

# Factors facilitating or constraining interventions to protect and promote health of older workers and to help plan and prepare for retirement

## Evidence Review for Research Question 3

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## Executive Summary

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The National Institute for Health and Care Excellence (NICE) has been asked by the Department of Health to develop public health guidance for employers and employees on effective and cost effective ways of promoting and protecting the health of older workers, covering workplace adaptations and adjustments to their changing needs in order to extend working lives and prepare for retirement.

The Institute for Employment Studies (IES) in partnership with The Work Foundation (TWF), Lancaster University, York Health Economics Consortium (YHEC), and Loughborough University (LU) have been contracted to undertake the evidence reviews of relevant effectiveness and qualitative studies and the economic analysis.

Three research questions were developed and following the search process, evidence has been found to address Research Questions 1 and 3:

- 'What are the most effective and cost-effective methods of protecting and promoting the health and well-being of older workers, and of supporting workers who wish to continue in employment up to and beyond state pensionable age? What supports, or prevents, implementation of these methods?' (RQ 1)
- 'What factors facilitate or constrain workplaces to enhance the well-being of older workers, to support them in continuing to work up to and beyond state pensionable age and affect the quality and outcomes of pre-retirement planning?' (RQ3)

No evidence was found to address Research Question 2:

- What are the most effective and cost-effective ways of helping older workers plan and prepare for retirement? What supports, or prevents, implementation of these methods? (RQ2)

This report presents the third of the three reviews based on qualitative, non-intervention studies which examined factors which enable or constrain employers to implement workplace policies and practices to protect and promote the well-being of older workers, support workers who wish to continue in employment up to and

beyond state pensionable age, and affect the quality and outcomes of pre-retirement planning.

It was agreed with NICE project team at the outset that a joint search strategy would be adopted for all three research questions which would cover:

- A search of key literature databases
- A search of the websites of relevant organisations
- Citation searches of material included in the reviews
- A review of material submitted through the NICE Call for Evidence
- Writing to any known researchers and experts in the field not already contacted during the Call for Evidence to ask for relevant material.

All the papers were reviewed against inclusion and exclusion criteria agreed with the NICE project team. Included studies for Research Question 3 were those that had a qualitative, cross-sectional or observational design, were published in English since 2005, and set in the UK, Australia or New Zealand. The decision to exclude material prior to 2005 and from other regions was based on the large volume of potentially relevant material obtained through searches for research question 3, some of which whose settings made the applicability questionable due to differences in cultural, institutional and employment context combined with a need for pragmatism and practicality in completing the review within the available timescale. The review examined factors which enabled or hindered a workplace intervention, policy or practice aimed at protecting and promoting the health and well-being of workers aged at least 50, helping them to continue to work up to and beyond the state pension age or improved the quality and outcomes of retirement planning. Interventions or support that employees access on their own, statutory provision or interventions to promote physical activity, mental well-being and smoking cessation in the workplace, and to manage sickness absence were excluded. Managing long-term sickness absence, promotion of physical activity and smoking cessation are already covered by existing NICE guidance.

The 27,738 titles and abstracts identified through the initial search process were screened through a two-stage process to identify papers that should be considered for full paper screening, using a checklist based on the inclusion/exclusion criteria. Articles were identified at this stage as being relevant for Review Question 1, 2 or 3.

The full papers of all the studies that came through the initial screening process were ordered. Retrieved papers were appraised by two members of the review team using the full inclusion/exclusion checklist to assess the content of the articles and whether they should be included in the review (see Appendix 3).

189 papers were identified for full paper screening for Review Question 3 through the initial search. In addition a further 26 papers were identified for screening from a further Call for Evidence and citation searching of the included papers. As a result of the complete screening process 67 papers were identified for inclusion in this review.

The 67 papers identified for inclusion in this review were assessed for quality and the data extracted and presented in an evidence table by two separate members of the review team. Papers were assessed using a checklist based on the quality assessment in the NICE Public Health Guidance Methods Manual (NICE, 2012). Depending on how they met the criteria behind the checklist papers were graded either: '++', '+' or '-'. Two different versions of the checklist were used depending on the type of study. Those using approaches based on 'quantitative' evidence such as primary field studies using surveys and secondary analysis of quantitative datasets adopted the quantitative checklist. Those using approaches or 'qualitative' approaches such as focus groups and interviews used the qualitative checklist. Where studies used mixed methods eg a survey and follow-up interviews, checklists for both approaches were completed and the quality rating used was taken from the method providing the majority of the research findings used in the review.

## Findings

The findings and Evidence Statements are structured around the following themes:

- Older workers' experience of work
- Impact of work on older workers' health outcomes
- Employer attitudes to older workers
- Age discrimination
- Attitudes and access to learning opportunities
- Flexible working for older workers
- Role of line managers in retirement process
- Management initiatives – training and rewards
- Proximity to workplace
- Older workers' retirement decision-making
- Phased retirement and health outcomes

## Older workers' experience of work

### Attachment to work

Experience of work is likely to be an important consideration in influencing worker decisions about continuing employment or retirement. Fourteen studies summarised in Evidence Statement 1a found evidence on the factors that influence aspects of work that older people particularly value, enjoy and which enhance their continuance commitment to staying in a role.

#### Evidence Statement 1a: Older workers' attachment to work

There is moderate evidence from thirteen studies, (++)<sup>1</sup>, (+)<sup>2,3,5,7,8,9,10,11,12</sup> and (-)<sup>4,6,13</sup>, seven UK<sup>1,3,4,6,7,9,10</sup> and six Australia<sup>2,5,8,11,12</sup>, that a number of factors contribute to older workers' attachment to work. The studies included a large scale survey of workers aged between 50 and 71 across multiple sectors(++)<sup>1</sup>, a large scale survey of care workers with an average age of 51(+)<sup>3</sup>, a qualitative study of residential care workers aged at least 45 and their managers(+)<sup>5</sup>, a survey of UK managers with an average age of 52 (-)<sup>6</sup>, a survey of Australians aged between 50 and 74 (+)<sup>8</sup>, a meta-analysis of 60 studies on economically active people aged at least 50<sup>9</sup>, a qualitative study of older workers aged between 50 and 68 in the North West of England(+)<sup>7</sup>, a qualitative study (+) with 31 workers aged over 65 in the UK<sup>10</sup>, a survey (+) of public sector workers aged over 50 in Australia<sup>11</sup>, a survey (+) of nurses in Australia with 54% aged over 44<sup>12</sup>, a qualitative study(-) with 31 people still working and aged over 75 in Australia<sup>13</sup>, a survey (+) of UK nurses aged over 60<sup>14</sup>, and small scale qualitative studies of UK hotel workers aged at least 50(-)<sup>4</sup>, and 30 staff aged at least 50 in a university(+)<sup>2</sup>. This evidence is mostly directly applicable to the UK. The factors identified were:

- friendships and personal relationships with colleagues<sup>1,4,5,6,10,12,13</sup>
- contribution to self-esteem and identity<sup>3,7,10,13</sup>
- opportunity to use creativity and intellectual capacity<sup>2</sup>
- good match between job content and personal skill profile<sup>1</sup>
- opportunity that work provides to help others<sup>2</sup>
- personal fulfilment<sup>6</sup> and work enjoyment<sup>8</sup>
- personnel leadership<sup>9</sup>
- using professional skills<sup>9,13</sup>
- being appreciated<sup>9</sup>
- having a good atmosphere at work<sup>9</sup>
- using work to maintain emotional and physical health<sup>10,13</sup>
- avoidance of boredom<sup>10</sup>
- supplementing income<sup>10,13</sup>
- opportunities to continue learning and take on new challenges<sup>10</sup>
- attachment to job content and purpose<sup>11,12</sup>

- flexibility of working arrangements<sup>11,13,14</sup>
- autonomy in the workplace<sup>12,13</sup>
- relative importance of work compared to other aspects of life<sup>12</sup>
- absence or low level of work-family conflict<sup>12</sup>
- working shortened hours, not having night shifts, being in a less physically demanding role, having management support and being in a less stressful role<sup>14</sup>

One study<sup>11</sup> found differences between men and women's attachment to work with factors having greater influence on the intention of women aged over 50 to continue working as interpersonal relationships ( $\beta = -.220, p < .05$ ), autonomy ( $\beta = .197, p < .05$ ), flexibility ( $\beta = .327, p < .001$ ). For men aged over 50, significant factors include importance of work ( $\beta = -.156, p < .05$ ).

<sup>1</sup> McNair (2006) (++)

<sup>2</sup> Shacklock (2006) (+)

<sup>3</sup> Bernard and Phillips (2007) (+)

<sup>4</sup> Jenkins (2014) (-)

<sup>5</sup> Mountford (2013) (+)

<sup>6</sup> Macleod et al. (2010) (-)

<sup>7</sup> Carmichael (2013) (+)

<sup>8</sup> Agnew et al. (2012) (+)

<sup>9</sup> Crawford et al. (2010) (+)

<sup>10</sup> Reynolds et al. (2012) (+)

<sup>11</sup> Shacklock et al. (2009) (+)

<sup>12</sup> Shacklock and Brunetto (2012) (+)

<sup>13</sup> Patrickson (undated)

<sup>14</sup> Royal College of Nursing (2013) (+)

These studies were conducted with workers who are in employment and do not therefore necessarily capture the precise motivations for older people to remain in or leave employment but they may indicate factors that employers should focus on enhancing when seeking to attract or retain older workers in employment. No studies were located which made links between these factors and the health and well-being outcomes for older workers.

## Impact of work on older workers' health outcomes

### Shift work impact on older workers' health

Direct evidence on the impact of work on health outcomes was located in two studies dealing with the experience of shift work among older women and the results are presented in Evidence Statement 1b.

#### Evidence Statement 1b: Shift work impact on older workers' health

- There is mixed evidence from three studies - two surveys both rated (+)<sup>1,2</sup>, and a meta-analysis rated (+)<sup>3</sup> - one study conducted with a sample of 846 nurses working full-time in two hospitals in Australia<sup>1</sup>, one based on a survey of 3273 New Zealand nurses<sup>2</sup>, and one based on a meta-analysis including 60 studies<sup>3</sup>, that work, especially shift work involving night duty and flexible shifts, has a negative impact on health among older people<sup>3</sup> and specifically older women<sup>1,2</sup>. Two studies<sup>1,2</sup> examined the impact of shift work on health among nurses, of which one<sup>1</sup> focused on fatigue. The evidence is partially applicable to the UK.
- The first study showed that shift work including set shifts, scheduled and rotating shifts had a negative impact on both physical and mental health of nurses, with fatigue and sleep disruption was cited by many respondents. Both single and partnered respondents reported these outcomes but respondents with partners were more likely to be able to cope with shift work. The authors suggest this is because those without partners may have a more varied set of activities outside work which are more difficult to accommodate around shifts.
- In the second study, nurses were divided into four groups: those working single shifts with no night shifts, single shifts with night duty, multiple shifts with no night duty and multiple shifts with night duty. The study found higher maladaptive chronic fatigue where the work pattern consisted of multiple rather than single shifts (particularly when night duty is part of the rotation), ie higher stress shift patterns. Reduced levels of recovery between shifts were found where the work pattern involved rotated shifts rather than single shifts, and poorest when night duty was involved. Mean scores for chronic fatigue and recovery were consistently poorer among those working permanent night duty compared to those working a single shift during the day<sup>1</sup>.
- Increasing age was associated with decreased chronic fatigue and increased recovery outcomes. The authors suggest this could be partly explained by senior nurses tending to work fewer of the high stress shift patterns<sup>1</sup>.
- The meta-analysis concluded that night work should be limited or avoided for workers aged over 45, that older workers should be given priority to transfer to day work or a shift of preference, that older workers should have increased rest periods or shorter working hours and that arranging more frequent health checks, giving training and counselling on sleep management, diet, exercise and stress is advisable for shift workers<sup>3</sup>.

<sup>1</sup> Winwood (2006) (+)

<sup>2</sup> Clendon & Walker (2013) (+)

<sup>3</sup> Crawford et al. (2010) (+)

## Impact of psychosocial work conditions on cognitive functioning

Direct evidence on the impact of work on health outcomes was located in a systematic literature review and the results are presented in Evidence Statement 1c.

### Evidence statement 1c: impact of psychosocial work conditions on cognitive functioning

There is moderate evidence from a systematic review<sup>1</sup> (++) of 17 papers (2 set in the UK) that, among the longitudinal study of civil servants (Whitehall II) covering 2,214 people in one study and 4,531 in the second paper, working more than 55 hours per week was associated at follow-up with significantly decreased perceptual reasoning and vocabulary among 'elderly' workers. The age of the workers was not stated but must have been greater than 40 years because they had been in the workforce for over 20 years at follow up. The review found at follow-up, all cognitive abilities (memory, reasoning, vocabulary, verbal fluency) were significantly decreased in individuals who reported low levels of organisational justice, which refers to how fairly treated people feel in the workplace.

<sup>1</sup> Then et al. (2014)

This points to the impact of both structural elements of working conditions and management treatment in affecting working capacity among older people. These factors may influence their capability to continue to work later in life and the type of work which people are capable of undertaking.

## Employer attitudes to older workers

### Factors affecting employer intent to recruit older workers

Employer attitudes in decision-making about whether to recruit older workers are key to the provision of opportunities for older people to continue in employment, especially for those wishing to change jobs later in their career or to take up a different type of role as part of transitions to retirement. Evidence was found in six studies of specific enabling factors that shaped employer intentions to recruit older people beyond employers' existing experience of and attitudes to older workers, as shown in Evidence Statement 2a, and the evidence from one study shows that stereotyping of older workers can be challenged through education and information of employers.

### Evidence Statement 2a: Factors facilitating employer intent to recruit and support older workers

There is weak evidence from six studies<sup>1,2,3,4,5,6</sup>, four UK<sup>1,4,5,6</sup> and two in Australia<sup>2,3</sup>, three (+) and three (-), that holding positive attitudes towards older workers is associated with intent to employ them and willingness to make workplace adjustments for them. The findings are partially applicable to the UK.

One qualitative study<sup>1</sup> (+) involving 40 group interviews with employers of varying sizes in four areas of Scotland found those with positive experiences of employing older workers were more likely to express intent to employ them in the future and to contemplate making workplace adjustments to accommodate their needs.

Two (+) rated surveys of employers, one of nursing recruiters in Queensland<sup>3</sup> and one in five Australian states<sup>2</sup> comparing responses of an intervention group and a control group to assess the effects of interventions to reduce age discrimination among firms with 10-50 staff, found that holding positive attitudes towards older workers was associated with expressed willingness to recruit older people. In one study<sup>2</sup> this was facilitated by the use of a factsheet challenging ageist stereotypes and 'cognitive dissonance' material declaring a booklet would be published listing employers who believed that age discrimination in hiring was morally wrong and supported the principle giving older workers a 'fair go'. Employers receiving both inputs reported:

- a significantly greater preference for hiring older workers than did employers who received either input alone or the control group (CDFS  $F(1,263) = 4.69, p < .05$ ).
- significantly more positive stereotyping of older workers' skills and abilities than employers who received CD, FS or the control

One (-) rated survey<sup>4</sup> of employers across OECD countries found that the UK had the highest proportion of employers holding positive stereotypes of older workers as more loyal and more reliable, and fewest negative stereotypes of older workers being less motivated, less flexible, less productive, less technologically orientated, and slower learners and the largest proportion of employers who reported that they were trying to recruit older workers (44%).

A survey (-) of 578 SMEs<sup>5</sup> in the UK found that 61% of SMEs sought to recruit a mixture of ages and regarded knowledge-sharing as the main benefit of an age-diverse workforce, followed by improved problem-solving and enhanced customer service. Almost nine in 10 (86%) SMEs surveyed agree that the knowledge and skills of mature employees is highly valuable.

A small (-) qualitative study<sup>6</sup> with eight managers in the legal and retail sectors in Manchester, UK, found that older workers are valuable due to their level of experience and ability to handle customers.

<sup>1</sup> Loretto and White (2006) (+)

<sup>2</sup> Gringart et al. (2010) (+)

<sup>3</sup> Gringart et al. (2012) (+)

<sup>4</sup> Harper et al. (2006) (-)

<sup>5</sup> McCartney and Worman (2014) (-)

<sup>6</sup> Dewhurst et al. (undated) (-)

A set of eight studies was located which investigated barriers to employer intentions to employ older people. These centre on the availability of alternative preferred sources of labour, assumptions about the kind of work that older people are seeking and lack of knowledge and awareness in handling an ageing workforce.

## Evidence Statement 2b: Barriers to employer intentions to employ older workers

There is moderate evidence from eight studies, five (+) and three (-), three set in Australia and five set in the UK, that a number of factors negatively affect employer self-reported intention to recruit older workers. The studies included telephone interviews with 50 employers in various sectors in Scotland(+)<sup>1</sup>, a qualitative study involving 40 group interviews with employers of varying sizes in four areas of Scotland(+)<sup>2</sup>, interviews with HR managers and analysis of employment data in five councils in Victoria, Australia(-)<sup>3</sup>, interviews with five hotel managers in the UK(-)<sup>4</sup>, a survey of 7,218 employees and focus groups with 94 senior staff in UK universities(+)<sup>7</sup>, a telephone survey of firms across a variety of sectors in one state in Australia(+)<sup>5</sup>, interviews with eight managers in legal and retail firms in Manchester, UK (-)<sup>8</sup>, and interviews with 12 senior managers from a variety of sectors in Australia(-)<sup>6</sup>. The evidence is mostly directly applicable to the UK but it should be noted that all the UK studies pre-date recession and legislative changes to pension provision and statutory retirement ages which may have affected employer views.

These factors identified were:

- opportunities to recruit an alternative labour supply such as younger staff<sup>2,3,4</sup>, migrant workers<sup>1,4</sup>, women<sup>5</sup>
- lack of knowledge and awareness of age management techniques and strategies<sup>1,2,6</sup>
- assumptions that older workers are seeking full-time roles<sup>4</sup>, would not accept sectoral working conditions<sup>1</sup>, are unwilling to work unsocial hours or would want higher pay than the sectoral norm<sup>1</sup>
- lack of recognition of age as an equality issue by some managers<sup>4</sup>
- insufficient time to plan organisational staffing due to the right to request working beyond a stated retirement age which only requires three months' notice and was leading to some Higher Education institutions adopting a default response of rejecting requests<sup>7</sup>
- perceptions that younger workers are better performers and older workers are more expensive and are not able to work as many hours per week or to modify these hours to meet business needs<sup>8</sup>
- perceptions that older workers lack enthusiasm and adaptability

<sup>1</sup> Hollywood and McQuaid (2007) (+)

<sup>2</sup> Loretto and White (2006) (+)

<sup>3</sup> McKeown (+)

<sup>4</sup> Jenkins (2008) (-)

<sup>5</sup> Taylor et al. (2013) (+)

<sup>6</sup> Martin et al. (2014) (+)

<sup>7</sup> Manfredi and Vickers (2009) (-)

<sup>8</sup> Dewhurst et al. (undated) (-)

## Age discrimination

Following on from employer attitudes towards hiring older people, a key set of factors that may influence older workers' attachment to work, their well-being and inclination to work beyond state pension age is how they are treated and perceived by managers and colleagues. Four studies were located that showed evidence of perceived and actual age discrimination against older workers and some suggestion from this age group that it should be tackled through training provision for managers and other staff.

### Evidence Statement 2c: Worker perceptions of age discrimination and the need for management training

There is moderate evidence from four studies, two (+) and two (-), two based in the UK and two in Australia, that a minority of older workers report having experienced workplace discrimination because of their age, that discrimination is likely to be indirect, subtle and/or covert and that workers would welcome training for line managers and younger staff to reduce stereotyping and improve management of older employees. The evidence is relatively recent and mostly directly applicable to the UK.

A (+) qualitative study<sup>1</sup> involving 48 interviews and two focus groups with older workers in a range of occupations set in Australia found that 10% reported actual age discrimination and 14% reported suspected discrimination.

A (-) rated qualitative study<sup>4</sup> with 12 workers aged at least 50 in the UK hotel sector found only a few people had experienced ageism in the workplace but that interview comments indicated that workers may have experienced age discrimination without recognising it.

A (-) rated survey of UK managers<sup>3</sup> with an average age of 52 found that 40% believed they had been disadvantaged by age in making job applications and seeking promotions.

A (+) rated mixed methods study<sup>2</sup> involving focus groups and a survey of workers aged over 45 in construction, finance, and aged care sector in Australia found that around one in five of those working in finance and aged care and around a third of those working in construction believed that colleagues had negative or very negative attitudes to older workers continuing to work beyond normal retirement age. Those working in finance identified subtle discrimination and harassment.

The same study<sup>2</sup> found that a majority of workers felt that supervisors and younger workers should receive training as a way of tackling age-biased stereotypes and a (-) rated survey of UK managers<sup>3</sup> with an average of 52 found that nearly half believed that training should be given to line managers on managing older workers.

<sup>1</sup> Billett et al. (2011) (+)

<sup>2</sup> Lundberg et al. (2011) (+)

<sup>3</sup> Macleod et al. (2011) (-)

<sup>4</sup> Jenkins (2009) (-)

## Attitudes and access to learning opportunities

Much labour market research shows the importance of maintaining skills as part of lifelong learning to enable career transitions. Gaining access to and making use of such opportunities is likely to be particularly important for workers who wish to move employers or change roles as part of phased retirement or to optimise their health and well-being in later working life. Fifteen studies illustrated moderate evidence on how access to learning opportunities was affected by the attitudes of older workers and managers to training provision for staff later in their working lives.

### Evidence Statement 3: Older workers and training

There is moderate evidence from fifteen studies, twelve (+) and three (-), five UK and ten in Australia, that older worker attitudes towards training and employer perceptions of older workers' attitudes may affect learning opportunities offered and taken up. The studies found that this may have implications for older workers' continued labour market participation and outcomes such as job quality. The studies are mostly directly applicable to the UK.

Two studies, one (+)<sup>1</sup> and one (-)<sup>6</sup>, the first involving 40 group interviews with employers of varying sizes in four areas of Scotland and the second involving secondary survey analysis and case studies, examined worker interest and perceived interest in training. The first<sup>1</sup> found that employers perceived that older workers might lack confidence, have less interest and be more reluctant to request training. The authors identify this as one of the beliefs held by employers that may affect management practices towards older workers. The second<sup>6</sup> found that older workers lacked confidence to train, were less likely to identify their own training needs and were harder to engage in training unless they perceived it to be of value.

One study<sup>2</sup> (+) set in Australia involving face-to-face interviews with 12 senior managers across a variety of sectors found that some managers believed that younger workers were more willing to learn. Most respondents expected workers to be proactive in identifying learning needs, expecting that by the time workers reached the age of 45 they should know what support they required.

One study<sup>3</sup> (+) using telephone interviews with 50 employers in Scotland found common perceptions that older staff are less adaptable to change and slower to acquire new skills. Training and development was less likely to be considered for older workers as older workers were seen as being reluctant to participate.

A survey<sup>5</sup>(+) of 128 recruitment decision-makers in companies with between 10 and 50 employees set in Australia found that older workers were viewed as less adaptable to new technology, less interested in technological change and less trainable. Similarly a (+)qualitative study<sup>8</sup> of older workers (aged 45 and older) across a range of occupations and sectors in Australia found employers tend to see older workers as less capable in terms of physical ability, capacity for learning and adaptability to change.

Two studies, one (+) and one (-), the first using interviews with 12 senior managers in a variety of sectors in Australia<sup>2</sup> and the second using an online questionnaire of 1,120 Australian local government staff<sup>4</sup> noted that older workers with lower education may need more support to engage in learning and development, and such staff may be reluctant to participate in training and development.

A qualitative (+)study<sup>8</sup> involving 48 interviews and two focus groups with older workers in a range of occupations set in Australia reported that some participants felt negative

perceptions of older workers led some employers not to support development or saw no need for training older workers whose performance was adequate.

A (+)mixed methods study<sup>7</sup> involving focus groups and a survey of workers aged over 45 in construction, finance, and aged care sector in Australia found that one in five or less of the four sample saw their employer's attitude as negative towards supporting training for older workers continuing in work beyond retirement.

A (+) survey<sup>12</sup> of 268 white collar Australian workers aged over 50 found that nearly two thirds believed they had the same opportunities to train and learn as younger workers and regarded themselves as being as adaptable as younger colleagues. About equal shares (40%) were interested or not interested in undertaking retraining in their current job. There were statistically significant gender variations with 88% of women reporting a belief that they were not too old to learn compared 76% of men ( $w_2 = 8.059$ ,  $df = 2$ ,  $p = .018$ ).

A qualitative (+) study<sup>9</sup> with 16 workers aged 55-87 in Scottish hotels and managerial staff found that older workers reported challenges in their jobs due to lack of training, particularly in IT. This was due to a presumption among managers that the core skills required in the sector are in customer service work which older staff would bring with them from previous work experience.

A meta-analysis<sup>10</sup> of 60 studies (+) found that training and learning are important to maintain older workers cognitive functioning, but older workers need to be given adequate learning opportunities and the mode of learning needs to be adapted to include time to reflect. The authors note a study which showed that older workers are keen to update their skills, including computing skills, and that their preferred learning modes are in-service training, in-house training, on-the-job training and one-on-one training, using more experienced workers as mentors. These findings are echoed in a set of three case studies of manufacturing organisations<sup>13</sup> in Australia (+) which showed that older workers preferred training to be work-based and practical, and 'just-in-time' to assist with particular tasks when they needed a job. This study also found older workers had more anxiety about assessment of new learning and were less willing to respond to questions in groups.

A survey of local government workers<sup>11</sup> (+) aged over 50 in Australia found that 89% were prepared to undertake training and development to enable them to move into transitional employment as they progressed towards retirement. Those in managerial/professional roles or possessing a degree were most likely to perceive this as an opportunity for learning, development and career change. A set of three case studies of manufacturing organisations<sup>13</sup> in Australia (+) also found that older workers showed enthusiasm for learning and were glad to be given the opportunity to learn for a new phase in later life.

A small scale qualitative study<sup>13</sup> of workers aged over 50(-) in Australia found that workers were motivated to engage in the training through regulatory requirements for a particular profession and that workers previous experience of training and using technology, together with sense of self-worth, shaped their expectations and level of confidence in learning. In contrast, a small scale study<sup>15</sup> with 25 workers in local government organisations in Australia (+) found that older workers were seen as often reluctant to retrain for less physically demanding jobs through lack of interest in other types of work, preference for current working conditions and belief in their own competence.

A series of three small case studies<sup>14</sup> set in manufacturing organisations in Australia (+) found that older workers lacked confidence to undertake training because they had been

outside the formal education system for a long time and had fewer qualifications than younger workers. This study also found that health problems such as diabetes and short-sightedness could affect older workers ability to learn.

- <sup>1</sup> Loretto and White (2006) (+)
- <sup>2</sup> Martin et al. (2014) (+)
- <sup>3</sup> Hollywood and McQuaid (2007) (+)
- <sup>4</sup> Pillay et al. (2006) (-)
- <sup>5</sup> Gringart et al. (2005) (+)
- <sup>6</sup> Newton (2006) (-)
- <sup>7</sup> Lundberg et al. (2011) (+)
- <sup>8</sup> Billett et al. (2011) (+)
- <sup>9</sup> Boreham et al. (2009) (+)
- <sup>10</sup> Crawford et al. (2010) (+)
- <sup>11</sup> Pillay et al. (2008) (+)
- <sup>12</sup> Dymock et al. (2012) (+)
- <sup>13</sup> Meyers et al. (2010) (-)
- <sup>14</sup> Smith et al. (2010) (+)
- <sup>15</sup> Pillay et al. (2010) (+)

This evidence suggests that, notwithstanding the introduction of legislation to combat age discrimination, some stereotypes and assumptions exist about the capabilities of older workers.

## Flexible working for older workers

### Enabling factors and barriers to implementing flexible working for older people

A key factor which is likely to influence worker inclination and capability to continue working beyond the state pension age is the availability of employment which may meet their personal needs and inclinations. Some studies explored the implementation of flexible working options such as reduced or flexible hours and Evidence Statements 4a and 4b identify the factors which facilitate or hinder employer implementation of such policies.

### Evidence Statement 4a: Factors facilitating implementation of flexible working for older workers

There is weak evidence from six studies<sup>1, 2, 3, 4, 5, 6</sup>, four (+) and two (-), five set in the UK<sup>1, 2, 3, 4, 5</sup>, and one set in Australia<sup>6</sup>, that a number of factors contribute to the effective implementation of flexible working for older staff. The studies include one with face-to-face interviews with 50 employees with a mean age of 61 across a variety of sectors in workplaces which offered flexible working policies(+)<sup>1</sup>, one using interviews and workshops with HR managers in seven large UK employers(-)<sup>2</sup>, one using interviews with 16 hotel workers in Scotland aged 55-87 and managerial staff<sup>4</sup>, one using eight interviews with managers in the legal and retail sectors in Manchester, UK (-)<sup>5</sup>, one using interviews with 25 workers in local government in Australia (+)<sup>6</sup>, and a large scale survey of older care workers(+)<sup>3</sup>. The findings are fully applicable to the UK. The factors are:

- adequate policy/project planning and resourcing<sup>1</sup>
- integration of flexible working for older staff as part of a broader diversity policy<sup>2</sup>
- trust between managers and employees<sup>1, 2, 3</sup>
- support from colleagues<sup>3</sup>
- effective communication of the policies to workers, including avoidance of jargon<sup>2</sup>
- use of workplace champions<sup>2</sup>
- provision of expert advice on financial implications of flexible working to workers<sup>2</sup>
- effective liaison between HR staff and pension fund staff<sup>2</sup>
- awareness of costs and benefits of the policy<sup>2</sup>
- management leniency to deviate from strict contractual requirements in recognition of the needs and benefits of employing older workers<sup>4, 6</sup>
- availability of a wide range of tasks covered by an organisation's activities, offering opportunities for older workers to continue to work<sup>5</sup>

<sup>1</sup> Alden (2012) (+)

<sup>2</sup> Employers Forum on Age and IFF (2006) (-)

<sup>3</sup> Bernard and Phillips (2007) (+)

<sup>4</sup> Boreham et al. (2009) (+)

<sup>5</sup> Dewhurst et al. (undated) (-)

<sup>6</sup> Pillay et al. (2010) (+)

These enabling factors are commonly recommended in the broader literature on effective change management and introduction of Human Resource Management policies, procedures and processes with a focus on planning, resourcing, mobilising support and communications.

Seven studies provided evidence on the barriers to implementing flexible working for older workers.

### Evidence Statement 4b: Barriers to implementation of flexible working for older workers

There is moderate evidence from seven studies<sup>1,2,3,4,5,6,7</sup>, two(-) and five (+), six in the UK and one in Australia, that a number of factors act as barriers to the implementation of flexible working for older staff.

The studies include one with face-to-face interviews with 50 employees with a mean age of 61 across a variety of sectors in UK workplaces which offered flexible working policies(+)<sup>3</sup>, one using interviews and workshops with HR managers in seven large UK employers(-)<sup>1</sup>, a large scale survey of older care workers in the UK(+)<sup>2</sup>, a telephone survey of firms employing more than 50 staff in Australia(+)<sup>4</sup>, a survey and telephone interviews with workers aged at least 45 predominantly employed in UK public sector organisations(+)<sup>5</sup>, interviews with eight managers in the legal and retail sectors in Manchester, UK (-)<sup>7</sup> and one based on a telephone survey of people aged over 50(+)<sup>6</sup>. The findings are mostly directly applicable to the UK.

The factors acting as barriers to implementation of flexible working are:

- negative attitudes of managers<sup>1</sup>
- communicating working time options available in a way that was clearly understood by staff<sup>1</sup>
- overcoming jargon associated with financial aspects of retirement such as pensions planning for staff<sup>1</sup>
- earlier rather than later discussions between HR and pensions fund staff<sup>1</sup>
- managing employee expectations that flexible working would be available to all staff seeking phased retirement<sup>1</sup>
- employee reluctance to downshift and reduce responsibility<sup>1</sup>
- operational pressures on business provision<sup>3,4</sup>, economic conditions<sup>6</sup>, and the nature of the job<sup>6</sup> requiring attendance at the place of work<sup>5</sup> which impeded provision of flexible hours, part-time and/or home working
- succession planning and the need to adapt to the business cycle<sup>6</sup>
- workers' lack of understanding of flexible working provisions and their individual eligibility<sup>2</sup>
- organisational cultures deterring some staff from disclosing information about their personal circumstances and motivations for seeking flexible working<sup>2</sup>
- having problems recruiting machinery operators, drivers and labourers<sup>4</sup>
- organisations reporting experiencing increases in job stress<sup>4</sup>
- workers lacking requisite equipment which prevented homeworking<sup>5</sup>

<sup>1</sup> Employers Forum on Age and IFF (2006) (-)

<sup>2</sup> Bernard and Phillips (2007) (+)

<sup>3</sup> Alden (2012) (+)

<sup>4</sup> Taylor et al. (2013) (+)

<sup>5</sup> Talbot et al. (2011) (+)

<sup>6</sup> Smeaton et al. (2009) (+)

<sup>7</sup> Dewhurst et al. (undated) (-)

The barriers to implementation reflect a mix of external pressures and internal organisational factors. The internal barriers consist of a range of general and commonly experienced project management challenges in implementing new Human Resource Management policies and those specific to the implementation of contractual changes with technical implications for retirement income.

### Impacts of flexible working for older workers

Evidence from five studies was located on the impacts of flexible and part-time working for older people. These generally focus more on self-reported attitudinal outcomes rather than behavioural outcomes or organisational outcomes and are shown in Evidence Statement 4c.

#### Evidence Statement 4c: flexible working impacts for older workers

There is moderate evidence from five studies<sup>1,2,3,4,5</sup>, three rated (+), one rated (-) and one rated (++) ,four in the UK and one set in Australia, that offering flexible working to older employees is associated with positive attitudinal outcomes, and in one study reportedly affects staff retention. The studies are mostly directly applicable to the UK.

One (+) study<sup>1</sup> based on face-to face interviews with 50 employees with a mean age of 61 across a variety of sectors in workplaces which offered flexible working policies in the UK found that self-reported benefits of flexible working were positive perceptions of work, home life and financial outcomes for individuals and enhanced self-reported goodwill and increased commitment in the workplace.

One (++) study<sup>2</sup> based on analysis of two survey samples of people aged over 50 in the UK found that older employees working part-time hours reported more positive attitudes to work than older workers with full-time hours.

One (+) study set in Australia<sup>3</sup> involving 12 focus groups with workers aged at least 49 found that those people working part-time were more likely to report enjoyment of work.

One qualitative (+) study with 56 people aged 50-68 in the North West of England found that for some of the interviewees who suffered health problems because of the inflexibility of the organisation or workplace, the only option was to leave their employment<sup>4</sup>.

One (-) survey of UK managers<sup>5</sup> found that around 60% of respondents reported that their organisations offered part-time and flexible working to all employees, in line with a general pattern of providing employment benefits in an age-free way and these policies were considered important strategies for retention of older workers.

<sup>1</sup> Alden (2012) (+)

<sup>2</sup> McNair (2006) (++)

<sup>3</sup> Quine and Bernard (2006) (+)

<sup>4</sup> Carmichael et al. (2013) (+)

<sup>5</sup> Macleod et al. (2010) (-)

## Role of line managers in retirement process

Interactions between managers and older workers can play a key role in the process of retirement. Two studies were found which examined line manager roles and the support they received to perform it, as shown in Evidence Statement 5.

### Evidence Statement 5: Role of line managers in retirement process

There is weak evidence from two(+) qualitative studies<sup>1,2</sup>, one using a survey of 129 managers in UK universities<sup>1</sup> and one using interviews with 25 managers in local government organisations in Australia<sup>2</sup>.

The first study<sup>1</sup> found that around 70% of line managers felt they had a moderate amount of discretion in managing the retirement process and most perceived it was a shared responsibility with HR staff.

Nearly half of line managers had received no training about operating without a fixed retirement age and nearly 45% of line managers had received no training around the wider implications of retirement.

Eighty-three per cent of line managers considered that they had a moderate of support or more from their own line manager to find flexible working solutions for older workers. Ninety per cent of respondents felt that their own line managers would provide moderate or higher levels of support for decision-making about retirement. A series of factors were associated with managers believing they had some responsibility in the timing of an employee's retirement:

- being female (2.09 times more likely than for males)
- being aged over 50 (2.49 times more likely than those aged 50 or under)
- experience of managing employees aged over 65 years (2.18 times) more likely than a manager without experience of managing employees aged over 65 years actors

The second study<sup>2</sup> found that the quality of individual manager-employee relationships was seen as critical to how constructive and open workers were able to be in discussions about retirement with managers, and the extent to which these took place.

The findings are partially applicable to the UK but the setting in public sector organisations limits their generalisability.

<sup>1</sup> Davies et al. (2013) (+)

<sup>2</sup> Pillay et al. (2010) (+)

The evidence suggests that line managers are aware of a shared responsibility with HR staff in managing older workers but some have had limited training, and previous experience of managing older staff, being female or being an older worker sensitises managers to their role in managing retirement.

## Management initiatives - training and rewards

In addition to adjustments to working time and patterns, organisations may deploy a range of techniques and initiatives to encourage staff retention. One study was found of these being applied to retain older workers and their impact, as shown in Evidence Statement 6.

### Evidence Statement 6: Management initiatives - training and rewards

There is weak evidence from one (+) qualitative study<sup>1</sup> using interviews with 20 managers and 20 care assistants aged at least 45 in randomly selected residential care homes in an Australian city that providing training and small, informal rewards (eg vouchers) positively influences older workers' intention to stay with the current employer. The findings are partially applicable to the UK.

<sup>1</sup> Mountford (2013) (+)

## Proximity to workplace

Three studies were found relating to commuting among older workers outlined in Evidence Statement 7.

### Evidence Statement 7: Proximity to workplace

There is weak evidence from three UK studies, one (++)<sup>1</sup> based on analysis of a sample of older workers extracted from four national UK datasets, one (+) based on a telephone survey of people aged over 50<sup>3</sup> and one (+) based on interviews and a survey of 1215 workers aged at least 45 from a variety of sectors<sup>2</sup>, that proximity to the workplace may affect older workers' employment choices. The evidence is fully applicable to the UK but the availability of generous pension arrangements to the large proportion of public sector workers in the second study may lead to overstatement of the impact of commuting on older workers' employment decisions.

One (++) study<sup>1</sup> found that a significantly greater proportion of workers after state pension age were travelling short distances to work compared to those pre- state pension age. The authors comment that this may indicate the importance of work locations to decisions about employment after state pension age and that workers may wish to focus on job opportunities which are close to home.

A second (+) study<sup>2</sup> found that 19% of workers had considered retiring or changing jobs as a result of specific current or future difficulties in their journey to work.

A third (+) study<sup>3</sup> found that a fifth of workers aged over 50 wanted greater flexibility in their work location.

<sup>1</sup> Cebulla et al. (2007) (++)

<sup>2</sup> Talbot et al. (2011) (+)

<sup>3</sup> Smeaton et al. (2009) (+)

The studies are not able to illustrate the impact of commuting on labour market participation and retirement decisions due to the research design and methods

adopted, and it would be useful if these could be investigated through longitudinal studies of older workers into their retirement.

## Older workers' retirement-decision making

### Retirement decision-making and financial status

A more substantial body of evidence was located on retirement decision-making, although there was limited evidence about how employer activities and initiatives affect this. The dominant factors identified were financial status and health, with mixed evidence on the role of job satisfaction. The findings are illustrated in Evidence Statements 8a, 8b and 8c.

#### Evidence statement 8a: Retirement decisions and financial status

There is moderate evidence from six studies that planning for retirement and the decision to retire at a non-standard age is associated with an employee's financial position both at work and their potential income in retirement. The higher individuals' current income/potential pension, the more likely they will make retirement plans and retire early. Two of the studies, both (+), are set in New Zealand<sup>1,2</sup>, one (+) survey of workers aged at least 50 was set in the UK<sup>6</sup>, and three in Australia<sup>3,4,5</sup> of which two are rated (+) and one is rated (-). The findings are mostly directly applicable to the UK.

- A (+) mixed method survey-based study of New Zealanders aged 50-70 found that an individual's financial position has an important influence on retirement decision-making<sup>1</sup>.
- A survey-based study (+) set in New Zealand found that higher levels of financial preparedness for retirement was associated with more positive perceptions of retirement, higher levels of informal planning and greater economic living standards ( $p < .001$  no coefficients reported)<sup>2</sup>.
- A (+) qualitative study of older people in Australia found that retirement planning was more likely among people in higher socio-economic groups<sup>3</sup>.
- A (+) study using data from an Australian household survey found that the nature and timing of individuals' retirement plans was related to their overall labour market position<sup>4</sup>.
- A national survey (-) of older workers in Australia found that the most common reason influencing the intention to retire was financial security (34% of respondents), followed by health (26%) and eligibility for the state pension (11%). The survey also found that those in the higher income and education categories were more likely to have planned for their financial security and physical, mental and social activity in retirement<sup>5</sup>.
- A telephone survey<sup>6</sup> rated (+) of older workers in the UK found that those employed in the skilled trades, sales and personal service jobs were more likely to be planning delayed retirement compared with individuals in other occupational groups, reflecting lower income levels than those in higher skilled managerial and professional occupations.

<sup>1</sup> Davey et al. 2008 (+)

- <sup>2</sup> Noone et al. (2011) (+)  
<sup>3</sup> Quine and Bernard (2006) (+)  
<sup>4</sup> Cobb-Clark and Stillman (2009) (+)  
<sup>5</sup> National Seniors, 2006 (-)  
<sup>6</sup> Smeaton et al. (2009) (+)

These findings may have implications for the health and retirement outcomes of different labour market groups and for labour market inequalities, since those with the highest incomes, most favourable pension prospects and possibly skill levels may be in the position of having greatest freedom of choice over labour market exit. This also has important implications for employers in terms of managing organisational needs against employee preferences and for public policy more generally. Workers in lower skilled roles with lower incomes may be seeking to work beyond the current typical retirement age and businesses will need to consider how to manage expectations as well as meet their obligations under employment legislation. Lastly, there are broader societal implications and potential wider public costs arising from the emergence of a segment of the population with inadequate retirement incomes and who are no longer capable of working in their existing jobs. The growing number of organisations closing final salary or defined benefit pension schemes in favour of career average pension schemes may be a further driving factor encouraging individuals with insufficient pension provision to remain in work for longer.

## Health and retirement decision-making

### Evidence statement 8b: Health and retirement decision-making

There is moderate and slightly mixed evidence from 14 studies of the impact of health on older employees' retirement decisions. Three of the studies were conducted in New Zealand of two<sup>5 13</sup> (+) and another<sup>9</sup> (-), six studies in Australia, of which four<sup>6 8 10 12</sup> (+) one<sup>7</sup> (++) and one (-). The remaining five studies<sup>1 2 3 4</sup> were conducted in the UK, four<sup>2 3 4 14</sup> (+) and one<sup>1</sup> (++) . The evidence is mostly directly applicable to the UK.

Eight studies indicated that poor health or certain health conditions, especially mental health conditions, were the main reason for giving up work among older workers<sup>5, 4, 3, 2, 6, 1, 13, 14</sup>. Two studies<sup>8, 7</sup> found that early retirement as a result of poor health was most common among younger age groups. One study<sup>9</sup> found a complex relationship between an individual's health and their decision to retire. Some chose to retire while they were still healthy enough to enjoy leisure activities, while others retired early because of ill-health or to protect themselves from further ill-health (including mental ill-health). One study found that 60% of retired workers surveyed were forced into retirement with personal health and health of family members being key influencing factors<sup>12</sup>. Another study found no relationship between health and retirement planning<sup>10</sup>.

- A four year (++) cohort study of 1,693 older workers in the UK found that fair or poor self-rated health was associated with work exit. Symptomatic depression was also a predictor of early work exit (OR=1.52, CI 95% 1.07, 2.18)<sup>1</sup>.

- A (+) qualitative study of 23 UK dentists found that the main reason for early retirement was depression, followed by musculoskeletal disease and specific skin conditions<sup>2</sup>.
- A (+) questionnaire study of 537 teachers in Scotland concluded that the most common reason for ill-health retirement was mental health disorders (37%) followed by musculoskeletal conditions (18%). The effect of age was not determined<sup>3</sup>.
- According to a (+) qualitative study of 56 people in North West England, health was the most cited reason for giving up full-time work. The influence of age on retirement decision could not be determined because all study subjects were over 50 years of age<sup>4</sup>.
- A (+) mixed method study of New Zealanders aged 50-70 found that the most important reason for giving up employment was poor health<sup>5</sup>.
- A (+) longitudinal cohort study on women's health in Australia found that being employed decreased as physical and mental health deteriorated. Women with following conditions were less likely to be employed at the end of the follow-up: diabetes, high blood pressure, depression, anxiety, and other psychiatric conditions<sup>6</sup>.
- A (++) longitudinal study of 2,803 people in Australia aged 45-75 found that retirement was greatest in the youngest cohort of men (HRR 1.37, CI 95% 1.17-1.60) and progressively decreased throughout older cohorts. In the final model, poor mental health remained a predictor in retirement for men and the interaction with age disappeared<sup>7</sup>.
- A (+) population based study of 3160 females and 1933 males in Australia found that men were more likely to retire due to ill-health (OR 2.85 CI 95% 2.03-4.01) and the effect declined with increased age<sup>8</sup>.
- A qualitative longitudinal study (-) found that individuals in New Zealand adopted different pathways to retirement related to their health including an 'impaired health pathway' (health and disability affect ability to work); a 'maximisation of life pathway' (retiring while healthy to fulfil other goals) and 'a protective pathway' (motivated by individual concern to promote and protect health)<sup>9</sup>.
- However a (+) study using data from an Australian household survey found no evidence that the way in which middle-aged Australians were forming their retirement plans depended on their own health status<sup>10</sup>.
- Analysis of a survey (-) of 153 dentists aged 50 or over in New South Wales, Australia found that of a number of (unspecified) variables entered, only age and home ownership were significant predictors of intended retirement age, with 27% of the variance attributable to current age and home ownership responsible for a further three per cent ( $p < 0.05$ )<sup>11</sup>.
- A survey of Australians (+) aged between 50 and 74 found that of those retired, only 40% had stopped work at a time of their own choosing and 60% were nudged or forced out of the workplace with personal health or health of family members as dominant factors<sup>12</sup>.
- A survey (+) of 6,662 New Zealanders aged 55 to 70 found that health status was significantly associated with the decision to work, with, for example, a 10% decline in health below the mean score associated with a fall in labour force participation (eg into retirement) of three to four percentage points. The drop in participation is more than proportional for males, but less for females<sup>13</sup>.

- A survey (+) of 1,875 people aged 50 to 64 years in Great Britain for that, having a generalised anxiety disorder among men was associated with an odds ratio of 3.1 (95% CI 1.2-7.8) for being early retired, and having a depressive disorder was associated with an even higher odds ratio of 4.3 (95% CI 1.7-11.0). For women, there was no significant association between being early retired and mental health disorders<sup>14</sup>.

<sup>1</sup> Rice et al. 2011 (++)

<sup>2</sup> Hill et al. 2010 (+)

<sup>3</sup> Brown et al. 2006 (+)

<sup>4</sup> Carmichael et al. (2013) (+)

<sup>5</sup> Davey et al. (2008) (+)

<sup>6</sup> Pit and Byles, 2012 (+)

<sup>7</sup> Olesen et al. (2012) (++)

<sup>8</sup> Pit et al. (2010) (+)

<sup>9</sup> Pond et al. (2010)

<sup>10</sup> Cobb-Clark and Stillman, 2009 (+)

<sup>11</sup> Schofield et al. (2010) (-)

<sup>12</sup> Agnew et al. (2012) (+)

<sup>13</sup> Enright and Scobie (2010) (+)

<sup>14</sup> Buxton et al. (2005) (+)

### Job satisfaction and retirement decisions

Evidence Statement 8c shows mixed evidence on the relationship between health outcomes and labour market withdrawal. However, there is no evidence on the enabling factors or barriers that may affect employers in taking preventive action to improve older workers' health and discourage early labour market exit due to lack of research evidence in this area.

### Evidence statement 8c: Job satisfaction and retirement decisions

There is moderate but mixed evidence from five primary studies, one set in the UK (++), three in Australia (two (+) and 1 (-)) and one in New Zealand (+), that retirement decisions are associated with job satisfaction, supplemented by evidence from one (+) review study. This evidence is partially applicable to the UK.

A UK household survey rated (++) found that 39% of workers aged 51 to 70 who were still in employment were working even though they could afford to retire<sup>1</sup>. All of these people said they enjoyed working with colleagues and that their job was well suited to their skills.

A (+) rated qualitative study of older people in Australia found that enjoyment at work was an incentive to remain in the workforce<sup>2</sup>.

A (-) rated mixed method study among older public service employees in Australia found that as employees aged they placed greater importance on job satisfaction as a reason to stay in work, particularly when their financial situation enabled them to make choices about when to retire<sup>3</sup>. However a (+) study using data from an Australian household survey found that individuals who were uncertain about retirement plans or never expected to retire were not significantly happier in their jobs than those forming retirement plans<sup>4</sup>.

A survey (+) of 1,958 New Zealanders aged between 40 and 64 found no significant relationship between retirement intentions and satisfaction with work.<sup>5</sup>

In addition one review study (+) found that self-rated poor quality of work experience was significantly associated with early retirement intentions.<sup>6</sup>

<sup>1</sup> McNair (2006) (++)

<sup>2</sup> Quine and Bernard (2006) (+)

<sup>3</sup> Oakman and Howie (2013) (-)

<sup>4</sup> Cobb-Clark and Stillman (2009) (+)

<sup>5</sup> Cameron and Waldegrave (2010) (+)

<sup>6</sup> Lancaster et al. (2011) (+)

On balance, Evidence Statement 8c suggests that employers should pay some attention to ways of enhancing job satisfaction if seeking to retain employees beyond state pension age because it may influence worker decision-making about retirement.

### Choice and control in retirement decision-making

The final set of evidence statements 8d, 8e and 8f point to the significance of the retirement decision-making process and in particular, the role of informed choice, control and support that may be required to help workers make optimal decisions.

### Evidence statement 8d: Informed choice and control over retirement decisions

There is moderate evidence from four studies, three rated (+) and one rated (-), three set in Australia and one in the UK, that employees who exercised higher levels of choice and control over their retirement had better outcomes than those with less choice, that those with higher incomes are more likely to intend to exert choice in the form of phased retirement, and a need to improve informed choices among particular ethnic minority sub-groups. The evidence is mostly directly applicable to the UK.

A survey-based panel study (+) found that 12 months after retiring, Australian retirees who had greater control over their retirement decision displayed significant increases in positive affect ( $\beta = 0.12$ ,  $p < 0.01$ ), decreases in negative affect ( $\beta = 0.15$ ,  $p < 0.01$ ), and increases in life satisfaction ( $\beta = 0.15$ ,  $p < 0.01$ ) than at the point of retirement. They were also more likely to say that they had adjusted well to retirement ( $\beta = 0.39$ ,  $p < 0.001$ )<sup>1</sup>.

A qualitative study (+) involving interviews with older workers and retirees in the UK found that involving individuals in decision-making enabled employers to meet their needs or temper the negative impacts on the individual of an undesirable outcome. Providing clear information on retirement procedures, options, and pathways enabled individuals to make informed retirement choices, helped individuals feel part of the decision-making process, and adjusted retirement expectations if needed<sup>2</sup>.

A qualitative study (+) conducted among older members of six ethnic minority groups in the UK found a need to improve understanding of financial products and planning, unmet need in relation to information about pensions and other financial issues and suggested that information, advice and guidance would help generate informed decision-making<sup>3</sup>.

A national survey rated (-) of older Australian workers found that those with the highest household income and those who had undertaken more retirement planning were more likely than those in the lowest income groups to intend to change to part-time work before retirement<sup>4</sup>. This may suggest a need to improve the informed choice capabilities among those on low incomes in the interests of maximising their financial security in retirement.

<sup>1</sup> De Vaus et al. (2007) (+)

<sup>2</sup> Morrell and Tennant (2010) (+)

<sup>3</sup> Barnes and Taylor (2006) (+)

<sup>4</sup> National Seniors, 2006 (-)

This evidence statement points to the potential role for employers in educating and signposting employees to information on retirement options and choices.

Evidence on whether phased or abrupt retirement positive affects life and health outcomes is not clear cut as shown in Evidence Statement 8e. There may be a range of confounding factors such as the relative health status of those retiring gradually or abruptly.

One piece of evidence points to the need for additional support for vulnerable labour market groups to help them make optimal choices about retirement.

### Evidence statement 8e: Older disabled workers may need particular support with retirement decision-making

One study (+) set in Australia and based on a series of qualitative interviews with workers with disabilities (aged 50-74) and their support providers found that most older disabled workers wanted to continue working beyond retirement age but needed particular flexibility and understanding to enable them to make an active choice about retirement<sup>1</sup>.

The evidence is partially applicable to the UK.

<sup>1</sup> McDermott and Edwards (2012) (+)

## Phased retirement and health outcomes

Lastly one study examined the impact of phased retirement on health outcomes.

### Evidence statement 8f: Gradual retirement

There is weak and mixed evidence on the benefits of gradual retirement from one (+) rated Australian study. The evidence is partially applicable to the UK.

A survey-based Australian panel study rated (+) found that gradual retirement was positively associated to a small extent with self-reported improved health 12 months into retirement (difference between T0 and T1:  $\beta = 0.14$ ,  $p < 0.01$ ) but those who retired gradually were significantly less satisfied with their retirement after a year than those who had retired abruptly ( $\beta = -0.12$ ,  $p < 0.05$ ), again to a small extent. Whether or not a person retired gradually or abruptly made no difference to the level of positive or negative affect, life satisfaction, self-image, or marital cohesion<sup>1</sup>.

<sup>1</sup> De Vaus et al. 2007 (+)

## Conclusions

The limitations of the evidence base reviewed for Research Question 3 reflect wider challenges also associated with earlier reviews for Research Questions 1 and 2 concerning the effectiveness and cost-effectiveness of interventions to promote and support the health and well-being of older workers and in the area of pre-retirement planning and training. There is a dearth of evidence on the outcomes and impact of management-initiated interventions in this field, and the overall quality of research in this area was both disappointing and surprising, consistent with the evidence of large scale literature reviews on related topics (see Lancaster et al., 2011, Farrow and Reynolds, 2012 and Crawford et al., 2009).

Despite some prominent examples of reportedly good practice in managing older workers available via case studies in grey literature and the trade press, little documented process or impact evaluation was located, and many of the studies on employer practices included in this review are up to a decade old. Since then, both

the labour market context and the employment policy context has changed significantly, and indeed recession and consequent more abundant labour supply for some occupations may have reduced employer need and appetite to consider the management of older employees. Moreover, the studies from an employer perspective considered for this review may reflect a degree of employer passivity in taking action in this area, albeit with evidence of emerging awareness of the need to manage older workers and to consider the impact of the abolition of the default retirement age. For some employers this appears to be coupled with a degree of ignorance in the growth and potential issues presented by an ageing workforce and a 'mainstreaming' approach to the management of diversity. This is of concern on at least two grounds. First, the abolition of the default retirement age in 2011 means that employers will have to start considering how to manage workers whose transition to retirement can no longer be assumed. Second, government reforms to increase the age at which people are eligible for the state pension will lead to those lacking adequate alternative pension provision in particular seeking to remain in work for longer.

There are also clear methodological considerations arising from this review for research in this field. There is an urgent need for research which uses mixed methods and deploys both employer and worker perspectives to examine employer practices with regard to recruitment, retirement planning and transitions. Those commissioning, designing and undertaking research also need to confront the challenge that to examine long-term impacts of working in later life, it will be essential to conduct longitudinal studies. This review urges research commissioners to prioritise funding of high quality studies into the impact of workplace level interventions on health and well-being outcomes which will seek to track the health and well-being of individuals during the lifespan of the intervention and onwards *beyond* the end of their working lives.

# 1 Introduction

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The National Institute for Health and Care Excellence (NICE) has been asked by the Department of Health to develop public health guidance for employers and employees on effective and cost effective ways of promoting and protecting the health of older workers, covering workplace adaptations and adjustments to their changing needs in order to extend working lives and prepare for retirement. As part of the process of developing the guidance, NICE has commissioned a series of evidence reviews and an economic evaluation.

The Institute for Employment Studies (IES) in partnership with The Work Foundation (TWF), Lancaster University, York Health Economics Consortium (YHEC), and Loughborough University (LU) have been contracted to undertake the evidence reviews of relevant effectiveness and qualitative studies and the economic analysis.

This report presents the third of these reviews based on qualitative studies which examined enabling factors and constraints on employers to implement workplace policies and practices seeking to enhance the well-being of older workers, support workers who wish to continue in employment up to and beyond state pensionable age and affect the quality and outcomes of pre-retirement planning.

## 1.1 Background

The health of the working population is vital to the economy and to society, but due to changing demographics of the workforce, western societies are facing great challenges to maintain economic growth and competitiveness. The workforce is ageing in the UK. It has been estimated that approximately one third of the labour force will be aged 50 or over by 2020 (Taylor 2007). Ignoring the skills, knowledge and contribution that older workers are capable of making to organisational performance has been described as a high-risk strategy (Foresight Mental Capital and Well-being Project 2008). The number of working age adults across Europe has begun to decline and some sectors of the European economy are beginning to report significant skills shortages. Furthermore both employers and governments face increasing difficulties meeting the financial costs of their pension commitments and early exit from the labour market can pose challenges both for individuals and

governments (DWP, 2014). In response, many European governments have increased state pension ages or reduced the generosity of state pensions to address this issue and the UK has abolished the default retirement age (Sinclair et al. 2013). Partly as a result, the workforce is older and more likely to face health problems with more people living with a long standing health problem or disability. According to The Labour Force Survey (2011), of 7.2 million aged 50-64 who are employed, 42% are living with a health condition or disability in the UK (Sinclair et al. 2013). It is likely that chronic disease rates will continue to rise; much of this is due to an increase in poor life style factors, such as poor diet, smoking and lack of exercise. Older people in disadvantaged groups more commonly face health problems at an earlier age, and are more likely to face difficulties in finding and keeping jobs, partly due to lower educational attainment and lower skill levels (Bloomer, 2014). Despite these barriers, the number of employed people aged 65 or over has more than doubled over the past two decades, from 425,000 in March to May 1994 to 1.1 million March to May 2014 (ONS 2014) so employers will have to deal with consequences of larger numbers of older workers.

Ill-health represents a major economic burden for society due to increased healthcare costs, loss in productivity and sickness absence. Both males and females over the age of 55 take more days off work due to self-reported ill health caused or made worse by work (Crawford et al. 2009). The most common sources of new cases of work-related illness reported were musculoskeletal complaints and stress, depression or anxiety, with those over 45 having the highest estimated prevalence rate (Crawford et al. 2009). Mental ill-health is associated with both physical and mental decline which is more common among older groups (Foresight Mental Capital and Well-being Project 2008). Besides poor health, the reasons for ceasing economic activity at age 50+ include limited skills and increased caring responsibilities (Marmot 2010). An evidence based review on the health, safety and health promotion needs of older workers (Crawford et al. 2009) identified that although there is an increased risk with age of developing a disease, this is not necessarily a reason to exclude an individual from work. Certain diseases, such as heart disease or diabetes, can be controlled and reasonable adjustments can be made to keep the individual at work.

The health of employees is a major factor in an organisation's competitiveness. Although absence rates have been falling in recent years, it has been estimated that annual costs of sickness absence for UK businesses is nearly £14 billion a year (Vaughan-Jones and Barham 2009). Employees in good health can be up to three times as productive as those in poor health; they can experience fewer motivational problems; they are more resilient to change; and they are more likely to be engaged with the business's priorities (Vaughan-Jones and Barham 2010). In Dame Carol Black's review of the health of Britain's working age population it was calculated that improved workplace health could generate cost savings to the government of

over £60 billion – the equivalent of nearly two thirds of the NHS budget for England (Black 2008).

It has been recognised that improved workplace health has the potential to make a significant contribution to the economy, to public finances and to reducing levels of disease and illness in society (Waddell and Burton 2006). Employers play a key role in helping to protect health and prevent future ill health of the working population and NICE Public Health Guidelines (2009) recommend a strategic and coordinated approach to promoting employees' mental health well-being. One of the biggest challenges facing the working longer agenda is poor health of older workers. However, until recently, relatively few initiatives by governments or employers have been established to explicitly improve the health of older workers (Sinclair et al. 2013). In fact, according to research from the Chartered Institute of Personnel and Development (CIPD) and the Chartered Management Institute (CMI) into age management, UK employers are still 'woefully unprepared for the impact workforce demographics will have on their businesses' (Macleod et al. 2010).

This finding is supported by much of the contextual evidence located for this literature review<sup>1</sup> which has shown an acute lack of research evidence that provides process or impact evaluation findings on employer-initiated interventions to address the health, well-being, retention and retirement planning needs for older workers. For example, attempts to undertake detailed literature reviews in this field have noted: 'There is very little literature on interventions to support a mentally healthy retirement' (Lancaster et al., 2011, p.18) and no evidence of evaluation of publicly available retirement planning services which include a health-related component. Concerning health and safety of older workers at workplace level, attempts to undertake detailed research have similarly been limited due to: 'very little direct evidence...concerning safety practices and health risks of workers over age 60' (Farrow and Reynolds, 2012). This research found evidence of some safety risks associated with specific challenges such as age-related hearing loss together with fewer accidents and injuries overall in this age group, although those occurring are more likely to be serious or fatal (ibidem). A short study on the health of female older workers concluded that while risks of MSDs and stress were the common priority concerns for both sexes, a lack of research analysis by gender was exacerbated by presumptions about the nature of work undertaken by women, and risks may be heightened by the need to combine work and domestic responsibilities (Doyal and Payne, 2007). A wide review of literature covering the health, safety and health promotion needs of older workers noted a 'lack of longitudinal research; no further analysis on fatal accidents or understanding of the high prevalence of MSDs,

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<sup>1</sup> The list of studies reviewed and providing contextual background is provided in Appendix 9.

stress and anxiety in older workers; and a lack of investigation into what interventions are going to be effective' (Crawford et al., 2009, p.6). Research notes that the economic context may reduce employer perceptions of the need to focus on retaining and supporting older staff and limited employer interest in developing age management strands within blanket diversity policies (Parry and Harris, 2011).

Survey research of 1,500 older workers by the Equality and Human Rights Commission (Smeaton et al. 2009) found that 60% of older workers wanted to carry on working after retirement age either in the same or different jobs. This is often because they cannot afford to retire. Whilst economic considerations are a key factor, personal fulfilment is also important to older workers in re-entering the workforce for enjoyment or company at work (Parry and Harris 2011). The decision of whether or not to continue working is complex and influenced not only by a combination of individual factors but also by organisational culture and policies. Again, research conducted around a decade ago found a reasonable body of evidence on barriers for people trying to re-enter the labour market in their fifties and some evidence on factors influencing decisions of different groups of people in choosing to retire or continue working (Phillipson and Smith, 2005). However, it noted limited information on a number of dimensions of health and work in later life including the roles of partners and domestic circumstances in influencing decision-making, experiences of ethnic minority groups, provision of training to older workers and the role of flexible working policies. Other studies conducted to investigate the perspectives of workers on extended working lives have noted a range of concerns. A survey of NHS workers showed widespread concern about detrimental impact on physical, mental and emotional health and ability to keep up with the pace of work (NHS Joint Staff Side, 2013). Staff also expressed appetite for a range of adjustments to working methods and working time.

Although there has been increasing research interest in the well-being of older workers (eg Crawford et al. 2009) and 'pre-retirement' training (Foresight Mental Capital and Well-being Project 2008), systematic evaluation of the best approach to the management of age diversity at the workplace is lacking. As more employers recognise the need to promote the health and well-being of ageing employees, it is important that they have access to guidelines which help them to provide healthy and good quality working environments in a cost effective way and using evidence-based interventions. Therefore NICE has commissioned systematic evaluation of the evidence on the effective policies and approaches for promoting and protecting the health of older workers to underpin the development of guidance for employers and others.

## 1.2 Aims and objectives of the review

The overall aim of this review is to identify, appraise and summarise research evidence to support the development of guidance for employers and employees on effective management practices to improve the health of older workers (aged 50 or over). The guidance will be aimed at human resources professionals, trade unions and professional bodies. It will also be aimed at health professionals (particularly those working in occupational health), and commissioners and managers with public health as part of their remit. It will be of interest to people who are self-employed and other members of the public. The guidance will cover organisational policies and initiatives for older employees, changes to the way work is organised and the work environment, activities to challenge or counteract ageism, retirement planning and training for mentors and older workers and any initiatives by organisations representing employers or the wider business community to promote the above.

The specific aim of this first review is to examine the following research question (RQ3):

*What factors facilitate or constrain workplaces to enhance the well-being of older workers, to support them in continuing to work up to and beyond state pensionable age and affect the quality and outcomes of pre-retirement planning?*

## 1.3 Structure of the report

This report covers:

- The methodology we adopted to conduct this review
- The findings from the review
- A discussion of the evidence.

In addition a series of Appendices provide further information on our approach and a bibliography of the studies included and excluded from this review.

## 2 Methodology

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### 2.1 The review team

The review was conducted by the Institute for Employment Studies (IES) in partnership with The Work Foundation (TWF), the York Health Economics Consortium, and Loughborough University. The review team was led by Dr Annette Cox, Associate Director at IES, and included Jim Hillage from IES, Dr Tyna Taskila from The Work Foundation, Dr Matthew Taylor from York Health Economics Research Consortium and Professor Cheryl Haslam from Loughborough University.

### 2.2 Overall search strategy

It was agreed with NICE project team at the outset that a joint search strategy would be adopted for all three research questions which would cover:

- Effectiveness studies (for Review Questions 1 and 2)
- Qualitative studies (for Review Question 3)
- Economic studies (for the Economics review)

The search for relevant evidence covered a number of elements:

- A search of key literature databases
- A search of the websites of relevant organisations
- Citation searches of material included in the reviews
- A review of material submitted through the NICE Call for Evidence
- Writing to any known researchers and experts in the field not already contacted during the Call for Evidence to ask for relevant material.

## 2.3 Inclusion and exclusion criteria

All the papers were reviewed against inclusion and exclusion criteria agreed with the NICE project team in relation to the research questions for the study which were:

A primary review question of:

*What factors facilitate or constrain workplaces to enhance the well-being of older workers, to support them in continuing to work up to and beyond state pensionable age and affect the quality and outcomes of pre-retirement planning?*

### 2.3.1 Inclusion criteria

#### Populations to be included

- All adults aged at least 50 in full or part-time employment, both paid and unpaid, self-employed people working in micro, small, medium and large organisations with an appointed line manager, and volunteers
- All employers in the public, private and 'not for profit' sectors who employ at least one employee

#### Interventions and policies to be included

- Interventions intended to address the research question primarily involving or aimed at employees aged over 50
- Interventions addressing entire workforces where at least 51% of employees are aged over 50
- Interventions targeted at 'older' workers aged below 50 where the intervention has an impact on them at age 50 or above
- Interventions delivered by third party organisations commissioned by organisations to deliver these within the workplace

#### Locations to be included

- Studies set in the UK, Australia and New Zealand. The decision to exclude material from other regions was based on the large volume of potentially relevant material obtained through searches for research question 3 whose setting made its applicability questionable due to differences in cultural, institutional and employment context combined with a need for pragmatism and practicality in completing the review within the available timescale

- Workplace settings or community level interventions aimed at workers rather than general population

#### Time period

- Studies published since 2005. Again the decision to exclude material published prior to this date was based on the large volume of potentially relevant material obtained through searches for research question 3

#### Study types

- Cross-sectional and qualitative studies

### 2.3.2 Exclusion criteria

#### Excluded population groups

- Self-employed individuals working in organisations without appointed line managers
- Sole traders
- Unemployed individuals
- Interventions aimed at the general public rather than people working in specific organisations
- Studies covering interventions aimed at all employees where the majority (at least 51%) are aged under 50, unless a specific differential impact (either positive or negative) is found for workers aged at least 50

#### Interventions and policies that are excluded

- Intervention or support that employees accesses on their own initiative, without prompting from the employer, organisation or line manager or other third party (eg trade union).
- Statutory provision to employees
- The effectiveness of specific interventions to promote physical activity, smoking cessation in the workplace, to manage sickness absence and the return to work of those who have been on long-term sick leave, and mental well-being of which the first three topics are already covered by NICE guidance
- Interventions delivered without targeting specific worker populations

### Locations to be excluded

- All countries except the UK, Australia and New Zealand

### Study types to be excluded

- Non English language studies
- Experimental quantitative studies including:
  - before and after studies
  - non-randomised controlled studies (NRCS)
  - randomised controlled trials (RCT)
  - systematic reviews or meta-analyses

Where studies of these types contained data relevant to the factors enabling or hindering workplace capabilities in relation to the research question for this review, these were included in the previous two evidence reviews. In practice, these were a low number of studies and they did not focus on barriers and enabling factors.

- Observational quantitative studies:
  - before-and-after studies
  - cohort studies
  - interrupted time studies
- Economic studies
  - cost–benefit analyses
  - cost-effectiveness analyses

## 2.4 Outcomes

The outcomes of interest to this review include a mixture of soft and hard outcomes covered by the following:

- **Organisation:** employee health and well-being and engagement; levels of employee recruitment and retention for the relevant age group; days lost to sickness absence (and reasons for absence); presenteeism; changes to work content, working time volume/patterns, flexible working practices; organisational measures of productivity; uptake of support services; return to work rates, job retention, measures of work ability, length of service, equality and diversity monitoring data (eg composition of workforce with health

conditions/disabilities); organisational HR data with relevance to staff well-being (eg survey results pertaining to HSE's Management Standards, staff surveys more generally); knowledge and awareness among managers and rest of workforce; RIDDOR data indicating health and safety outcomes; incidence of age-related discrimination grievances/disciplinary/employment tribunal claims; all available economic data; business outcomes such as labour turnover, productivity; customer service; profitability; health related behaviours/diseases.

- **Employee:** individual levels of health and well-being, motivation, individual performance, stress and job satisfaction; perceptions of fair treatment; awareness, availability and uptake of training and support services; changes in work patterns and tasks (including changes in work/life balance); impact on knowledge, skills and behaviour, including outcomes post-retirement such as financial status, social inclusion/isolation, civic participation, loneliness/mental health, physical health, self-reported quality of life.

## 2.5 The search for evidence

A single search to cover RQs 1, 2 and, 3 and the economic evaluation was conducted of key databases in health and medicine, social studies and business and management. A separate search for theses and dissertations was undertaken but due to the volume of material, theses and dissertations were not taken forward for inclusion in the sifting as it was judged that significant findings of publishable quality would be picked up through the search of peer reviewed journal articles and grey literature.

### 2.5.1 Databases searched

#### General

- Academic Search Complete (via Ebsco)
- Scopus (Elsevier)
- Web of Science (includes SSCI) (Thomson Reuters)

#### Business and social science

- ABI/Inform (via Proquest)
- AgeInfo and NDAR (Centre for Policy on Ageing)
- Assia (via Proquest)
- Business Source Premier (via Ebsco)

- Campbell Collaboration (Native interface)
- International Bibliography of the Social Sciences (via Proquest)
- EconLit (via Ebsco)
- EPPICentre databases – DoPHER and TRoPHI (Native interface)
- SCIE (Native interface)
- Social Policy and Practice (via NHS Evidence)
- Sociological Abstracts (via Proquest)
- XPerTHR (Native interface)

### Health and Medicine

- AMED (Ebsco)
- Cochrane (Wiley)
- EMBASE (OVID)
- HMIC (HDAS)
- Health Business Elite(HDAS)
- Medline (OVID)
- PsycINFO (Ebsco)

### 2.5.2 Additional cost effectiveness search

In addition to the general searches for RQs 1-3, a specific cost effectiveness search for the economic evaluation was conducted using the following sources:

- Cost-effectiveness Analysis (CEA) Registry (<https://research.tufts-nemc.org/cear4>)
- EconLit
- Embase (via OvidSP)
- Health Economic Evaluations Database (HEED)
- MEDLINE (via OvidSP)
- NHS Economic Evaluation Database (NHS EED)
- RePEc (Research Papers in Economics) (<http://repec.org/>)

### 2.5.3 Grey literature search

In addition to searching traditional academic databases the search process also covered 'grey literature', ie material that was not published in academic media or was in the process of publication. The following approach was adopted to the search through grey literature:

- A thorough search using the deep web search engine MEDNAR was conducted
- A thorough search of Google Scholar was conducted to identify grey literature, unpublished although peer reviewed conference papers indicated by details given on the papers/conference website, policy reports and theses E-mail alerts were set up to automatically notify the team of any new publications or grey items within the search parameters
- BASE (<http://www.base-search.net/>) was searched, specifically for material in institutional repositories
- Resources and directories available through Greynet International ([www.greynet.org](http://www.greynet.org)) were examined to locate any other compendia and direct links to grey literature not covered by other sources

#### Websites

A range of relevant policy and other agencies were searched, including the following UK sites:

- Acas: <http://www.acas.org.uk/>
- Age UK: <http://www.ageuk.org.uk/>
- Association of Chartered Physiotherapists in Occupational medicine  
<http://www.csp.org.uk/tagged/association-chartered-physiotherapists-occupational-health-ergonomics-acpohe>
- British Chambers of Commerce (BCC): <http://www.britishchambers.org.uk/>
- British Psychological Society: <http://www.bps.org.uk/>
- Centre for Employment Studies Research:  
<http://www1.uwe.ac.uk/bl/bbs/research/cesr.aspx>
- Centre for Mental Health: <http://www.centreformentalhealth.org.uk/>
- Chartered Institute of Environmental Health: <http://www.cieh.org/>
- Chartered Management Institute: <http://www.managers.org.uk/>
- CIPD: <http://www.cipd.co.uk/>

- College of occupational therapy –work section <http://www.cot.co.uk/cotss-work/cot-ss-work>
- Department for Work and Pensions:  
<https://www.gov.uk/government/organisations/department-for-work-pensions>
- Department of Health:  
<https://www.gov.uk/government/organisations/department-of-health>
- EEF: <http://www.eef.org.uk/>
- Employers' Forum on Age (part of the Employer Network for Equality and Inclusion): <http://www.efa.org.uk/>
- HSE: <http://www.hse.gov.uk/>
- Investors in People: <http://www.investorsinpeople.co.uk/about-us/our-organisation-achieving-success-through-people>
- IOSH: <http://www.iosh.co.uk/>
- London Health Commission: <http://www.londonhealthcommission.org.uk/>
- National Audit Office: <http://www.nao.org.uk/>
- NICE (including former Health Development Agency document search) and NHS Evidence: <http://www.nice.org.uk/>
- Oxford Health Alliance: <http://www.oxha.org/>
- Public Health Observatories: <http://www.apho.org.uk/>
- Scottish Government: <http://www.scotland.gov.uk/>
- Sloan Centre for Ageing at Work  
[http://capricorn.bc.edu/agingandwork/database/browse/facts/fact\\_record/5670/al1](http://capricorn.bc.edu/agingandwork/database/browse/facts/fact_record/5670/al1)
- UK Commission for Employment and Skills:  
<https://www.gov.uk/government/organisations/uk-commission-for-employment-and-skills>
- Welsh Government: <http://wales.gov.uk/>
- 'Working Late' research programme on the New Dynamics of Ageing  
[www.workinglate.org/](http://www.workinglate.org/)
- Xpert HR: <http://www.xperthr.co.uk/>

In addition we searched the sites of the following international bodies:

- Cedefop: <http://www.cedefop.europa.eu/>
- Eurofound: <http://www.eurofound.europa.eu/>
- European Commission: [http://ec.europa.eu/index\\_en.htm](http://ec.europa.eu/index_en.htm)
- EU-OSHA: <https://osha.europa.eu/>
- EuroHealthNet: <http://eurohealthnet.eu/>
- Finnish Institute of Occupational Health: <http://www.ttl.fi/en/Pages/default.aspx>
- Institute for Work and Health: <http://www.iwh.on.ca/>
- International Commission of Occupational Health: <http://www.icohweb.org/>
- International Labour Organisation: <http://www.ilo.org/global/lang--en/index.htm>
- Liberty Mutual Research Institute for Safety:  
<http://www.libertymutualgroup.com/omapps/ContentServer?pagename=LMGroup/Views/LMG&ft=2&fid=1138356633468&ln=en>
- Organisation for Economic Co-operation and Development:  
<http://www.oecd.org/unitedkingdom/>
- The National Institute for Occupational Safety and Health:  
<http://www.cdc.gov/niosh/>
- World Health Organisation: <http://www.who.int/en/>

#### 2.5.4 Call for Evidence

The NICE project team issued a Call for Evidence on 10 June 2014 which closed on 10 July 2014 and asked for interested parties to send in evidence of relevance to the reviews. NICE issued a second Call for Evidence on 9 March 2015 which closed on 27 March 2015 with a specific focus on evidence gaps identified through the search and review process.

#### 2.5.5 Contacting experts

To supplement the Call for Evidence a range of key academics, researchers and commentators in the field, known to the research team, PHAC members or recommended by the NICE project team were contacted and asked for any appropriate references.

### 2.5.6 Citation searching

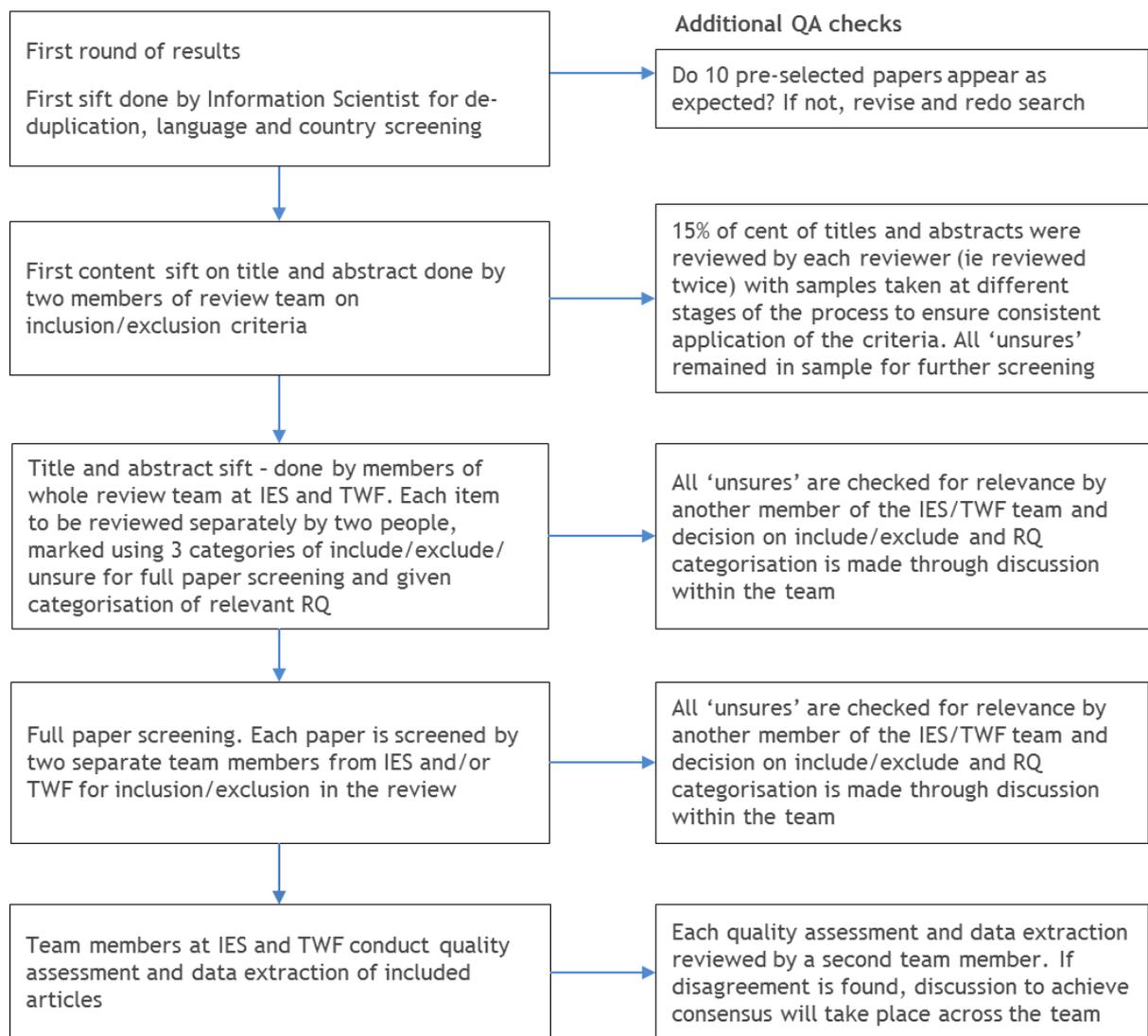
Once papers for initial inclusion were identified, a citation search for these articles was conducted using Web of Science and GoogleScholar to identify citing articles. Articles were double sifted and those put forward were subjected to full paper screening by two reviewers.

## 2.6 Screening and data extraction

The process for sifting and screening material identified through the search and extracting the relevant evidence is summarised in Figure 2.1. The titles and abstracts of the papers identified through the initial search were downloaded into EndNote and screened for relevance using the inclusion and exclusion criteria, using a three-stage process involving:

- An initial sift based on title and abstract
- A second screening stage based on title and abstract and allocation to RQ1, 2 or 3
- A full paper screening.

**Figure 2.1: Outline of sift and screening process**



### Initial sift

The titles of all material identified through the search were de-duplicated, checked that they conform to the inclusion criteria on language, date and country and quickly reviewed against the inclusion and exclusion criteria by two members of the review team. Fifteen per cent of the titles and abstracts were reviewed by each reviewer (ie reviewed twice) with samples taken at different stages of the process to ensure consistent application of the criteria<sup>2</sup>.

<sup>2</sup> The first 1,000 titles and abstracts were reviewed by both researchers and the kappa statistic was 74 per cent. The papers where the two reviewers disagreed were discussed and an understanding

### Second title and abstract screening

The titles and abstracts of all papers which came through the initial sift were separately reviewed against a checklist based on the full inclusion and exclusion criteria by two members of the review team (ie reviewed twice) and identified for full paper screening and the results recorded in the review database.

At this point, the included papers were tagged according to whether the paper was relevant for RQ 1, 2 or 3 and/or the economics review. Where there was disagreement between the reviewers a third member of the team reviewed the paper and reached a consensus with the other two reviewers.

### Full paper screening

Each full paper was separately screened against a checklist based on the full inclusion and exclusion criteria by two members of the review team and identified for inclusion (or exclusion) for one of the reviews. Where there was disagreement a third member of the team also reviewed the paper and a consensus was reached with the other two reviewers.

## 2.7 Outcomes of the search process

A series of databases were searched by an Information Scientist at the Lancaster University library between 21 July and 16 August 2014, see Table 2.1.

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reached on what met and did not meet the inclusion and exclusion criteria. Subsequent two further batches of 600 and 570 papers were double sifted and the results compared with kappa statistics of 87 per cent and 89 per cent respectively.

**Table 2.1: Summary of literature databases searched (preliminary prior to addition of final website inclusions and material supplied by experts)**

Database Name	Platform	Number of titles and abstracts downloaded to EndNote database
Academic Search Complete	EBSCO	5,956
Scopus	Elsevier	1,227
Web of Science (includes SSCI)	Thomson Reuters	2,692
Business and social science		
ABI/Inform	ProQuest	624
AgeInfo ( Centre for Policy on Ageing)	Native	56
Assia	ProQuest	3,598
Business Source Premier	EBSCO	1,568
Campbell Collaboration	Native	0
EconLit	EBSCO	217
EPPICentre databases	Native	0
International Bibliography of the Social Sciences	ProQuest	206
Social Care Online (from SCIE)	Native	0
Social Policy and Practice	OVID	1,386
Sociological Abstracts searched with ASSIA	ProQuest	
XPerTHR	Native	3
Health and Medicine		
Cochrane (Wiley)	Native	101
EMBASE	OVID	817
HMIC	HDAS	103
Health Business Elite	HDAS	861
Medline	OVID	5,781
Medline-in-process	OVID	50
PsycINFO	EBSCO	1,948
Theses and Dissertations		
Index to Theses	Native	19
Digital Dissertations	ProQuest	525
Total		27,738

*Source: IES/Work Foundation/Lancaster University, 2014*

The search strategies were designed to cover: workplace interventions to support the health, well-being and continued employment beyond normal retirement age of older workers, pre-retirement training, advice, guidance and mentoring; (cost-) effectiveness and health and well-being outcomes. Examples of the strategies used are set out in Appendix 4 and the results set out in Table 2.1. The titles and abstracts identified through the searches were recorded in an EndNote database.

Following the searching and screening process a total number of 189 papers were identified for full paper screening. This represents a considerable reduction from the

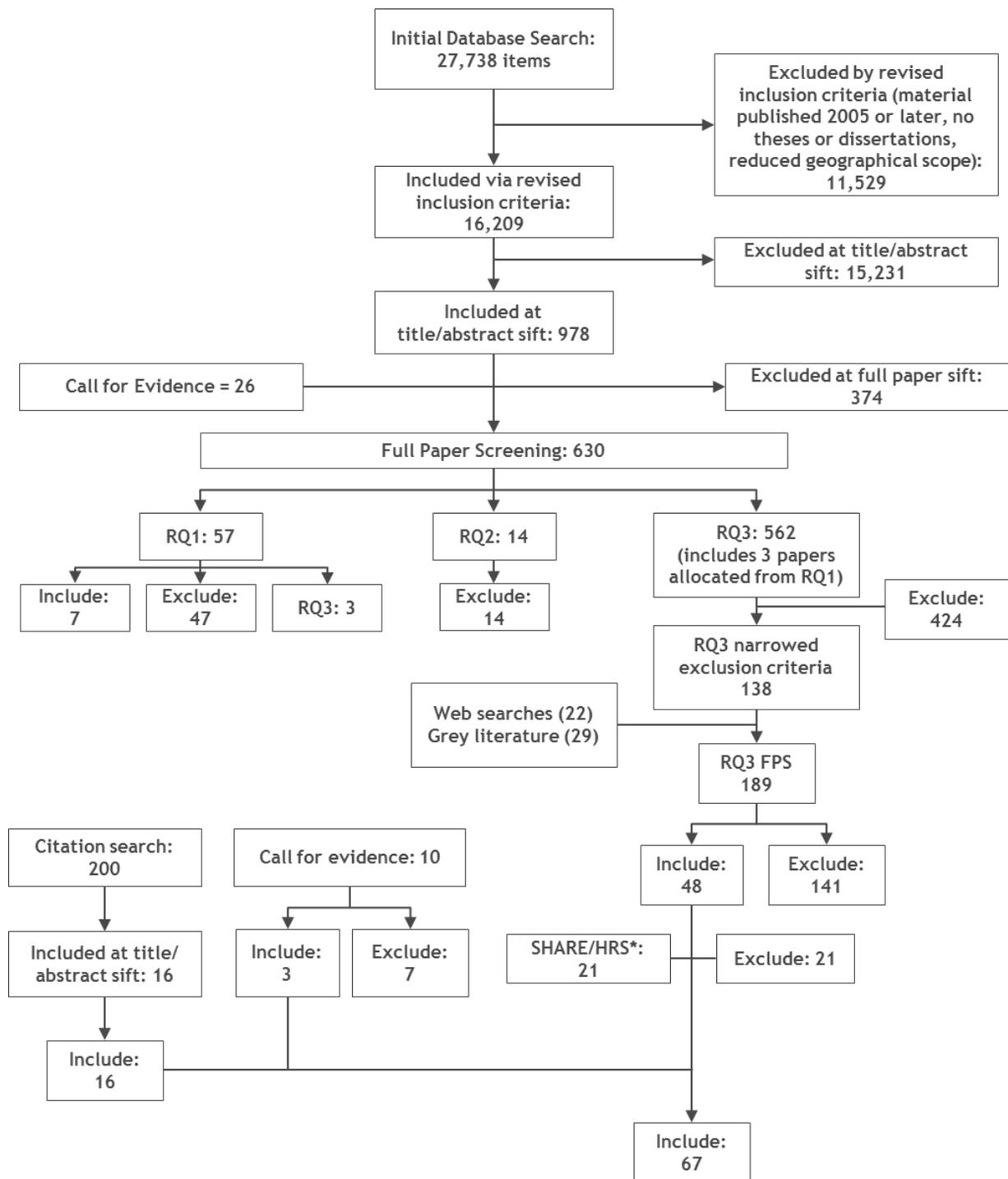
original volume of papers identified through the search strategy. To manage the volume of literature gathered, additional criteria were introduced to focus the scope of the research to papers published since 2005, exclude dissertations and theses since data from them would have made its way into peer reviewed journals and to focus on OECD countries and European countries joining the EU in or before 2007. In practice, large volumes of the papers returned by the searches proved not to be relevant to the review. A large volume of literature consisted of technical papers on retirement or pensions legislation, another large segment dealt with the domiciliary or residential care of older people, a further segment dealt with national policy on retirement ages or pensions policies and a further segment consisted of news items reporting the imminent or actual retirement of prominent business figures. These items were excluded at the sifting/screening stage and are not included in Appendix 7. Following the decision to focus the review on material from the UK, Australia and New Zealand, a further 424 items were excluded.

All of the papers put forward for full paper screening have been obtained except for four conference papers for which the authors were contacted but did not respond.

Seven papers were included in the first review. None were included in the second review.

A total of 189 papers were full paper screened for RQ3 following the initial search. In addition a further 26 papers were identified for full screening from a further Call for Evidence and citation searching of the included papers. As a result of the complete screening process a total of 67 papers met the relevant criteria and are included in this review. The results of the screening processes are summarised in Figure 2.2.

Figure 2.2: Outcome of search process for Review Questions 1, 2 and 3



\* SHARE = Survey of Health and Ageing in Europe; HRS = Health and Retirement Study

Source: IES, TWF, Lancaster University

## 2.8 Data extraction

The 67 papers identified for inclusion in this review were assessed for quality and the data extracted and presented in an evidence table. The evidence from each paper was extracted and the quality of the paper appraised by a member of the IES/TWF review team and then checked and re-appraised by another. A narrative summary of the evidence table was also produced.

### 2.8.1 Quality appraisal

Papers were assessed using a checklist based on the quality assessment in the NICE Public Health Guidance Methods Manual (NICE, 2012). As a result papers were graded either:

- ++ All or most of the checklist criteria have been fulfilled; where they have not been fulfilled the conclusions are very unlikely to alter
- + Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter and
- Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

The checklist is included in Appendix 2.

### 2.8.2 Data extraction

For each paper the evidence table, which follows the format set out in Methods for development of NICE public health guidance (third edition, 2012) summarises:

- the key research aims
- the study quality rating
- the research design and methodology
- the findings that contribute to the research questions
- limitations and gaps
- summary information about authors, publication etc.

## 2.9 Evidence synthesis

The findings from studies have been synthesised and where appropriate grouped thematically and an evidence statement(s) generated for each theme (Chapter 4).

During development of the evidence statements and synthesis the relevance of the findings to the UK context was also assessed, based on the following criteria:

- the population involved
- the setting, including the country or countries and type of workplaces in which the study took place
- the intervention and whether it would be appropriate for the UK
- the reported outcomes.

## 2.10 Excluded studies

Appendix 7 provides the reference details of the 148 excluded studies at the full paper screening stage for Review Question 3. Studies were excluded because they failed to meet at least one of the inclusion criteria. As soon as they failed to meet one of the criteria they were excluded. In the appendix the references are ordered by the criterion by which they were excluded. They may have failed against other criteria too.

## 3 Findings

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A total of 67 studies met the criteria for inclusion in this first review and focussed on factors which facilitate or constrain workplace capabilities to implement policies, practices or interventions to protect and promote the health and well-being of older workers, to support them in continuing to work up to and beyond state pension age and/or to improve the quality and outcomes of retirement planning.

The studies are summarised below and the implications of the findings discussed in Chapter 4.

### 3.1 Summaries of the included studies

#### Agnew et al. (2012)

This survey-based study (rated -) examined the preparedness of Australians at the later stages of working life and specifically: leaving paid work; managing finances; changing daily activities; and dealing with longevity and compared expectations with typical experiences.

Fieldwork took place in May 2011 among 920 members of the PureProfile internet panel with the aim of collecting information about the financial knowledge base, values and plans of retirement age Australians. The on-line survey had one common section answered by all and three supplementary sections each answered by around one third of respondents. The common questions covered demographics, values, survival probabilities, bequests and retirement planning. The three supplementary surveys focussed on 1) income and wealth (including superannuation), 2) more detailed retirement plans and 3) knowledge of superannuation concepts, Age Pension and retirement income product features.

The response rate is not stated.

## Outcomes

### *Workforce transition*

A majority (60%) of pre-retirees had not formulated plans for leaving their jobs. This group indicated that they had not really given any thought to leaving the workforce or had only just started thinking about it without making any decisions. Around 30% had some plans in place and had started talking to their employer. Fewer than 40% had discussed retirement with their partners and fewer than 20% with their friends. Low levels of discussion around retirement suggested little scope for sharing social capital. When asked to nominate a retirement age, around 70% suggest an age, typically 65, whereas around 10% stated they do not intend to stop working and 20% cannot give an intended retirement age. While the majority of pre-retirees expected to decide for themselves when they would stop paid work, responses of the already-retired show that the decision was often made for people. Of those who had already retired, only 40% said they had decided for themselves when to stop work and the remaining 60% were either forced to retire or nudged out of the workplace. When asked to rank reasons for retiring, 'wanting to do other things' was first in importance. Exogenous factors beyond the control of subjects, like personal health and the health of other family members, ranked second and fourth. Personal health was twice as important as the third-ranked 'no longer needing to work – had enough income'.

### *Financial retirement planning*

Estate planning appears to be well covered by many mid-life Australians. Around two thirds of respondents said they had thought about leaving a financial or material bequest. Of those, nearly 60% had made a will. Further investigation into financial planning stages shows that the majority has gone no further than reviewing their current financial position. Only about one in three in this age group had clear goals and plans in place to achieve them. Fifty per cent of pre-retirees expected their living standard to decline (either 'somewhat' or 'a lot') after retirement.

### *Activities and retirement lifestyle*

When Australian pre-retirees were asked to rank eight prospects for their retirement from best to worst, 'having a chance to travel' was clearly first. 'Taking it easy' and 'having time with your partner' were also highly ranked. Others rated time for interests as important, and looked forward to less pressure, with time to spend on hobbies or sport. Access to these attractive features of retirement is contingent on financial security. Spending more time with children and 'being your own boss' were less preferred prospects, as was having time for volunteering. Further questioning showed some mismatch between expectations and realisations. Around

40% of pre-retirees had given little thought to what they would do after work. Travel and leisure activities figured prominently in the priorities of people who have made plans. By contrast, when the same question was asked of the retired, carer responsibilities and volunteering were more important than anticipated. Close to 45% of the sample of not-yet-retired anticipated continuing paid work in some capacity after formal retirement. Of those 60% stated that work enjoyment rather than needing more money was the main reason for returning to work.

### Limitations

The authors did not identify any limitations, but the reviewers noted that the study was primarily descriptive with limited quantitative analysis. The response rate is not stated so the representativeness of the survey is unknown.

### Applicability to the UK

The study is set in Australia with a sample whose representativeness is unclear, which limits its generalisability and makes it partially applicable to the UK.

### Alden (2012)

This (+) rated study using semi-structured face-to-face interviews among 50 employees in the South East of England sought to investigate how workplace flexibility policies to support workers aged at least 50 are implemented in practice, supplemented by analysis of Labour Force Survey, Workplace Employment Relations Survey and the EHRC 'Older workers: employment preferences, barriers and solutions' project to define flexible working.

The participants were selected by a stratified random sampling approach, and 26 were male, 24 were female with an average age of 61.

### Outcomes

Some large employers appeared to be managing flexible working options effectively from the perspective of their staff. The enabling factors associated were focussed effort, planning and support and trust between individual managers and workers was important in negotiating flexibility, so employees with less visibility had more difficulty in accessing flexible working options. Workers had mixed views on the effectiveness of 'informal' flexible working options, although these were most common.

Business needs led to flexibility being more difficult to offer for some roles. The authors conclude that greater education is required for organisations, managers and

employees to perceive that some flexibility, albeit limited, may be possible for a wide range of roles.

Benefits where flexible working options were offered, based on evidence gathered from older workers, included more positive perceptions of work, home life and financial outcomes for individuals and enhanced goodwill and increased commitment in the workplace.

### Limitations

The study has a relatively small sample of workers, and their occupations are unknown. In addition, it is confined to one geographical region of the UK which is more affluent than other regions, so external economic factors affecting the sample's perceptions may not be consistent with workers in other regions. It also lacks data from employers on factors affecting implementation of flexibility options which may influence worker perceptions.

### Applicability to the UK

The study is applicable to the wider UK population, but is limited by the geographical focus and small sample size.

### Barnes and Taylor (2006)

This (+) qualitative study, for the UK Department for Work and Pensions (DWP), aimed to understand the expectations and priorities of ethnic minority pensioners and people of working age with regard to work, retirement and pensions from a series of 60 in-depth interviews with people from the six main ethnic minority groups in the UK including both those below and above state pension age.

The final sample of 60 respondents consisted of five men and five women living in either London or Birmingham from each of six ethnic minority groups: Indian, African, Chinese, Caribbean, Bangladeshi and Pakistani, aged 40 or over. 13 were retired and three were working after state pension age. In terms of age cohorts: 16 were over 60; 22 were in the 50-59 group; and 22 were in the 40-49 group. Twenty-two of those under state pension age were currently in employment, 11 were self-employed and 11 were not employed (this group included the unemployed and those unable to work due to ill-health or caring responsibilities). None of the sample was under state pension age and retired. The final sample included 19 low income, 17 medium income and 24 high income households.

Interviewees were recruited through community contacts via a screening questionnaire by an independent research agency which was also responsible for carrying out the interviews in the respondents' preferred language. Individuals

were given an incentive to take part. Interviews covered characteristics of individuals, their work history and key life events, expectations about retirement, household incomes and financial decision making, and knowledge of pensions. Interviews were taped, translated when needed and transcribed verbatim and used with field notes made to contextualise the interviews. Analysis was conducted with NVivo using a grounded theory approach to capture themes related to subgroups.

Over half the sample were married and most were living in two generation families. However, there were also some families where three generations lived in the same house, couples without children, adults living with parents, lone parents, and in two cases, grandparents with legal responsibility for a grandchild. Most had bought or were in the process of buying their homes. The great majority had arrived in the UK prior to the 1990s and a fifth of the sample was born in the UK, of which a small number were educated in their country of origin before returning to the UK for work.

## Outcomes

There was considerable diversity in the experiences of the interviewees. One key distinction was between migrants and those born and educated in the UK. Many of the former found work in low paid, unskilled sectors and while some sought to improve their situation (for example, via self-employment), others remained in low paid work. Seven profile groups emerged from the data: women who have never worked, lone parents, self-employed, workers in ethnically segmented labour markets, workers from declining industries, second generation and dual earner households. Some ethnic groups were over-represented in some categories, which had implications for retirement and pension decisions made by individuals from particular communities.

As well as work and education, household finances, attitudes to money and financial products had an impact on retirement planning. Those on low incomes tended not to be working and had large families and those well off were in work, had higher incomes and had fewer, if any children. Those with a sufficient income were aware of using a range of financial products, but there was little evidence of people using financial advice, and for people of all income levels, saving products used may not have been the most efficient.

Most said their knowledge of pensions was limited. There was a general awareness of entitlement to state pensions, but people could not always make the distinction between tax and NI. Among those with an occupational pension there was a general understanding of the principles of a defined contribution scheme. Dual earner households and those born in the UK had a relatively advantaged position but lone parents, women who had never worked and segmented industries faced challenges in access to pension schemes and saving enough to retire. Experiences of those who

were self-employed varied. Most interviewees stated that they would probably continue to work after the state pension age (mostly those self-employed, or in professional/managerial roles subject to health and employer willingness to continue to employ them), however, others stated they would prefer to retire.

Respondents suggested that it could be beneficial or helpful to have pension and retirement planning briefings for all employees alongside provision of other financial services.

### Limitations

No significant limitations were identified by the authors or the reviewers.

### Applicability to the UK

This study is set in the UK and so is by definition applicable to the UK although as a qualitative study it may not be generalizable to the groups it sought to cover.

### Bernard and Phillips (2007)

This (+) rated study set in two UK public sector organisations (an NHS Trust and a local authority social services department) used employee questionnaires and interviews in seeking to evaluate formal strategies used by people working who had domestic care responsibilities for older people to help them manage these dual roles. It also sought to identify the factors that help or hinder working carers in undertaking these tasks, and the roles that public, private and voluntary sectors can play in meeting the needs of working carers.

Among 8,953 carers receiving an initial screening questionnaire, 2,440 staff responded (27%), of which 365 were identified as carers of older people. 204 indicated willingness to participate further, of which 56% responded to a second, more detailed questionnaire, in which men were oversampled due to the low proportions of male carers identified through the screening questionnaire. From the detailed questionnaire responses, 48 working carers with an average age of 51 years were selected for interview with a balance across job type, hours of work and distance of travel from home to care recipient. 40 interviewees were female and 8 were male, reflecting the gender balance among staff. Interviews with carers were supplemented by interviews with senior and middle managers in each organisation.

### Outcomes

The study found that carers continued to work because of the importance of work to their identity, with a majority expressing a desire to continue to work even if they did not need to financially.

The majority of carers reported that they only used a minority of the policies available through their employer to support their dual roles, typically annual leave and time off in lieu. Some made use of options to work from home, to use the telephone for personal calls at work and information on eldercare made available by their employers. Time off in lieu was especially valued.

Key factors in implementing options valued by carers were sympathetic managers who were willing to support the policy and to match individual staff working time preferences with business needs, coupled with support from colleagues. This required development of trust between carers and managers over time. Due to the nature of their jobs, many carers had learned coping strategies to give them some relaxation time and were able to navigate health and social care systems effectively which eased the processes of managing their domestic caring responsibilities.

Barriers to using options such as carer's leave included a lack of understanding of such provisions and their individual eligibility. In addition, organisational cultures meant that some carers did not feel able to disclose details of their domestic caring responsibilities to their employers.

### **Limitations**

The nature of work undertaken by this group of carers may provide them with a relative advantage in coping with their dual roles. It is therefore uncertain that other groups in the workforce would be able to implement such coping strategies as easily or effectively, given the difficulties faced by carers in accessing employer support. In contrast, the occupational demands placed on the workers covered by this study may be higher than people working in other jobs, so it may be easier for employers in other occupations to implement policies and practices to support older working carers. In addition, participation in the study was voluntary and the study sample is heavily dominated by female workers, given the nature of the occupations studied. The study is also not able to shed light on the experiences of former workers who have left the labour market due to care responsibilities, so the sample may be skewed to those with a higher tolerance for combining domestic care tasks with employment.

### **Applicability to the UK**

The study has moderate applicability to the broader UK population but this is likely to be limited to workers in the same or similar occupations due to the nature of the work undertaken and competencies developed which may not be shared by carers in other jobs.

## Billett et al. (2011)

This (+) rated qualitative study of older workers (aged 45 and older) across a range of occupations and sectors in Australia found a minority (around 10%) reported that they experience workplace discrimination because of their age.

The study was based on 48 qualitative face-to-face or telephone interviews and two focus groups (each with six participants) drawn from respondents to a larger study. The research focussed on the extent to which respondents that they have been discriminated against because of their age and paid specific attention to access to training, promotion opportunities and job security.

### Outcomes

A minority of respondents reported incidents of age discrimination, 14% cited anecdotal or suspected age discrimination and 10% reported actual discrimination.

The respondents' perceptions were that employers tend to see older workers as less capable in terms of physical ability, capacity for learning and adaptability to change, but superior to younger workers in commitment, reliability and corporate knowledge.

Subtle instances of discrimination were reported by seven respondents who felt older workers would be more likely to be made redundant over younger workers.

Five respondent reported overt discrimination. Two reported older workers being made redundant because they did not fit the company's image. Some suggested certain industries, such as, marketing and hospitality were seen as younger industries and so older workers would be more likely to face discrimination in them.

Equal access to training and development was consistently reported across industries, although some felt negative perceptions of older workers lead some employers not to support development. Others felt businesses didn't see the need to train older employees because they were already 'good enough'.

Some said they were at a point in their career that they no longer sought or wanted advancement. Some felt younger employees were more likely to advance because the company felt they would be there longer.

## Limitations

The sample was not representative and apparently skewed towards professional and paraprofessional workers, although the study does not state how the sample is distributed between the groups mentioned.

In addition the review team noted that the focus on 'perceptions of discrimination' and not actual instances could be subject to bias.

## Applicability to the UK

The findings are broadly applicable to the UK but there may be unstated cultural differences which affect employer perceptions of older workers.

## Boreham et al. (2009)

This (+) rated study used semi-structured interviews with 16 people aged between 55 and 87 to identify the challenges of working past usual retirement age in the Scottish hotel industry. The sampling approach and response rate was not given. Each older worker was interviewed for up to one hour on issues surrounding their job and experiences in the work role. Interviews were audio recorded and transcribed for analysis. Departmental managers and HR staff were interviewed about the hotels' policies for employing older workers and their perceptions of their training needs. A thematic analysis of the older workers' interviews was carried out, and results were cross-validated with the manager and HR interviews

## Outcomes

Interviewees reported the following challenges: learning their jobs; coping with busy periods; adjusting to flexible work hours, and establishing working relationships with colleagues.

Older workers reported challenges in their jobs due to lack of training, particularly in IT. This was due to a presumption among managers that the core skills required in the sector are in customer service work which older staff would bring with them from previous work experience. Nevertheless, none of them expressed resentment about being let down, and none suggested that having to learn their jobs by their own devices had caused undue stress. All had worked to the best of their ability to tease out the whys and wherefores of their new employment, keen to succeed and confident in their capacity as self-directed learners. Indeed, meeting this challenge enhanced the sense of self-efficacy that lay at the heart of their job satisfaction.

Five older workers talked about problems of pressure of work; some reported being so busy that they could not perform as they would like. Others reported problems with management's expectation that they work flexible shift patterns. All the older

workers interviewed wanted to work reduced hours and to avoid night work, so that they could maintain a good work-life balance. Management leniency to deviate from strict contractual requirements in recognition of the needs and benefits of employing older workers was a factor which enabled provision of flexible working for this group of staff. They were happy to do this because they appreciated that slowing down with age is accompanied by a more contemplative life style which has its own benefits to the employer. One older worker, having retired after many years of relentless work in another industry, identified the advantage of slowing down as being more willing to listen. S/he commented that slowing down a bit and taking the time to listen to people enhanced on-the-job learning and collaborative working. The more reflective approach typical of the older worker was also more conducive to health and safety.

### Limitations

The author identified a perceived lack of transferability of the research findings because the fieldwork was specific to hotel sector and the relatively small sample size in Scotland. In addition, the review team noted that the interviews were transcribed and analysed by only one researcher so their validity and reliability of interpretation has not been checked.

### Applicability to the UK

The study is of uncertain applicability to the UK because it used a very small sample in only sector and the findings are therefore not generalizable to the rest of the hospitality sector or to the rest of the UK nations.

### Brown et al. (2006)

This (+) rated survey sought to examine the process, causes and outcomes of ill health retirement (IHR) among teachers in Scotland using a questionnaire by the Scottish Public Pensions Agency completed by 537 teachers who had retired due to ill health between April 1998 and March 2000. The likelihood of taking up employment after IHR was investigated.

The possible predictors of IHR were: sex, age, dependants, job group, managerial responsibility, type of health condition, health improvement and whether the individual wanted to work again. Age was recoded into ordinal categorical variables (less than 50, 50–54 and 55+). Job group was recoded as ordinary teacher and promoted teacher/lecturer (senior teacher, assistant principal teacher, principal teacher, assistant head teacher, deputy head teacher, head teacher, lecturer and senior lecturer). Cause of IHR was recoded as musculoskeletal, circulatory, mental disorder and other (all other causes of IHR). The relative chance of re-employment was initially estimated by unadjusted odds ratios (OR) calculated for each predictive

variable. Multiple logistic regression models excluding 'health improvement' and 'wanting to work again' provided adjusted OR and their confidence intervals. Odds ratios were calculated to give the relative chance of employment post IHR for each predictive variable. These are sex, age, dependants, job group, managerial responsibility, cause of IHR, health improvement and wanting to work again.

### Outcomes

The most common cause of IHR was mental disorders (37%), followed by diseases of the musculoskeletal system (18%). Eleven per cent of teachers attended an occupational health service (OHS) prior to IHR. Nine per cent of teachers were offered part time work and five per cent were offered alternative work. Sixty-three per cent of retired teachers stated their health had improved and 48% said they would like to work again. Thirty-six per cent of the surveyed teachers had found re-employment since their retirement. Multiple logistic regression analyses showed three variables as independent predictors of re-employment: gender (being male), having dependants, job group, and cause of IHR.

Multiple logistic regression analyses showed three variables as independent predictors of re-employment after IHR:

- having dependants (OR = 2.08 (1.24, 3.50),  $p = 0.006$ )
- being a promoted teacher,(compared to an ordinary teacher) (OR = 1.83 (1.07, 3.15)  $p = 0.028$ )
- whether the ill-health retirement was caused by mental ill-health (compared with a musculoskeletal condition) (OR = 2.71 (1.25, 5.85),  $p = 0.043$ )).

No evidence of independent association between the other variables and re-employment status was found.

### Limitations

The authors were concerned that the response rate was 53% (even though normal in questionnaire studies) and that there could be some concern about non-response bias. Due to the sensitivity of the information there may be under reporting of some of the responses if certain teachers who are working again did not choose to return the questionnaire.

## Applicability to the UK

This study was conducted among Scottish teachers thus the results are highly applicable to teachers in the other parts of the UK.

## Buxton et al. (2005)

This study (rated +) aimed to compare the health status of economically active 50- to 64-year-olds with economically inactive former workers in Great Britain.

The study is based on the Psychiatric Morbidity Survey of Great Britain, carried out by the UK Office of National Statistics in 2000. The survey used a stratified sampling approach among people living in Great Britain, aged between 50 and 64. The achieved sample was 1,875, a response rate of 67%. The authors constructed models using logistic regression, to estimate the odds ratios of being early retired to being in work, for common mental disorders and physical complaints for men and women.

## Outcomes

Numerous health problems were all significantly more common in early retired men than in those in the labour force, but only arthritis and rheumatism, heart and circulatory system complaints and digestive system complaints were significantly more common in early retired women.

In multivariate analysis, for men, the odds of being early retired were associated with age, tenure, mental health and physical health variables. In fully adjusted regression models for men, having a generalised anxiety disorder was associated with an odds ratio of 3.1 (95% CI 1.2–7.8) for being early retired, and having a depressive disorder was associated with an even higher odds ratio of 4.3 (95% CI 1.7–11.0). The odds of being early retired were also greater in those with arthritis and rheumatism, back and neck problems, other bone and joint problems and heart and circulatory system complaints. For women, being early retired was associated with age, tenure and some physical complaints. None of the three most prevalent mental disorders had a significant association with being early retired. The odds of being early retired increased with age and were smaller in those who owned a house with a mortgage. Women were also more likely to be early retired if they had back and neck problems and heart and circulatory system problems. In models including a count of physical diseases, rather than individual complaints, having two or more conditions was associated with an odds ratio of 5.7 (95% CI 3.4–9.4) for men and 2.4 (95% CI 1.5–3.9) for women.

The analyses showed that early retiree men and women both reported poorer general health, more complaints and more difficulties with daily activities. However, only a minority considered a health problem to be their main reason for

not working. The most important finding, however, was that early retired men were very much more likely to have neurotic disorders than those remaining in the labour force. In women, odds ratios for neurotic disorders did not reach statistical significance, although, association of depression in the early retired is near significance.

### Limitations

No limitations were identified by the authors, although the review team noted that the survey data somewhat dated (2000). Furthermore, some potential confounding factors (physical problems) were acknowledged but not controlled for.

### Applicability to the UK

The study is set in Great Britain and although the findings are based on data that are almost 15 years old, they are still relevant and applicable

### Cameron and Waldegrave (2010)

This survey-based study rated (+) examined the relationship between work, education and a range of other factors and well-being among a representative sample of New Zealanders aged between 40 and 64.

The Enhancing Wellbeing in an Ageing Society (EWAS) study programme involved two large-scale, national, random sample surveys of independent and semi-independent New Zealanders between the ages of 40 and 64 years, and 65 and 84 years. This study examined the survey data from the second group.

The survey was conducted among people drawn from a random sample of landline telephone numbers over the whole of New Zealand was provided by Yellow Pages Data Solutions ([www.yellowpagesgroup.co.nz](http://www.yellowpagesgroup.co.nz)) from the electronic white pages, and potential respondents were phoned using Computer Assisted Telephone Interviewing (CATI). The survey had 1,958 respondents, a response rate of 27%. The survey results were re-weighted to make them representative of the survey population.

The survey instrument was developed after extensive consultation between the research partners, the University of Waikato and the Family Centre Social Policy Research Unit and a considerable number of stakeholders contacted by the Family Centre. Several of the questions (such as those in the health module) were drawn from internationally used research instruments. Further questions were developed with reference to scales and indices used in the literature, while others have been tested extensively in surveys administered by research team members on other projects. Two measurements of overall wellbeing were used: the wellbeing question

from The World Values Survey (WVS), and the World Health Organisation's Quality of Life indicator (WHOQOL)

## Outcomes

Among the 40-64 year-old New Zealanders surveyed, 5.9% responded that they were already retired. The most cited reasons for retirement among midlife New Zealanders were poor health (35.6%), 'wanted to do other things' (23.8%), and 'don't need to work' (10.4%), family responsibilities (6.2%), and disablement or injury (5.9%). This is quite different from the responses by older New Zealanders, where most retired because they 'wanted to do other things' (27.5%), or they 'reached official retirement age' (26.3%). Of those who were retired, 27.7% indicated that they had undertaken some form of work since their retirement. Age, gender, and education were not significantly associated with the decision to work after retirement; unlike the older sample where work after retirement was significantly more likely to be undertaken by the higher educated. Work after retirement among midlife New Zealanders included a narrower range of activities than did work after retirement for older New Zealanders. Some form of voluntary work was engaged in by 15.3% of the retired midlife New Zealanders, with the older cohorts engaging in more voluntary work than the younger cohorts.

The mean age at which the midlife New Zealanders intended to retire was 63.6 years. Many midlife New Zealanders were preparing financially for their retirement – of those surveyed, two-thirds had some form of private retirement savings. There were no significant differences in the probability of having some retirement savings by age cohort, and men were slightly more likely to have retirement savings than women. However, the higher educated were significantly more likely to have retirement savings than the lower educated ( $p < 0.0001$ ); of those with primary school education only 44.6% reported some retirement savings, compared with 66.3% of those with secondary school education, 67.1% of those with a vocational qualification, and 77.8% of those with a university qualification.

Overall levels of satisfaction with work were relatively high, with 87.4% of respondents reporting they were satisfied with work (and 12.6% reporting they were dissatisfied with work). However, the level of satisfaction was much lower among midlife New Zealanders than among those aged 65 to 84, where 97.2% were satisfied with work. There was no difference in satisfaction with work by gender or education. Reported satisfaction with work among midlife New Zealanders was significantly associated with their current or most recent type of job, with satisfaction highest among full-time unpaid family/farm business workers (94.9% satisfied) and the fully retired (89.6%), and lowest among part-time unpaid family/farm business workers (80.4%), homemakers (82.8%), and the 'other' category (70.0%) (no p-values reported). There were no significant relationships between retirement intentions and satisfaction with work. Those unsatisfied with work were

no more likely to be intending to retire early or to be looking forward to their retirement, than those who were satisfied with work.

### Conclusions

Overall the study found a positive relationship ( $p < 0.001$ ) and between higher levels of wellbeing and:

- **Health:** Experiencing good physical and mental health;
- **Education:** More likely to have higher qualifications;
- **Work:** In current or recent employment;
- **Economic Living Standard:** More likely to have a higher personal income, higher asset wealth, not going without essential items and services, and owned their own home. There was a negative association with those who considered they had inadequate income to afford necessities.

The study found a negative relationship ( $p < 0.01$ ) for men between higher levels of wellbeing and more periods outside the workforce.

### Limitations

No limitations were identified by the authors. The review team noted that a new State superannuation scheme (KiwiSave) was brought in during the course of the study which might affect New Zealanders views about retirement.

### Applicability to the UK

The study is set in New Zealand with a representative sample and is mostly applicable to the UK

### Carmichael et al. (2013)

The purpose of this (+) rated qualitative study was to provide insights on the relationship between health and employment in older age.

A qualitative study of 56 people (aged 50-68) was carried out in the North West of England. Semi-structured interviews were framed by a 'life-event calendar' to drive the lines of inquiry in the interview. The calendar was developed to provide visual cues and historical markers to facilitate the recollection of both occupational history and life events sequentially. Work histories were recorded in reverse order from present day to first ever job (type of job, employment status, location, duration). Respondents were asked to report their current health status by selecting between health categories of excellent, very good, good, fair and fairly poor to poor.

Participants were asked a series of open-ended questions about their experiences in the labour market, the influences on their participation over time and their views on current anti-age discrimination policy.

### Outcomes

Health was one of the most commonly cited reasons given for a change in employment. Nine interviewees had retired due to health problems, 11 said their employment had been adversely affected by ill-health. These figures were contextualised with reference to BHPS respondents who reported that they had left a job in the previous year prior. Employment participation rates were significantly lower for all respondents reporting ill-health who also reported lower than average subjective well-being. The negative relationship between ill-health and employment participation was strengthened by age; older respondents with equivalent health status are significantly less likely to be employed. Interviews showed that mental health issues appeared to affect men disproportionately: three females compared to 12 men spoke about work-related stress. Work was perceived to have an intrinsic value in people's lives, often defining who they were.

Overall this evidence shows that the relationship between employment status and health is complex and individualised and may exhibit both positive and negative dimensions. There are also potential feedback effects from health to work. Whether the effect of ill-health on employment is accentuated by age is difficult to discern from the responses of the interviewees since all the sample members were 50 or over. The effects of worklessness on health and well-being in this study were generally perceived to be negative. For some of the interviewees who suffered health problems because of the inflexibility of the organisation or workplace, the only option was to leave their employment. One implication is that the participation rates of older people could be raised through the introduction of more flexible work practices. Overall, the findings confirm that ill-health is an important determinant of an older person's labour supply and the type of work they do. Ill-health can induce withdrawals from employment manifested in redundancy, job loss and early retirement.

### Limitations

The study took place in North West of England which may affect generalisability of the findings. The sampling method was participant driven, which could have caused selection bias as those who had experienced health problems may have been more likely to participate.

## Applicability to the UK

Although the study took place in one area of the UK and the results may not be representative of other parts of the country, the study is generally applicable to the UK

### Cebulla et al. (2007)

This (++) rated study based on analysis of four national UK datasets sought to compare the experience of the 'oldest' workers with those pre-state pension age in terms of the extent to which workers beyond the state pension age make use of flexible working options and their role in facilitating employment.

The analysis was conducted on individuals from the 2005 UK Labour Force Survey (LFS) including 1,200 over state pension age, individuals from the 2004 Workplace Employee Relations Survey (WERS) of which were 200 were over state pension age, the 2004 British Household Panel Survey and UK data from the 2004 European Social Survey, of which on just over 70 people were over state pension age. Two comparison groups of individuals were composed, each of which worked at least 5 hours per week. The first group was made up of older workers within five years of the state pension age (men 60-64, women 55-59) and the second group was made up of workers no more than five years older than the state pension age (men 65-69, women 60-64), although in some cases the upper age limits were relaxed to generate a larger sample of workers in the older age categories.

### Outcomes

A significantly greater proportion of workers after state pension age were found to be travelling short distances to work than those pre- state pension age. The authors comment that this may indicate the importance of work locations to decisions about employment after state pension age and that workers may wish to focus on job opportunities which are close to home.

Forms of flexible working which were widely available included flexi-time, job-sharing, home working and changed patterns/hours of work. Those people working after the state pension age were more likely to be working in an establishment with policies offering any of the working time flexibilities except the option to increase hours or change a work pattern. Analysis of the WERS and LFS data that older workers rarely used flexible working options, although they were more likely to work in establishments where such options were available. The most commonly used option was flexi-time. The proportions using such options (with the exception of part-time working) were lower among women older than state pension age than those before state pension age.

## Limitations

The authors note that quantitative surveys are not imperfect in capturing the implementation of flexible working options and may not detect ad-hoc and informally negotiated arrangements. The review team noted a need to explore why flexible working options are not taken up by older workers even where such policies are offered by employers.

## Applicability to the UK

The findings are widely applicable to the UK because the study is based on multiple sources of nationally representative survey data.

## Clendon and Walker (2013)

This (+) rated study set in New Zealand used an online survey to explore the experiences of nurses aged at least 50 who undertake shift work in order to understand more about their perceptions of how shift work affects their health and well-being, and what kind of shift work is detrimental to a measure of good health.

The sample was drawn from the New Zealand Nurses Organisation (NZNO) with 3,273 responses and a 58% response rate. Eighty per cent of respondents had worked in nursing for at least 20 years. They were asked for their perceptions of the physical and mental effects of shift work. A validated health score (EQ5D) was used to assess health measures. Analysis was segmented by marital status, and part-time/full-time hours of work. Respondents also offered free text responses about the impact of shift work on health and social functioning.

## Outcomes

There was an equal distribution of participants who felt shifts worked well for them and those who felt shifts were unsuitable. Offering multiple options in the survey meant that some who thought shift work suited them may have also felt these patterns of work to be detrimental to their health. Those respondents with partners were more likely to cope with shift work. The authors suggest this may be due to single people forming social relationships within wider circles, and maintaining them can be disrupted by shift work. Single respondents found shift work to suit them, but were worried that their tiredness would lead to mistakes. Both single and partnered nurses thought shift work had a negative impact on health. Part-time workers indicated coping better with shift work than full-time workers, but would rather not work shifts.

The most common comments on how shift work impacted social/ family relationships were about the impact on ability to socialise with friends, take part in

sports activities, or night-classes/ activities involving long-term commitment, long-term physical and mental health, fatigue and sleep disruption. Although the ability to cope with shift work reduced with age, interviewees reported that various coping mechanisms developed with experience to cope with shift work. Some had been doing shift work for long periods of time, and accepted it as part of their everyday lives, although others resented this.

A fixed shift schedule was found to be easier to cope with than scheduled and rotating rotas which work to ensure maximisation of staff availability. Rotating shift patterns created 'substantial struggles' for those respondents affected by them. Self-reported quality of life in relation to shift work was assessed using paired two-tailed t-tests and while there was some evidence of association, there was no statistically significant relationship between those working regular hours and those working scheduled and rotating shifts or permanent night shift in terms of health-related quality of life, levels of pain, anxiety or daily living ( $P = 0.07$ ).

### Limitations

The authors noted that only those nurses who held valid e-mail addresses were surveyed which potentially biased the sample. Those that reported more extreme views could have also been more likely to respond affecting representativeness of the research. The research team notes the possibility that those nurses who have adapted better to shift work are most likely to make up the sample.

### Applicability to the UK

The study is partly applicable to UK as it was conducted in New Zealand where healthcare practices are similar to UK setting but the study notes trends towards use of flexible shift systems in New Zealand which may not reflect practice in the UK.

### Cobb-Clark and Stillman (2009)

The aim of this (+) rated study set in Australia was to develop a deeper understanding of the retirement plans of individuals in each subgroup and examine the determinants of retirement expectations using data from a longitudinal survey of Australian households.

The Household, Income and Labour Dynamics in *Australia (HILDA) Survey* encompasses approximately 13,000 individual respondents living in more than 7,000 households. The authors used the variation in responses to questions about retirement planning across survey waves to classify individuals into four subgroups: (i) those with uncertain plans (ie those reporting 'do not know' in both waves 1 and 3); (ii) those who do not plan to retire at all (ie those reporting 'never' in both waves 1 and 3); (iii) those who have delayed retirement planning (ie those reporting 'do not

know' in wave 1 and something else in wave 3); and (iv) those who have reported a numeric expected age in both waves 1 and 3, who are referred to as individuals with 'standard retirement plans'.

The analysis focussed on men aged 45–55 and women aged 45–50 in the first year of HILDA to avoid the selection bias associated with early retirement. Individuals who either did not respond in both waves 1 and 3, who report that they never worked, or who report being retired in either wave were excluded from the analysis sample. The eventual sample comprised 840 men and 462 women.

## Outcomes

Approximately two-thirds of the men and more than half of the women in the sample reported a numeric expected retirement age, referred to as having a standard retirement plan. More than 20% of middle-aged Australians seemed to have delayed their retirement planning and approximately 10% either did not know when they expect to retire or expected to never retire.

Uncertainty in retirement planning was associated with more uncertain employment conditions, while those who anticipated working forever appeared to do so out of concerns about the adequacy of their retirement incomes rather than out of increased job satisfaction or a heightened desire to remain employed.

Men altered their retirement plans in response to labour market shocks, while women were more sensitive to their own and partners' health changes. These results point to a great deal of uncertainty in women's retirement planning, which the authors say is perhaps not surprising given the complexity of women's labour supply decisions more generally.

In wave 1 approximately 55% of men and women were under the age of 45 and consequently are not asked any of the retirement questions. Overall, one in four men (26.2%) was over the age of 45 and not yet retired, while 18.2% of men indicated that they had retired from the labour force. Retirement was somewhat more common among women, with 21.2% reporting they were retired, while 2.7% of women report that they had never worked.

Among men aged 45–49, 6.1% reported being retired. Similarly, 11.3% of men aged 50–54 reported being retired, while retirement rates reached 19.9% for men aged 55–59. The retirement rates for women at the same ages were 8.8, 17.6 and 41.7%, respectively.

The results demonstrated that expected retirement ages were highly clustered at five-year age intervals, that is, at ages 55, 60 and 65. A small proportion of individuals also report expecting to retire at ages 50 and 70 and a few people report expecting to retire at intermediate ages. Some non-retired men (eight per cent) and

women (five per cent) reported that they 'never' expect to retire, while in wave 1 as many as one in five men and one in three women reported that they 'do not know' when they expect to retire. In contrast, the ages at which individuals report having retired were distributed much more continuously. Middle aged men reported wanting to retire at age 57.5, while women would have liked to have retired somewhat earlier at age 55.4. More than one in three middle-aged Australians anticipated retiring when they would like, while approximately 60% expected to retire later than they desire. Less than five per cent expected to retire earlier than they would like suggesting that few people saw labour market or health factors as a constraint on their continued employment.

Retirement expectations, on the other hand, were strongly related to one's current labour market position. Middle-aged Australians who were either not employed or self-employed were substantially less likely to have formed expectations about the age at which they would leave the labour market. For example, the self-employed were significantly more likely to report uncertainty about their expected retirement age ( $p < 0.1$ ) and more likely to have failed to plan for retirement or never plan to retire ( $p < 0.05$ ).

Thus, the authors conclude that anticipating the age at which one will leave the labour market may be easier for workers in jobs with well-defined superannuation benefits and standard retirement ages. Retirement expectations were also related to lifelong labour market attachment. Individuals with 10 years of additional work experience were six percentage points more likely to have standard retirement plans ( $p < 0.05$ ) and five percentage points less likely to have delayed retirement plans ( $p < 0.1$ ).

Retirement planning was not significantly related to individual's job satisfaction. Individuals who were uncertain about their retirement plans or who never expected to retire were not significantly happier in their jobs than the majority of middle aged Australians forming standard retirement plans. However, the level of satisfaction with finances was lower among these individuals than among those planning to retire at standard ages. Although those expecting never to retire were significantly more satisfied with their health, those who delayed their retirement planning have significantly lower levels of health satisfaction, as well as lower life satisfaction, more generally.

Results indicated that men's retirement plans were more sensitive to labour market shocks, while women appeared to alter their expectations regarding retirement in response to negative health shocks that they – or their partners – had experienced.

## Limitations

The authors point out that HILDA is a representative sample of Australians aged 15 and older, and there were relatively few individuals retiring during the existing waves of the survey, making it difficult to directly study retirement behaviour. A fuller understanding of the effect of age on retirement planning will require more waves of the HILDA, to observe the completed retirement behaviour of more cohorts of Australians.

The analysis considered broad forms of retirement plans, but does not specifically address the question of whether health status is related to an expectation of retiring at a younger or an older age. In addition the review team noted that the analysis did not seem to take into account different sectors/type of work

## Applicability to the UK

This quantitative study is set among a large representative sample of older workers in Australia and is partially applicable to the UK.

## Crawford et al. (2010)

This is a systematic literature review which aimed to identify the health safety and health promotion needs of older workers rated (+).

The review focussed on the following research questions:

- What are the health, safety and health promotion needs of older workers?
- How are those needs being addressed?
- Do safety initiatives affect health, and vice versa, in this group of workers?
- Is the research reviewed applicable to the UK situation?
- What data gaps are there?

Search terms were collated to describe the population, intervention, outcomes, study designs and exclusion and inclusion criteria. The review focussed on studies covering participants who were aged 50 years and over, employed and/or economically active.

Seventeen databases were searched using the search terms, together with five websites.

An initial screening process was carried out, whereby the title and abstract of candidate papers were screened against the inclusion criteria. Where it was unclear from the title or abstract whether a paper should be included, a conservative

approach was taken and the full paper was ordered for review. During the screening process a further five papers were identified as possibly relevant from the references in other documents.

On completion of initial screening, abstracts were reviewed and compared with the inclusion and exclusion criteria. Where the abstracts fitted the inclusion criteria, full documents were obtained and reviewed, and data extracted. Data extraction was carried out for all papers included in the review. The literature was split into research that explores the impact of age-related change and research providing data on the effectiveness of interventions.

For the included studies, a quality assessment was made based on the following criteria:

- \*\*\* Strong evidence, provided by consistent findings in multiple, high quality scientific studies
- \*\* Moderate evidence, provided by generally consistent findings in fewer, smaller or lower quality scientific studies
- \* Limited or contradictory evidence, produced by one scientific study or inconsistent findings in multiple scientific studies
- - No scientific evidence.

Some 60 studies were included in the review.

## Outcomes

### *Physical change with age*

The review found that physical and mental changes associated with ageing, include a reduction in aerobic capacity and oxygen uptake, an increase in BMI, and a reduction in muscle strength; did not necessarily have a workplace effect. Some maintenance of aerobic and muscular capacity was possible but no individual, regardless of age, could work to 100% of capacity all the time.

### *Physical capacity*

Where individuals were no longer able to carry out job demands, it was important to establish whether this was because the job itself was too demanding, or whether it was down to the individual. Objective assessment was necessary to tell whether the job demands are too great. Consideration of the whole workforce was important; ergonomic designs needed to be developed that allowed the majority to continue working. Changes which might alleviate work demands included ensuring recovery time between tasks was adequate, that a risk assessment had been carried out, that

risk reduction measures had been taken, and that there was a good reporting route for individuals who have identified problems.

### *Shift work*

Working over 60 hours per week in a physically demanding environment had been found to increase the risk of adverse outcomes in older workers. It was recommended that if shift work was necessary, shifts were designed using good ergonomic criteria, as well as: the limitation or cessation of night work for workers aged over 45, giving older workers priority to transfer to day work and a choice of preferred shift, reducing workload, shortening working hours and/or increasing rest periods, arranging more frequent health checks, giving proper counselling and training on coping strategies concerning sleep, diet, stress management and exercise. Noise reduction measures could reduce the likelihood of serious hearing loss, and age-related vision problems associated could be corrected via lighting and the use of glasses or contact lenses.

### *High-risk industries*

It might be necessary to consider more frequent health assessments of staff to ensure that they were able to continue to do their work safely. These must be objective and relevant to the work involved.

### *Psychological and psychosocial factors*

Ageing slows reaction times, but increases knowledge and accuracy. Mental impairment was not necessarily a problem over 50s; most showed no mental impairment before the age of 65, and one study demonstrated that 95% of those aged over 65 showed no impairment in intellectual functioning. Changes were typically offset by older workers' greater knowledge base and experience. Some evidence suggested long-term maintenance of health involved consideration of diet, physical, and mental activity; continued training and intellectual stimulation was important for all workers. Maintenance and updating of skills was equally important for older workers, but the style of training may need consideration. There was limited evidence that lack of social support was linked to emotional exhaustion.

### *Safety*

Although younger workers were more at risk of accidents, older workers were more at risk of fatal injury and took longer to recover. Employer engagement was vital in ensuring successful return to work. Accident prevention in this age group and accident analysis were essential tools in reducing accidents, but risk reduction measures must be made accessible to the whole working population.

### *Occupational health interventions*

Ill health was not an inevitable outcome of ageing. There was an increased likelihood of developing disease with age, but disease could be treated and controlled, workplace adjustments could be made, and health assessments could be carried out if required. The highest prevalence rates for musculoskeletal disorders occurred in people aged over 55; this might be associated with cumulative exposure rather than the direct effects of age. Reporting of stress, anxiety, and depression was higher in the 45–54 age group than in the rest of the population. Again, it was unclear whether this was an age effect or due to cumulative exposure. However, the data suggested workplace intervention action should be prioritised for the over-50s.

### *Health promotion opportunities*

Occupational health was seen as an important factor by older workers, but personnel leadership, professional skills, being appreciated and having a good atmosphere at work were also important. Increasing physical activity to reduce health risks and increase aerobic and muscular capacity was important, as well as improvements in mental health.

### **Limitations**

The data gaps identified in the review included a lack of longitudinal or good quality interventional research. There was a clear need for more in-depth analysis of accidents, rehabilitation and return to work for older workers. In terms of occupationally related disease, a better understanding was needed of the prevalence and possible intervention strategies for the reduction of current self-reported levels of musculoskeletal problems and stress, anxiety and depression. The research also highlighted a widespread failure to use objective, occupationally relevant measures for both physical and mental capacity.

### **Applicability to the UK**

The findings from the review are applicable to the UK.

### **Davey et al. (2008)**

This mixed method study rated (+) and set in New Zealand aimed to understand how individuals make choices about labour-force participation as they move through their 50s and 60s, how attitudes surrounding retirement changing, and what incentives and disincentives are operating, and how personal circumstances with family/ caring responsibilities affect working lives, productivity and career aspirations, incomes and ability to plan for retirement.

The study used a review of existing literature, data from two large scale national surveys (Health, work and retirement (HWR) study and EEO Trust's work and age survey) of people aged 55-70, and qualitative interviews of 60 older workers who participated in HWR survey.

### Outcomes

In the HWR survey, little difference between working, retired, partially retired groups in terms of influences on retirement decisions was found. The most important reasons for majority (across all groups) were personal factors eg health/ wanting to do other things. Gender differences in responses are greater than those between groups based on job/ retirement status and findings are relational and contingent upon circumstance, eg women more likely than men to give consideration to health of family members when their partner is about to retire and more likely to think not being able to find work and employers' policy on older workers to be an influence.

Health status ranked as an important influence on retirement decision in HWR and EEO trust studies across non-retired and retired groups.

Financial influence also had importance in retirement decision-making. Those with higher incomes have greater choice whereas for others decisions are more strongly influenced by income requirements.

### Limitations

This study did not perform critical analysis of the surveys and could have used the evidence from the literature more extensively in order to make comparisons and strengthen conclusions.

### Applicability to the UK

The study was conducted in New Zealand at the time when similar policy discussions were also held in the UK. The results are partially applicable to the UK setting.

### Davies et al. (2013)

This (+) qualitative study used an online survey of managers in UK universities sought to describe differences in line managers' perceptions about retirement management and identify potential sources of bias in decision-making surrounding their decision-making.

The sampling approach was not stated but the survey obtained 129 responses from staff with line management responsibilities in 29 universities and achieved a response rate of 22%.

### Outcomes

Around 70% of line managers felt they had a moderate amount of discretion in managing the retirement process and most perceived it was a shared responsibility with HR staff.

Nearly half of line managers had received no training about operating without a fixed retirement age and nearly 45% of line managers had received no training around the wider implications of retirement.

Eighty-three per cent of line managers considered that that they had a moderate of support or more from their own line manager to find flexible working solutions for older workers. Ninety per cent of respondents felt that their own line managers would provide moderate or higher levels of support for decision-making about retirement. A series of factors were associated with managers believing they had some responsibility in the timing of an employee's retirement:

- being female (2.09 times more likely than for males)
- being aged over 50 (2.49 times more likely than those aged 50 or under)
- experience of managing employees aged over 65 years (2.18 times) more likely than a manager without experience of managing employees aged over 65 years actors

### Limitations

The limitation identified by the review team was the research setting in a single type of public sector organisation so the findings are not fully generalizable. Employee perspectives were not included but gathering their views would help provide triangulation of the results.

### Applicability

The findings are partially applicable to the UK but the setting in only one type of public sector organisation limits their generalisability.

### Dewhurst et al. (undated)

This (-) rated pilot study in the UK retail and legal sectors set out to examine managerial attitudes towards older workers and handling the abolition of compulsory retirement ages.

The study used eight interviews with senior managers with HR responsibilities divided equally between legal and retail sectors in Manchester, supplemented with documentary analysis. The sampling source and approached is not stated.

### Outcomes

Managers perceived that older workers do not perform as well as younger workers, and are viewed as a cost. One respondent suggests that, financially, older workers, are costly and what they are paid 'in comparison to [their] current performance doesn't match up'. Older workers are also considered to be able to contribute fewer hours to the workplace. This is attributed to a form of burn-out.

Older workers were often referred to as lacking in enthusiasm and adaptability. Older workers 'had not adapted and changed', whereas younger workers were seen as having more 'energy' as well as an up-to-date education. This is also sometimes a problem in relation to more senior worker. Older workers were also considered more inflexible than younger workers: 'One of the difficulties is that a lot of them are full-time and a lot of them do the hours that don't suit the shopping patterns of our customers'.

Despite these negative perceptions, many suggest older workers are valuable due to level of experience and the 'great value in having that final opinion'. One respondent noted that 'with law you can keep going as long as your mind/brain keeps working. It doesn't matter what the rest of your body is doing'. In retail, older workers were described as 'some of our best people here, because it's all generated around service and how they interact with customers, some of our best people will be in the bracket of being 50+. And it fits with the dynamic. You always try and think, as a store manager, what will try and resonate with the people who shop here'.

While flexibility is often hailed as a solution to the retirement dilemma, the legal organisations do not consider flexibility to be an option within their current business models and organisational structure and culture. Part time work is viewed as unworkable by many organisations as it interfered fundamentally with client expectations. By contrast, flexibility is central to the operation of organisations in retail. The large range of tasks available in the organisation appears to play a role in the ability to be flexible in terms of retirement.

### Limitations

The authors note that there is a lot more work that needs to be done to understand the different pressures and responses that shape how firms deal with retirement issues by considering a greater range of organisations as well as a greater range of industrial and commercial sectors.

## Applicability

Due to the small sample size and lack of clarity on sampling frame and choice of firms, the results are not necessarily generalizable to firms in the wider legal and retail sectors. The focus on two sectors means the results are not generalisable to all UK organisations.

### De Vaus et al. (2007)

This (+) rated study using panel data from Australian workers examined whether workers who transition to retirement gradually have better outcomes than those making an abrupt transition and the role of perceived control in influencing outcomes.

The sample consisted of 358 individuals initially selected from a broader study according to their type of transition to retirement and used hierarchical regression analysis accounting for variables including gender, marital status, white/blue collar occupations, level of education, part/full time working and health status. Measures were taken at four time points: pre-retirement, baseline (with a median of seven days prior to the last working day), and after 12 months, 24 months and 36 months post-retirement. Questionnaires were used pre-retirement and telephone interviews were used for most participants post-retirement.

The outcomes measured in the analyses were: positive and negative affect (10-item short form, Lawton et al. 1992); self-image, comprising four items from the Rosenberg (1965) self-esteem scale, three items from Adelman's (1994) self-efficacy scale, and four items from Scheier and Carver's (1985) optimism scale 1985; life satisfaction (Campbell, Converse and Rodgers 1976); and marital cohesion (Spanier 1976). The seventh outcome, retirement adjustment, was adapted from a study of retired clerics (Schultz and Schultz 1997).

Retirement transitions were categorised as follows. 220 participants with *abrupt pathways* were employed full-time (N=166) or part-time (N=54) at baseline, but had no paid employment during the three year follow-up. The 138 participants who followed a *gradual pathway* to retirement included 50 people who retired gradually to no work, 44 who took up work in retirement after a period of no work, and 44 who decreased their work hours or commitment.

The degree to which retirees had control over the timing of retirement and the way in which they retired was assessed through five survey items eg 'How much say did you have in the timing of retiring/leaving your job?' rated on a four-point scale from '1' (complete say) to '4' (no say at all).

## Outcomes

After controlling for sex, age, marital status, job status, financial status, health and scores at baseline gradual retirement was positively associated to a small extent with self-reported improved health 12 months into retirement (difference between T0 and T1:  $\beta = 0.14$ ,  $p < 0.01$ ) but those who retired gradually were significantly less satisfied with their retirement after a year than those who had retired abruptly ( $\beta = -0.12$ ,  $p < 0.05$ ), again to a small extent. Whether or not a person retired gradually or abruptly made no difference to the level of positive or negative affect, life satisfaction, self-image, or marital cohesion.

Overall, the degree to which retirees had control over the timing of retirement and the way in which they retired had relatively strong effects on life in retirement compared with whether they retired gradually or abruptly.

Positive coefficients indicate that those who exercised high choice and control had better retirement outcomes than those with little choice. Twelve months after retiring, those with greater control displayed significant increases in positive affect ( $\beta = 0.12$ ,  $p < 0.01$ ), decreases in negative affect ( $\beta = 0.15$ ,  $p < 0.01$ ), and increases in life satisfaction ( $\beta = 0.15$ ,  $p < 0.01$ ). They were also more likely to say that they had adjusted well to retirement ( $\beta = 0.39$ ,  $p < 0.001$ ).

## Limitations

No limitations were identified by the authors, but the review team noted that the study had a relatively limited sample size which was drawn from one panel study, narrow in target and low numbers.

## Applicability to the UK

This quantitative study is set among a sample of older workers in Australia and is partially applicable to the UK.

## Dymock et al. (2012)

This (+) rated study used a series of semi-structured interviews and an online survey of white collar employees aged at least 45 in government organisations to understand further how older workers view training opportunities and engage in them.

The survey received 268 responses of which 66% were from women. Seventy-five per cent of respondents were aged at least 50. The overall response rate was not stated. Responses were analysed using SPSS.

## Outcomes

Nearly two thirds of older workers believed they had the same opportunities to train and learn as younger workers and regarded themselves as being as adaptable as younger colleagues. About equal shares (40%) were interested, or not interested in undertaking retraining in their current job. There were gender variations with 88% of women reporting a belief that they were not too old to learn compared 76% of men.

Eighty-nine per cent of respondents were prepared to undertake training and development to enable them to move into transitional employment as they progressed towards retirement. Those in managerial/professional roles or possessing a degree were most likely to perceive this as an opportunity for learning, development and career change.

## Limitations

The review team noted that the study was limited to white collar workers in the public sector and there was a gender imbalance in respondents with women outnumbering men by 2:1, probably reflecting the employee profile in those workplaces.

## Applicability to the UK

The survey is likely to be partially applicable to the UK but only within similar organisations in the public sector.

## Employers Forum on Age and IFF Research (2006)

This (-) rated study used interviews and workshops with HR managers in seven large employers to investigate barriers and potential solutions to implementing a flexible retirement policy, combined with a literature review. The latter does not fall within the scope of the evidence eligible for this review and has not been included in the following summary.

Employers selected were members of the Employers Forum on Age (EFA) or DWP Age Positive Champions. Six employers had implemented flexible retirement, usually as part of their work-life balance policies with the option available to all staff and one was considering implementing it. The primary option offered was usually flexible working time, with a minority of employers offering sabbaticals, community/voluntary service or annualised hours contracts.

## Outcomes

Organisations reported that enabling factors in implementation were fostering approaches to normalise flexible retirement as part of broader diversity policies, as was training line managers to operate performance reviews fairly and equally for older and younger staff. Other enabling factors included widespread communication, in particular using champions to brief employees, avoiding complicated jargon concerning pensions when disseminating information to staff, signposting employees to sources of financial advice to enable them to make informed choices about retirement options, and awareness of costs and benefits to the organisation.

Barriers to implementation included negative attitudes of managers, difficulties in communicating working time options available in a way that was clearly understood by staff, overcoming jargon associated with financial aspects of retirement such as pensions planning for staff and earlier rather than later discussions between HR and pensions fund staff, concerns about managing employee expectations that flexible working would be available to all staff seeking phased retirement, employee reluctance to downshift and reduce responsibility.

## Limitations

The study was rated (-) because a small number of employers were interviewed, all of which had an interest in the issue of older workers, so the findings cannot necessarily be generalised. In addition no data on older worker participation in the schemes or any relevant attitudinal, behavioural or organisational outcomes was collected. This makes it difficult to assess the relative weight of each barrier or enabling factor in contributing to employer perceptions of the relative success of the flexible retirement policies.

## Applicability to the UK

The findings are partially applicable to the UK but generalizability is limited by the very small sample of employers, all of whom had a pre-existing interest in the subject area. In addition, the research was undertaken prior to the recession and reforms to pensions legislation and the abolition of the default retirement age, which may have shaped wider employer views on these issues.

## Enright and Scobie (2010)

This study (rated +) is based on an analysis of the results of a survey designed to investigate the factors surrounding work and retirement for a sample of New Zealanders aged 55 to 70.

The primary objective of the study was to assess the importance of a person's health status on their participation in the labour market and on the related decision as to retirement. In 2006, a postal survey was conducted among working New Zealanders drawn from the electoral roll (sampling method not explained) aged 55 to 70. The survey achieved 6,662 respondents with a reported response rate of 62%.

### Outcomes

The analysis found that those working had a lower living standard than those retired. Among both working and retired, better health measures are associated with greater satisfaction with current material living standards. Similarly, better health was associated with the expectation of higher living standards in retirement. Furthermore, relative to working Europeans, working Maori expect to have higher living standards in retirement.

In all the estimated models, health status was significantly associated with the decision to work. This result held regardless of which measure of health was used. In contrast, wealth was not identified as having a significant effect. A 10% decline in health below the mean score was associated with a fall in labour force participation of three to four percentage points. A decline of this magnitude is clinically significant. At 20% below the mean score, participation falls by 10 points for males and six for females. A 40% fall in the health scores would correspond approximately to a self-reported assessment of poor health. At this level, male participation falls 26 percentage points and females by 13 percentage points. The drop in participation is more than proportional for males, but less for females; in other words, while male participation rates are higher, they decline more rapidly as health deteriorates. In addition to the effect of health, substantial absolute effects on the probability of working stem from a respondent's marital status.

The probability that a person in the workforce would chose full-time over part-time employment was not significantly related to either the physical or mental health scores. While physical health status has a significant effect on whether to join the workforce, the evidence is that, given a person is employed, their choice about full- or part-time work is not a function of their health status. Both males and females have a lower probability of working full-time as they age, receive a benefit or have income from superannuation. In contrast they are more likely to be in full-time employment if they are widowed or have dependants. There was a marked reduction in labour force participation when respondents receive New Zealand Superannuation (NZS), typically at age 65. The results suggest that there was a significant 'deterrence effect' on labour force participation of NZS, once the effect of a wide range of other influences has been controlled for. For males, the survey results confirmed that poorer physical and mental health reduces the probability of

labour force participation. Notably, mental health conditions do not appear to influence the labour force participation decisions of females. The results indicated that for both males and females, those reporting lower standards of health were less likely to remain in the workforce. The odds of a person working if they report fair or poor health status were very much lower than those reporting excellent health. This finding was repeated using two different measures of the key economic variable: the respondent's wage rate and the income of other family members.

The survey also asked respondents whether they expected to be in full-time employment once they reached a certain age. Two ages were specified: 62 and 65. Key factors that were associated with a significantly greater probability of expecting to be in the labour force at these ages were: being male; separated or widowed, Māori and the health of family members.

### Limitations

The authors stated that attempts were made to find suitable instrumental variables that might determine health status but not influence the labour supply decision; these attempts proved unsuccessful. Only one wave of a longitudinal study used. A better understanding of the health/labour force status relationship required the use of longitudinal panel data, and the results assume no cohort effects (both of these would be remedied with longitudinal data

### Applicability to the UK

The study is set in New Zealand with a sample whose representativeness is unclear and is partially applicable to the UK

### Gringart et al. (2005)

This (+) rated study using a survey of 128 recruitment decision-makers in companies with between 10 and 50 employees set in Australia sought to gain knowledge of employer stereotyping of older workers (defined as those aged between 55 and 70).

The firms were sourced through the Kompass business directory and the final response rate was 46%.

The study used three dependent variables:

- 'sum of scale' (the sum of the 28 stereotypes about older workers derived from literature and used to develop items for the questionnaire), assessed on a 7 point Likert scale. An example of an item is: 'How trainable are older (55-70) workers compared to younger (25-40) workers?' with a score of 1= far less trainable and a score of 7= far more trainable

- 'age relevance' ( a single item about the relevance of age in making hiring decisions)
- 'likely to hire' (two questions about how likely respondents were to hire older workers).

A variety of analyses including Pearson product-moment correlations and analysis of variance were conducted.

### Outcomes

Employers reported negative views of older workers on 12 out of 28 items in the survey. Older workers were viewed as being less adaptable to new technology, less interested in technological change and less trainable, as well as being less ambitious, less energetic, less healthy, less creative and not as physically strong. They were thought to have impaired memory, to be less mentally alert, and less flexible and were less likely to be promoted.

A significant positive relationship was found between 'sum of scale' and 'likely to hire,'  $r(126) = .53, p < 0.01$ . This suggests that employers holding positive attitudes towards older workers were more likely to hire them.

In contrast, holding the view that age is of greater relevance in making hiring decisions decreases likelihood of hiring older staff ( $r(126) = -0.38, p < .01$ ).

There were no significant associations between respondents' sex, age, and educational level on the three dependent variables when the variables were analysed separately or in combination.

In the open-ended section of the questionnaire, employers reported about twice as many positive attributes for older workers as negative. Employers indicated that older workers had a better work ethic than younger, that they had more appreciation of their jobs, and that they took fewer sick days. Older workers were viewed as more presentable than younger workers, more punctual, more responsible, and wiser.

Negative aspects of older workers reported by employers were that older workers had difficulties with new technology and that they are set in their ways.

There was no significant difference between employer views of older male workers and older female workers.

## Limitations

A number of weaknesses should be noted in the study. The authors note the limitations caused by a small sample of businesses with fewer than 50 staff, so the results may not be generalizable to larger firms. In addition, the survey is transparent in revealing its subject matter and intentions. Undertaking research into beliefs that may lead to practice which is prohibited by employment law may need a more subtle approach to elicit employer behaviours.

## Applicability to the UK

The findings are partially relevant to the UK due to a similar labour market context but there may be unstated cultural differences which affect perceptions of older workers.

## Gringart et al. (2010)

This (+) rated study set in 5 Australian states used surveys of an intervention group and a control group to assess the effects of interventions to reduce age discrimination among firms with 10-50 staff in hiring older workers.

It is unclear whether there were 282 or 279 usable and complete employer responses as numbers in different parts of the paper do not add up. Demographic data was given for 267 company respondents, of which 203 were male and 64 were female with a mean age of between 45 and 50.

Three types of intervention were tested:

- a) A **fact sheet** intervention (FS), a one page sheet in which twelve commonly expressed stereotypes about older workers were contrasted against empirically based counter evidence, and presented in a similar format to Australian governmental information sheets. For example, 'older workers are less adaptable' would be countered with 'older workers adapt well to new working environment and circumstances'. Respondents were requested to tick a box on the report card acknowledging having read they sheet and post back the card.
- b) A **cognitive dissonance** intervention (CD) drew on two previous studies, explaining past discriminatory behaviour in hiring older adults is against the principle of giving people a fair go, '*held so dear in Australia*'. Respondents were told that a booklet was being published which would contain a list of names that morally disagreed with age discrimination in hiring. It was made clear this would be published and that this would show hiring decision makers that those on the list supported and believed in giving older workers a fair go.

- c) A **combination** intervention combining the cognitive dissonance and fact sheet interventions (CDFS).

Materials for the intervention and follow-up stages were on different coloured card, in different fonts and posted from different researchers at different universities to appear as two separate studies.

The questionnaire had three sections:

- Section A: 28 items covering possible stereotypical views about older workers and the extent to which they were held (Cronbach's  $\alpha$ s between .81 to .92)
- Section B: Two items assessing likelihood that respondents would employ older adults and their perceived relevance of age in hiring decisions.
- Section C: One open ended question – what other characteristics of older workers differentiate their performance from that of younger workers

### Outcomes

For the interventions using CD and FS there were significant positive associations between the intervention and preference for hiring older workers - CD  $F(1,263) = 6.95, p < .05$ ; FS  $F(1,263) = 4.28, p < .05$ ).

In addition, employers who received the combined CDFS interventions showed:

- A significantly greater preference for hiring older workers than did employers who received CD or FS or the control (CDFS  $F(1,263) = 4.69, p < .05$ ).
- Significantly more positive stereotyping of older workers' skills and abilities than employers who received CD, FS or the control.

Male respondents had significantly higher age relevant scores compared to their female counterparts, showing they viewed age to be significantly more important in hiring decisions.

Respondents aged at least 55 had a significantly more positive view of older workers overall compared to younger respondents.

CD, FS and control reported around three times as many positive attributes related to older workers compared to negative ones. CDFS had eight times more positive attributes than negative ones, the most positive attributes and the fewest negative ones.

All four groups indicated older workers had better work ethics, more appreciation of their job, more common sense and were more reliable. Three of the four suggested older workers were more experienced, more proud of their job, more willing to do

all kinds of jobs, more responsible, more loyal and more honest. CDFS and FS cited that older workers were more knowledgeable, better understood the company, were better mentors, were more likely to stay in work, more stable and were wiser. CDFS and CD noted older workers were more dependable and mature. CD and FS described older workers as having more life experience.

CD and control groups responded that older workers were more hardworking, better under pressure and were friendlier. FS and control groups stated that older workers were more focused on their job, better at following instructions, better problem solvers, more punctual, more accurate, more patient and intrinsically motivated.

All four groups described older workers as set in their ways. FS and control groups commented that older workers were slower and had difficulties with technology. CD and FS groups noted older workers were resistant to change and. CD and control groups thought older workers were weaker and CDFS and CD thought they were less good with ICT.

### Limitations

The authors note that generalisability is limited to companies contained within the Kompass Australia population of companies with between 10 and 50 employees, using postal delivery made it difficult to be sure of respondents' identity and the study used no measure of actual hiring behaviour following interventions. Differing levels of emotional involvement and personal commitment required in the CD and CDFS interventions as compared to the FS or control may produce different response rates. Limitations identified by review team include the problem of asking respondents to indicate their age preference of workers regardless of job description could obscure some important role- and sector-related context.

### Applicability to the UK

This study is partially applicable to the UK but there may be unstated cultural differences shaping employer attitudes towards older workers.

### Gringart et al. (2012)

This (+) rated study set in Western Australia used a survey to investigate the attitudes held about older nurses by 163 nursing recruiters.

The respondents included 143 women and 19 men, with ages ranging from 25-67 and the mean age was 48. Ninety-seven organisations (19.7% of agencies contacted) agreed to participate. These included 45 hospitals, 39 aged care facilities, 11 nursing

agencies, and two medical centres and the response rate was 66%. Older nurses were defined as those aged 55-70 years.

Three dependent variables were used including the sum of a 28 item stereotype scale (higher scores representing more favourable attitudes); a question about the relevance of age to hiring with a possible range of 1 (low relevance) to 7 (high relevance), and a question on likeliness of hiring older nurses. The survey also included open ended questions asking respondents what other characteristics of older nurses differentiated their performance from younger nurses.

Cronbach's alpha was used to assess internal consistency and principal component analysis (PCA) was used to test the relationship between the 28 item scales and created 7 'subscales'. Linear regressions tested which subscale best predicted importance of age and likelihood to hire.

## Outcomes

The main results of the study were:

- 12% of respondents reported that they were not at all likely or remotely likely to hire an older nurse.
- 80% of respondents rating older nurses more favourably on productivity. On the 28 item scale these older nurses were generally viewed as more efficient, competent, dependable, skilled, motivated, creative, reliable, and harder working than younger nurses.
- 77% of respondents rated younger nurses more favourably see them as more mentally alert, possessing good memory, being physically healthy and strong, and being energetic.
- 79% of respondents rated younger nurses more favourably. Higher scores indicated that older nurses were viewed as less adaptable to new technology, interested in technological change, trainable, productive, and more ambitious than younger nurses.
- 56% indicated that older nurses were seen as more cooperative, able to fit in, flexible, and cost-effective and 53% rated older nurses more willing to work. 89% rated older nurses as more stable workers.
- 50% saw all nurses as equally likely to be promoted while 36%, indicated that younger nurses are more likely to be promoted.
- A significant positive relationship was found between holding favourable attitudes towards the skills and personal qualities of older workers and reported likelihood of hiring older nurses ( $r(163) = .32, p < .01$ ).

- A significant negative correlation was found between holding negative attitudes towards older nurses and perceived age relevance in hiring decision ( $r(163) = -.22, p < .01$ ).

### Limitations

A robust PCA would have required a minimum of 280 participants, so the study was under powered, sampling from one Australian state limits the generalizability of findings and no measure of exposure to older workers was included which would have been helpful in understanding the source of beliefs. There was also no verification of actual employer behaviours in hiring of nurses of different ages.

### Applicability to the UK

This study is partially applicable to the UK but there may be unstated cultural differences shaping employer attitudes towards older workers.

### Harper et al. (2006)

This (-) rated study undertook a survey of 6,320 employers of varying sizes across OECD countries to investigate how widespread negative attitudes and stereotypes are towards workers aged at least 50, and whether these attitudes influence employer behaviour towards older employees.

Three hundred and two responses were received from UK employers of which 17% of responses were received from firms with 10-99 workers, 20% were received from firms with 100-499 workers and 64% were received from employers with over 500 workers. The sampling source for the survey is not stated.

### Outcomes

The United Kingdom (along with the US) had the highest proportion of employers holding positive stereotypes of older workers as more loyal and more reliable, and fewest negative stereotypes of older workers being less motivated, less flexible, less productive, less technologically orientated, and slower learners. Fewer than 10% of UK employers attributed four of these characteristics (unspecified) to older workers. More than 50% of UK employers attributed no negative characteristics to older workers.

The UK had:

- the highest proportion of employers (70%, along with the USA) stating that they offer older workers the opportunity to pursue 'new kinds of work' (not defined in the paper)

- the highest proportion of employers (71%) which stated they offered older workers the opportunity to work fewer hours and
- the largest proportion of employers who reported that they were trying to recruit older workers (44%).

### Limitations

The authors note that conclusions based on a small sample cannot necessarily be generalised and deficiencies in using attitudinal data as a measure of age discrimination, combined with lack of information on the personal characteristics of respondents which may influence their responses. In addition, it is not clear whether there is any variation in UK responses between companies of different sizes and in different sectors. The research team notes that the research was conducted prior to the global financial crisis. Patterns of labour supply and shortages across different sectors may have changed since then, with consequent influence on employer inclination to hire older workers.

### Applicability to the UK

The findings are partially applicable to the wider UK, but a considerable period of time has elapsed since the research was conducted. Combined with the impact of global recession, shifts in labour market supply and demand and changes in retirement legislation and pension provision both in the UK and elsewhere, this means that employer attitudes towards older workers may have changed as a result.

### Hill et al. (2010)

The aim of this qualitative study rated (+) and using semi-structured interviews of 23 UK dentists was to determine the factors that contributed to premature ill health retirement (IHR) among UK dental practitioners, and the effects of IHR on their lives.

The sample was made up of former dentists aged 39-51 (average age was 51 years old) who had retired prematurely due to ill health. Topics included the causes of early retirement, the effect of ill health retirement (IHR) upon health and quality of life, preventing IHR, and support. Interviews were conducted by telephone and face to face, recorded, and transcribed. A purposive sampling technique was used to recruit the respondents from an insurance company database to recruit a diverse range of respondents. A framework approach to data analysis was utilised.

## Outcomes

The main causes for IHR were depression, musculoskeletal disease and specific skin conditions. Respondents expressed concern regarding the level of support available to dentists facing health problems, but these are only the views of a few practitioners and not necessarily the views of the profession. Retired dentists also recommend better training for younger graduates about the causes of stress and business problems. Post retirement counselling may also be needed to help dentists obtain alternative employment. Respondents to this study found that continuing to work had a positive impact on their health.

## Limitations

The gender balance was not representative given that only four women were interviewed. A mixed method study (interviews followed by a questionnaire study) may have been more appropriate approach than qualitative study alone.

## Applicability to the UK

The study was conducted in the UK, but is not fully generalizable due to the focus on a single profession and lack of gender balance in the sample.

## Hollywood and McQuaid (2007)

This (+) rated qualitative study used telephone interviews with 50 employers to explore employer responses to demographic changes in rural labour markets in Dumfries and Galloway in Scotland with a focus on employment of older people. The employers were drawn from the following sectors: health and social work, hotels and catering, manufacturing, wholesale and retail, or agriculture and forestry and were of varying sizes. No consistent definition of older worker was imposed on employers by the research.

## Outcomes

Employer perceptions of older workers were mixed. Common perceptions were that older staff are less adaptable to change, slower to acquire new skills and less able to cope with work pressures. In contrast, many employers held very positive views of older workers, in particular that they are loyal, reliable and confident. These stereotypes played a strong role in relation to recruitment decisions of employers. Characteristics ascribed to older workers included reliability, confidence, a strong work ethic, and experience.

Most employers reported themselves as willing to employ older workers but had difficulty attracting them due to pay and conditions offered and the study argues

that for older workers in rural areas, low wages and poor conditions offered may be a major disincentive for labour market participation.

Most employers stated the ability to do the job was the most important factor in recruitment. Few employers admitted to directly discriminating against older workers, but some expressed concern about risks of poor physical health based on perceptions of older people's ability to carry out physical jobs rather than direct experience.

Training and development was less likely to be considered for older workers and older workers were seen as being reluctant to participate in such activities.

One barrier towards optimising employment of older people was the availability of migrant workers as an alternative labour source.

### Limitations

The research took place in a limited number of firms, sectors and in two specific local areas. The authors note that research is required in a broader range of geographical areas and that more information is required on the actions of older workers themselves and their experiences of work and retirement. It is necessary to assess how workplace policies on recruiting and managing older staff are implemented in practice to understand how employer perceptions and beliefs influence actual behaviours.

### Applicability to the UK

The findings are partially applicable to the UK but the labour market contexts are likely to vary substantially by geography. We should also note that this research pre-dates the recession of the late 2000s which may have affected labour supply and demand with consequent effects on employer attitudes towards use of older workers.

### Jenkins (2008)

This (-) rated study used interviews lasting around one hour with five hotel managers in the UK (and five in the Republic of Ireland) with the aim of assessing the role of Human Resource practices in perpetuating age discrimination in hotel workplaces. It sought to define an 'older' worker, ageism and age discrimination and ascertain the effects of Human Resource management practices in hotel workplaces on the employment of 'older' workers.

The hotel chain was purposefully selected as it was considered to be 'typical' of hotel chains in the UK and Ireland. The hotels where interviews took place were

purposefully selected to reflect the geographical coverage of hotels and, furthermore, represent the hotel chain's major brands. Participants were female, white, aged under 50 and worked full-time.

### Outcomes

The author argued that there was little evidence of direct discrimination against older workers but there may have been some indirect discrimination, partly due to lack of recognition of age as an equality issue by some managers.

The HR managers used the company website, local colleges, word-of-mouth recommendations and job centres to recruit staff and the author notes that the first three methods may limit applications from older staff. Training needs were identified and some training done by the hotels or external organisations. In general, the nature of training depended on the department in which the employee worked. None of the hotels offered age awareness training or similar initiatives. All hotels had an equal opportunities policy but some managers were ambivalent about practical effectiveness due to variations in implementation by line managers and none had attempted to actively manage diversity in the age of staff. Most perceived the prospective pool of people in the labour market who would be interested in the available jobs as young and felt that older people would want full-time work. Use of migrants as a source of labour was popular, although the reasons for this were not stated in the paper.

### Limitations

The study is heavily limited by a very small sample size taken from one organisation which precludes generalizability to other firms and sectors. Policy and practices claimed by the HR managers were not validated through others sources and the experience of older workers themselves is not considered.

### Applicability to the UK

This study is mostly applicable to the UK but nearly 10 years has elapsed since it was conducted, and subsequent legislation and policy may have altered employer attitudes and practices.

### Jenkins (2009)

This (-) rated study was based on 23 face-to-face interviews with older workers in the hotel sector in the UK and Ireland.

The hotel chain in which the research took place was considered to be 'typical' of hotel chains in the UK and Ireland. The individual hotels within the chain were

purposefully selected to reflect the geographical coverage of hotels and, furthermore, represent the hotel chain's major brands.

Interviews were conducted with 23 older workers in 10 hotels within a hotel chain, 12 in the UK and 11 in Ireland. The interviewees were aged 50 or above and comprised 11 females and 12 males and included workers from housekeeping, front office, food and beverage, concierge, maintenance, finance and conferencing.

Questions were asked regarding previous work experience, perceptions regarding their work, status as 'older' worker, recruitment, selection, training, development, retirement, skills and knowledge.

The interview method was selected to investigate older hotel workers' views on workplace equality as the method was thought to be good for investigating a person's beliefs, perceptions and views of reality.

Moreover, the choice of an 'interpretivist' methodology to research older hotel workers was thought to be consistent with the need to understand the reality, actions, motives and intentions of the research participants.

### **Outcomes**

Only a few respondents had experienced ageism, but the authors reported that there were indications at the interviews that people may be victims of a variety of forms of age discrimination without being aware of it.

Participants had undertaken a range of training and development courses in such areas as health and safety, customer care and information technology.

### **Limitations**

The study was quality assessed as (-). The study contained no description of how participants were selected which makes it difficult to estimate selection bias, ie workers who enjoy working at hospitality sector may have been more likely to participate.

### **Applicability to the UK**

The study is applicable to the UK but the small sample and focus on one sector limits the generalizability of the findings.

## Jenkins et al. (2014)

This (-) rated study involving semi-structured interviews with 19 hotel workers aged at least 50 in five UK hotels examined whether these workers experienced disengagement from their jobs as they approached retirement.

The individuals were selected in conjunction with hotel management which resulted in a non-random sample.

### Outcomes

The workers reported that social contact in their jobs was important to them, and were content with their job and employer. They did not report perceptions of unfair treatment on grounds of age, undue stress or anxiety or that they were not valued or trusted by colleagues and managers. Some older workers had reduced their working hours but many viewed retirement negatively.

### Limitations

The findings have some major limitations due to a very small sample and high possible risk of selection bias due to managerial involvement in the process. The study did not consider the influences of personal circumstances, health, finances and education in influencing the formation of workers views.

### Applicability to the UK

The findings are applicable to the UK but the small and non-random sample precludes generalisation of results to a wider population.

## Lancaster et al. (2011)

This is a mixed-method study (rated +) comprising a literature review plus a small survey of employers examining effective interventions to support mentally healthy retirement.

The aim of the study was to address a series of research questions:

- How can retirement impact mental health and wellbeing?
- What is the impact of working beyond the usual retirement age on mental health and wellbeing?
- Are there effective interventions to promote the mental health and wellbeing of those approaching retirement?
- What pre-retirement support is currently available UK wide?

The original intention was to concentrate on review-level literature. However, very few review-level studies were identified. Therefore, particularly relevant individual studies were included. Large, nationally representative sample studies were given priority (particularly for identifying impact of retirement). Due to the lack of literature on interventions, all intervention studies identified were included.

In addition an additional survey was sent to employers to supplement data and findings from the literature review, and providers of support were also mapped. The survey did not aim to establish a representative picture of employers across Scotland but rather an indication of the types of activity and differences between different sizes of workplace and types of workplace obtained through a 'snapshot' survey of a small database of employers in Scotland. One hundred and forty one responses were received from employers across Scotland.

## Outcomes

### *The literature review*

There was mixed evidence for the impact of retirement on mental health and wellbeing. A range of individual, social, retirement, job/organisational variables, and post retirement factors were likely to explain these contradictory findings. Multiple retirement trajectories had been proposed, suggesting that, whilst the impact was not uniform, it could be predicted by these individual and environmental characteristics. Studies of job and organisational variables provided increasing evidence for the role of 'quality of work' in retaining employees and protecting mental health of those aged 50+.

The evidence suggested that 'choice' and 'conditions of exit' play a clear role in determining the impact on mental health and this is a more important determinant than the 'type' of retirement.

Working beyond the 'retirement' age supported improvements or at least maintenance of mental health, this was however dependent on the 'quality of work'. For example, work characteristics that were known to support mental health and wellbeing, were those such as autonomy, fulfilment, effort-reward balance, job satisfaction.

There was some evidence for the positive impact of retirement planning on retirement adaptation, though more recent studies conclude that this alone was not sufficient to secure wellbeing in retirement. There was some evidence for socio economic differences in access/take up of retirement planning activities.

### *The employer survey*

The survey found that medium and large workplaces were more likely to review their policies and large and public sector workplaces were more likely to provide training for those administering retirement processes compared with smaller and private sector or voluntary workplaces. A similar proportion of medium and large workplaces that responded offered phased retirement (around 50%). The proportion was less for small (38%) and micro workplaces (17%).

A large proportion of micro workplaces that responded offered flexible working after Default Retirement Age (DRA) (67%), as did large workplaces (65%) and medium workplaces (77%). The proportion for small workplaces was less (44%).

Three-quarters of large workplaces that responded provided pre-retirement training, 45% with a health element. Pre-retirement training and counselling was provided by a greater proportion of public sector workplaces compared with private and voluntary sector. Pre-retirement counselling was less common than training in all workplaces.

Annual medicals, regular reviews, time off to attend courses, time off for adjustment (paid and unpaid) were among the other types of support reported by workplaces that responded to the survey.

Some of the reported benefits of retirement support were: maintaining skills; a more diverse workforce; transfer of skills and experience; being a caring employer; staff feel valued; enhanced staff motivation; succession planning; maintaining mental and physical health of staff. Some of the challenges reported by respondents were: covering staff to take time off to attend courses; meeting expectations; cost of providing services; poor take up; low staff turnover.

### *Key findings from the support mapping*

Although a prerequisite for inclusion in the mapping was coverage of 'health' in the support provided this varied greatly in scope and content from one provider to the next.

All providers delivered support to those in pre-retirement/retirement transition. The support was generally not sector specific or provided to certain sizes of workplace. It was also not aimed at any specific populations ie sectors, demographics etc. However, some did provide separate 'executive training' for those in senior roles. There appeared to be a lack of formal evaluation of services. This echoed the findings from the literature review, which also found little evaluation of interventions.

## Limitations

The authors noted that review found a lack of intervention studies, so the findings are limited by the lack of evidence. The reviewers found that the study's methodology was not particularly clear, including the sampling approach for the survey.

## Applicability to the UK

The study is focussed on evidence relevant to the country and therefore is applicable to the UK.

## Loretto and White (2006)

This (+) rated qualitative study used 40 group interviews with employers of varying sizes in four areas of Scotland to investigate the relationships between employers' HR policies, practices and attitudes towards older workers.

## Outcomes

Employers were either neutral or positive in preferring to recruit older workers. The benefits mainly centred on experience, better interpersonal skills in handling customers, providing care, possession of technical skills in which young people were not being trained, higher levels of task commitment, in doing a job well, with more motivation and tenacity due to a higher work ethic. Employers also attributed higher motivation to freedom from family commitments thus enabling older staff to work more hours with more flexibility or higher financial motivation, while others mentioned personal drivers such as financial motivation. Other reasons for positive preferences for older staff depended on personal similarity with the age of the employer. There were ad-hoc examples of staff working beyond usual retirement age or on a casual basis after retirement. Despite these reportedly positive perceptions, the research found that older workers were often not the first choice for employers but had been targeted due to labour market shortages for particular types of work.

Over half of the employers felt that performance decreased from age 50 onwards, particularly for those doing manual work. Concern was expressed that older workers in manual occupations are less able to cope with physically demanding jobs for which around a quarter of employers would offer some adjustments to work patterns and some were also prepared to modify job content. There was less evidence of adjustments being offered for older workers affected by mental ill health arising from pressures of managerial/professional roles. A quarter of employers said they offered phased or flexible retirement or revised work patterns and nearly half said that they offered the option for older employees to work part-time. Those most

likely to offer these options had positive experiences of employing older workers. Employers who did not offer a pension scheme felt this had a major impact in encouraging workers to continue working until an older age. Those employers contemplating ending early retirement schemes due to cost expressed concern that they would both have to make adaptations to the needs of older workers and manage employee expectations of retiring early.

All but one of the employers claimed that they had no upper age bar on opportunities for training or promotion although some noted that older workers might lack confidence, have less interest and be more reluctant to request training.

### Limitations

A major limitation noted by the authors is the voluntary nature of participation; this may have attracted employers with more progressive practices or greater interest in the area to take part and therefore skew the findings. In addition, the small sample of employers is not necessarily fully representative of practice across the wider population and the group setting may have inhibited employers from speaking openly. The review team also noted that the research was undertaken before the abolition of the default retirement age, so employer policies and practices in managing older workers may have changed. Most fundamentally, employer policies may not translate into practice and more detailed investigation of how policies are applied including older and younger workers' perceptions of them is required.

### Applicability to the UK

The findings are partially relevant to the current UK context. There has been substantial change in employment legislation affecting the default retirement age, pension provision and the economic context since the research was conducted. These may have consequently shaped employer attitudes and practices towards the employment of older workers.

### Lundberg and Marshallsay (2007)

This (+) rated survey of older workers in a range of sectors in Australia examined the attitudes of older workers about continuing on in the workforce past retirement age and how changes to superannuation, work cover and insurance requirements assisted employment past retirement age.

The study is based on focus groups with and a survey of Australian older workers (aged 45+) in three sectors represented by four unions:

- Finance/Finance Sector Union/National;
- Aged care/Health Services Union of Australia/Victoria;

- Aged care/Liquor, Hospitality and Miscellaneous Union/ South Australia; and
- Construction, Forestry, Mining and Energy Union/South Australia.

The union membership lists were used for recruitment of respondents. The focus groups were made up of small samples of older workers from each participating union. Respondents were directed to consider the retirement age for people of their gender in their sector.

The formulation of the survey was guided by the focus groups, and questions suggested by union secretaries were incorporated. The questionnaire was then administered to four samples from each of the unions, and interpretations of findings were validated by the focus groups.

The focus groups comprised:

- Construction: 17 male retired union members.
- Finance: Four male and nine female union representatives from five different institutions including banks, credit unions and insurance.
- Aged care (two separate meetings): Not reported

The survey sampling approach involved systematic sampling apart from construction where the questionnaire was all inclusive. The survey analysis method was not reported. The survey achieved response rates of between 14 and 44%, as follows:

- Finance N = 1,070, response rate: 44%
- Aged care = 520, response rate: 35%
- Aged care = 194, response rate: 23%
- Construction = 242, response 14%

The gender breakdown of the sample varied between 92-93% female in the two care sector samples to two per cent female in construction. The authors stated that age and gender distributions were comparable with the national data, however this does not match with the data presented in the report.

## Outcomes

The survey found that most respondents in the four samples believed they would need to work beyond their normal retirement age. Less than one in 10 of the aged care sample (9.9% and 8.5%), one in eight of the construction sample (12.7%) and

one in five of the finance sample (22%) believed they would **not** need to work beyond their retirement age.

Around two-fifths of respondents did not know about the attitudes of their colleagues to older workers remaining beyond retirement (between 31.1 and 43.1%) and the rest believed that colleagues' attitudes were mainly positive. About one in five of the aged care (18 and 22.8%) and finance (17.3%) samples and one in three of the construction (31.2%) samples saw their colleagues' attitudes as negative or very negative.

More than half of the respondents in the four union samples (between 53.9 and 56.2%) were uncertain of the attitudes of their employers to supporting training for older workers continuing in work beyond retirement, although one in five or less of the four samples saw their employer's attitude as negative (between 9.1 and 15.5%) or very negative (between 1.6 and 7.3%).

Over half of respondents (56.1 – 68.1%) indicated that they did not require training to continue working beyond retirement age, while less than one in three did (24.0 – 30.3%). More than half of those who indicated that they would need training to obtain different work after they retire reported that this was available to them (between 50.0 and 56.3%), and less than one in five (between 15.4 and 17.7%) reported that it was not.

Of those who indicated that they saw value in training to enhance the productivity and effectiveness of older workers who continue to work beyond retirement age, around half felt this was available to them (45.6 – 47.5%). Less than one in five felt this was not the case (12.2 – 15.3%), except in the construction sample, where about two-fifths reported training was available (36.1%) and one in five reported that such training was not (19.6%).

Around two-fifths of respondents thought there were gender differences in access to training and employment opportunities for older workers (strongly agree 11.4 – 14.1%; agree 28.2 – 38.3%). One in five did not (disagree 17.3 – 18.8%; strongly disagree 1.6 – 3.1) aside from construction where this was one in 10 (disagree 8.9%; strongly disagree 2.1%). Responses concerning gender discrimination were similar from male and female respondents.

Around seven in 10 saw a need for training supervisors and younger workers about age-biased stereotypes (strongly agree 15.1 – 23.3%; agree 45.8 – 53.1%), and one in 10 did not (strongly disagree 0.4 – 2.0%; disagree 6.7 – 10.4%).

In the focus groups, most respondents considered training in or updating computer skills as the most useful training which would enable them to continue working effectively past retirement age.

Respondents in the finance sector focus group thought there was no real encouragement for remaining in the workplace, which is characterised by subtle discrimination and harassment. Concern was expressed that workers would be made redundant through the introduction of technology. In addition it was felt that increasing workloads in a short period of time, the complexity of jobs and length of service not being taken into account were further pressure points.

### Limitations

This study was assessed as (+). The authors state that a national household survey seeking responses from older workers would have been a more effective way of minimising any potential bias introduced by using union membership lists as a sampling frame, but it would have been prohibitively expensive.

The response rate to the two South Australian questionnaires was less satisfactory. The South Australian aged care study response and the construction industry response rates were too small for these samples to be generalised.

In addition the review team noted that the detail about the response to qualitative questions provide limited insight, no method of analysis was reported. Finally, the response rates were variable limiting generalizability.

### Applicability to the UK

The findings are applicable to the UK but may be affected by unstated cultural differences affecting employer and worker perceptions of older workers.

### **Macleod et al. (2010)**

This (-) rated study for the UK's Chartered Institute of Personnel Development (CIPD) involved a survey of 1,033 CIPD and Chartered Institute for Management (CMI) members, supplemented by 10 case studies of firms with policies aimed at older workers.

CIPD and CMI members were invited to take part in a survey (mode unreported). The survey received: 1,033 respondents (response rate unreported). The study states that: 'The personal characteristics of respondents are therefore reflective of the Institute's professional members – respondents had an average age of 52 and were more likely to come from a large than a small organisation.' Over a third, 37% of respondents came from the public sector (15% from education and 11% from health and social care).

The findings of the report are also informed by 10 case study interviews, drawn from survey respondents, which 'offer some practical insights into the real-life

approaches being taken by a variety of organisations as they respond to an ageing workforce’.

## Outcomes

Key findings relevant to this review were as follows:

- Attitudes to older workers
  - The survey found a positive attitudes towards older workers – 93% of respondents agreed that knowledge and skills of older workers were highly valuable, while 69% disagreed that older workers are more expensive.
  - Benefits of employing older workers – knowledge retention was the principle driver of retention, well ahead of legal compliance or cost control issues (90 compared with 36 and 19% respectively).
  - Reasons for working later in life – motivations were principally financial, as people looked to maintain income or top up pensions. Maintaining social connections and being personally fulfilled were also important.
  - Experiences of age discrimination – 40% felt disadvantaged by age, with these experiences mostly relating to job applications and promotions.
- Impact of general HR practices
  - Recruiting older workers – 64% of organisations had removed age from application forms, up from 44% in 2005.
  - Training and skills development – 91% said their organisation offered training regardless of age, and 77% saw training as very important in keeping skills up-to-date.
  - Flexible working – around 60% of respondents reported that their organisations offered part-time and flexible working to all employees, in line with a general pattern of providing employment benefits in an age-free way. These were considered important strategies for retention
- The challenge of retaining older workers
  - Policies and preparedness – 14% of managers and HR managers considered their organisation very well prepared to cope with issues of an ageing workforce. Only a third reported board-level recognition of the need for an effective strategy on employing older workers.
  - Driving change – HR departments were seen as very influential in terms of managing older workers. They played a key role in driving through the necessary changes organisations that needed to adapt to an ageing workforce.

- Resistance to change – line managers were regarded as highly influential in the implementation of organisational policies, yet also somewhat resistant to change.
  - Managing older workers – seven per cent offered training to line managers on managing older workers, yet 47% thought such training was needed. Some 59% thought young managers found it hard to manage older workers.
- Retirement policies
- Default Retirement Age (DRA) – Just over one third of those using the DRA felt more employees stayed on past 65, but nearly half thought retirement patterns had not changed since its 2006 introduction.
  - Retirement policy – 57% reported that their organisation used the DRA of 65 and 19% had no fixed retirement age or retirement above 65. Many managers were not well informed about their organisation's policies, especially middle/junior managers in large organisations.
  - Benefits of flexible retirement – those without a fixed retirement age tended to state that processes met organisational and individual needs.
  - The case study interviews showed organisations recognised the need to increase retirement ages in line with employees' desires to work for longer.

### Limitations

This study was assessed as (-). No limitations were reported by the authors, however, the study contains very little information about the survey approach (eg survey mode, response rate etc.). In addition, there is a lack of significance testing or analysis on longitudinal survey data which would have allowed the data to be used more convincingly.

### Applicability to the UK

The study is applicable to the UK but full generalizability is difficult to assess without knowing the response rate and how representative sectoral coverage is.

### Manfredi and Vickers (2009)

This (-) rated study was based on an on-line survey of employees in 12 UK higher education institutions supplemented by data from follow-up focus groups with respondents. The research examined employee preferences and expectations about retirement, and perceptions of age discrimination across different occupational groups.

The survey took place in 12 higher education institutions in the UK; six were 'pre 1992' institutions and; six became universities following the 1992 reforms. The on-line survey was e-mailed to all staff and received 7,218 responses out of a total sample of 39,403 staff (a response rate of 18.3%). Of the respondents, 94 senior academics and managers of professional and support staff and of manual staff took part in focus groups.

## Outcomes

Academics and manual staff were more likely to intend to work beyond retirement compared to other groups of staff. The main reason for expecting to retire beyond 65 was lack of pension provision. Staff reported fears that senior staff not retiring could put pressure on finances if organisations continue to promote people and hire new staff. The consensus was that academic staff should be retained only if this was of strategic importance. Manual staff felt it difficult to prove strategic importance to the organisation and so was discouraged from requesting to work beyond 65.

Half-time working was a popular idea, although some expressed trepidation over loss of full earnings. Flexible retirement was seen as a solution by some.

The majority, 56%, of staff members were interested in considering taking flexible retirement. Half, 50%, of these who were between 50 and 60 did not know if they were able to do this. Knowledge was poor on what types of flexible retirement was offered by individuals' pension schemes. The idea of flexible retirement was more popular in 41-55 age groups. Support staff had little experience of the right to request working beyond retirement.

Requesting to extend employment three months prior to retirement was seen as too little time by managers who need to plan further ahead, eg in terms of new staff, promotions, and resources. The right to request extending employment beyond retirement age had resulted in HE institutions adopted a default 'no' position, inhibiting flexibility for people who wish to work beyond retirement age, because of the perceived complexities.

## Limitations

The study was quality assessed as (-). The survey has a relatively low response rate (18%) and the survey sampling process and distribution is not presented or discussed.

Furthermore, the study does not present detailed findings on when staff would like to retire or how this differs with age.

## Applicability to the UK

The study is applicable to the UK but its concentration in one sector limits its generalizability to other parts of the economy.

## Martin et al. (2014)

This (+) rated qualitative study set in Australia used semi-structured face to face interviews with 12 senior managers to investigate how ideologies shape managers' perceptions about the ongoing employability of workers labelled as older and to understand the perceptions upon which managers make decisions about older workers.

Managers were selected through snowball sampling and were all aged at least 45. They comprised six men and six women, of which three were from a welfare organisation, two from the banking sector, two from universities, one each from a fashion store, secondary school, accounting practice, an aged-care organisation and a cattle company.

Data was analysed using a qualitative software data analysis package and independently coded by two members of the research team to improve reliability.

## Outcomes

Macro-level developments such as new technology or the impact of regulation led managers to implement training, rather than older workers' skill requirements or desires and managers did not aim training at older workers in particular. A quarter of the group believed that younger workers were more willing to learn and that while in general, older workers had a strong work ethic, some older workers 'coasted' in their jobs. Most respondents expected workers to be proactive in identifying learning needs, expecting that by the time workers reached the age of 45 they should know what support they required.

There was no evidence that managers were trying to improve knowledge or awareness about best practice in training older staff, although some managers noted that older workers with lower education needed more support in development and learning. The authors noted a lack of knowledge in how to implement specific HR practices for older workers.

Overall the study found a 'meritocratic' or passive, complacent approach which did not differentiate between the needs of older and younger workers or between the needs of different groups of older workers. Managers held contradictory or ambivalent attitudes about older staff. Costs and contextual factors in different sectors influenced likely levels of investment in training older staff.

## Limitations

The study suffers some substantial limitations. The authors note the risks of the small sample size which precludes generalizability and the review team notes participant reactivity bias, where interviewees provide the 'correct' answers and are rewarded by the interviewer through verbal or non-verbal cues. They also note the nature of the discussion around discrimination introduces the possibility of social desirability bias in respondents' answers and the research design precluded examination of practice within the organisations and the perspective of older workers.

## Applicability to the UK

The findings are partially applicable to a wider UK population but there may be unacknowledged cultural differences in employer views of older workers.

## McCartney and Worman (2014)

This (-) rated telephone survey set in the UK sought to explore small and medium enterprises' (SMEs) experiences of and attitudes towards age diversity in the workplaces. 578 managers were selected via purposive sampling allowing coverage across individual size bands and at least 50 respondents, although the sample source and response rate is not stated.

## Outcomes

The majority (61%) of SMEs surveyed focussed their attention on recruiting a mixture of ages. The key benefit to SMEs of an age-diverse workforce was reported as knowledge-sharing (56%). Following this, other benefits highlighted include improved problem-solving (34%) and enhanced customer service (21%).

Almost nine in 10 (86%) SMEs surveyed agree that the knowledge and skills of mature employees is highly valuable. Despite this, four in 10 (44%) believe that younger managers find it difficult to manage mature employees.

A third of SMEs (34%) sought to extend working lives through flexible working options, a quarter (25%) have a flexible retirement policy and one in five (22%) offer homeworking.

Almost half (46%) of SMEs reported that their organisation has no activities in place to ensure it has access to enough skilled and diverse people of all ages.

Among those SMEs surveyed with activities in place to ensure they have access to enough skilled and diverse people of all ages, the most common is 'clear, accurate and accessible information about jobs and career opportunities' (17%) followed by

work experience for all ages (14%) and building close relationships with schools and colleges (12%). One in 10 SMEs surveyed monitored the age distribution of the workforce.

### Limitations

The research team noted that only descriptive statistics were reported and no description of the data collection (including response rates) or analysis was given which makes it impossible to assess the potential risk of bias.

### Applicability

Due to the lack of information about data collection, response rates and selection bias, it is not possible to judge how far the findings are applicable to the whole of the UK SME population.

### McDermott and Edwards (2012)

The aim of this (+) rated study set in Australia was to understand the factors affecting people's decision to retire, based on a series of qualitative interviews with workers with disabilities and their support providers.

Seventy-six people participated in the semi-structured interviews, including 33 older people with an intellectual disability working in supported employment, 10 people who had retired and 30 service providers. The date of the fieldwork and the sampling approach was not reported.

Interview schedules were developed to elicit information about duties at work, attitudes towards employers and co-workers, living skills, leisure-time, family and friends, finances, and perceptions of retirement in conjunction with university advisors with expertise in qualitative research with people with intellectual disabilities. The instrument was piloted on two participants, with questions then being revised. The interviews with stakeholders focused on identifying issues affecting older workers and employers due to an ageing workforce. The interviews were transcribed and imported into a qualitative data analysis programme, NVivo.

### Outcomes

The study found that older people with an intellectual disability in supported employment had limited opportunity to act in a self-determined manner regarding the transition out of the workforce. Most participants with disability who were still working believed that retirement would hold few opportunities besides sitting in front of the television all day, and this opinion was common even though participants had other interests outside of work. Almost all interviewees who were

working expressed the hope that they could continue to work into the foreseeable future and stated that they would stop work only when their physical health deteriorates to the point that they are no longer physically capable of going to work. This decision to continue working had implications for both service providers and people with disability. Supporting older workers made it more challenging for service providers to run their organisations as the skills and abilities of older workers decreased.

Service providers respected supported employees' decision to keep working and did not force people out of the workforce simply due to a decrease in productivity. Many employers had implemented strategies to keep older people engaged with the supported employment workforce. While age-appropriate work kept people engaged, it often meant involving older people with disability in menial tasks. The authors state that this suggests that many older people in supported employment were not effectively enabled to make intentional choices and that continuing to work well into older age does not provide the meaning that people with disability both seek and deserve.

The authors concluded that enabling people in supported employment to make active and intentional choices about the transition to retirement requires flexibility and understanding that all people with disability were able to make active choices about their lives. Service providers expressed a moral obligation to support older people, but providing increasingly limited options limits self-determination. Another challenge for providers was to take responsibility for enabling their employees to become self-determining citizens.

### **Limitations**

The authors reported that some participants had limited communication skills, which may have impacted on their comprehension of the interview questions. The only retirees interviewed were being supported by pilot retirement support services, whereas most people who retire from supported employment have limited access to such services; removes representation and diversity of perspective. There was a small number of interviews with carers (only two). In addition the review team noted that the role of the researcher was not defined.

### **Applicability to the UK**

This qualitative study is set among a sample of older workers with a disability and support workers in Australia and is of limited applicability to the UK.

## McKeown, undated

This (+) rated study set in five councils in Victoria, Australia, used mixed methods including analysis of existing data and face to face interviews to investigate how employers are managing an ageing workforce. This covered the level and type of workforce planning initiatives being undertaken, and planned and current initiatives on the recruitment, retention and maintenance of the ageing workforce. Interviews took place in 2005 with an HR manager in each organisation, of which two were women and three were men. Three interviewees were aged over 50 years and two were aged between 35 and 39 years. The interviews were supplemented with two focus groups, of which one used an existing grouping of seven HR managers from local government and the second was an invited group of five senior local government officials.

### Outcomes

The study found that the greatest concern appeared to be with the 'risk' associated with employing older employees rather than the knowledge, skills and abilities they have to offer and that may be lost on their exiting the organisation. Employers viewed skill shortages as a problem, but the solutions identified were explicitly linked to HR practice focused on the recruitment of younger workers. Limited workforce planning was taking place as analysis of workforce statistics by age was not systematically undertaken. Mentoring was aimed at career development of younger employees rather than knowledge transfer and development of older workers. There was a lack of control for older workers over retirement transitions and voluntary redundancies were still operating in some councils. Added to this was the general view that staff turnover was something to reduce but not necessarily to understand. Overall, there was little evidence of action being taken to recognise skills of older workers and to actively retain, maintain and sustain them in the workforce.

### Limitations

No limitations were identified by the author. The review team noted that the small sample size makes it difficult to generalise the results to other sectors and lack of information on the recruitment process makes it difficult to assess the small sample for bias.

### Applicability to the UK

The study is partly applicable to the UK in terms of the types of attitudes and practices uncovered but the local government context is somewhat different. Given the long period of time which has elapsed since the study and major reductions in public funding for local government in the UK, pressure to recruit and retain workers may be linked to specific occupations and locations where there are skills

shortages. This may have consequences for employer inclination to address the needs of older workers.

### McNair (2006)

This (++) rated study used five questions added to the ONS omnibus survey, followed by a supplementary survey to increase understanding of older workers opinions on work and identify any distinctive sub-groups in terms of attitude, experience of work, plans for retirement or aspirations for the future. It explored what aspects of work older workers like, what they would change, how they would like to work, and whether they have experienced discrimination.

The study received responses from 1,136 workers aged over 50 in the first survey, and 401 responses from workers aged between 51 – 70 in the second survey, with a response rate of 41% for the second survey, of which an unstated proportion were not in work.

### Outcomes

The study reported that those workers responding to the first survey who felt more in control of job changes were more likely to stay in work and were more likely to be in managerial and professional roles, while those who experienced imposed job change were less likely to stay in work after 50. Those over 50 were less likely to receive any support when changing job compared to those under 50 (37% compared to 47%). Eighty per cent of those in work were willing to consider paid or unpaid work post-retirement with the largest group (48%) wishing to work in part-time or flexible paid roles.

Attitudes were most strongly influenced by level of qualifications, income, occupational grade and gender. Highly qualified workers were most likely to continue working after retirement age and to take early retirement as a positive choice. This polarisation increased with age, especially after the mid-fifties. People were most likely to change jobs for career-related rather than work-life balance, personal or lifestyle reasons until workers reached 60, with some variation by gender, size of employer and age. A substantial group of women aged over 50 made job changes and retired to meet caring responsibilities. Workers in small firms were less likely to change jobs but more likely to do so for personal reasons and were less likely to continue to develop their skills over the age of 50. Job mobility was higher for higher qualified workers. People in their fifties were less likely to increase their skills and responsibility as a result of a job move than younger workers but more of these 'changers' increased rather than decreased their responsibilities in moving roles. People aged over 50 were less likely to receive training or support when moving roles than younger colleagues.

Among respondents to the second survey who were still employed, 39% intended to continue working even though they were financially able to retire. At least three quarters of people aged over 50 who were still employed stated that they enjoyed working with colleagues, valued friendships at work, reported a good match between their jobs and their skills and that their job matched their personal circumstances. The entire sample of those who defined themselves as retired but still working stated they enjoyed their job and working with colleagues. Older employees working part-time hours reported more positive attitudes to work than older workers with full-time hours. The authors note a 'shaking out' of the labour market where disaffected workers in their mid-fifties leave their jobs, meaning that those who remain working are likely to be more motivated either by financial concerns or intrinsic satisfaction.

### Limitations

The author notes that more detailed or sophisticated analysis, eg correlations could have been conducted and the measures adopted could have been discussed in greater detail. The research team notes that more information could have been provided about the decision-making process and motivations for staying in or leaving work.

### Applicability to the UK

The study is fully applicable to the UK but was conducted before the financial crisis which may have shaped the attitudes and labour market engagement of older people through changing personal circumstances.

### Meyers et al. (2010)

This (-) rated study used semi-structured interviews with eight people aged over 45, of which all but one were employed, to investigate the learning needs and factors that motivate and engage mature-aged workers to participate in a training programme. The individuals were selected from participants in a government training programme and sampling was non-random through personal contacts approaching the participants.

### Outcomes

The study found a high level of diversity among participant circumstances, motivations and engagement in learning. It reported that workers were motivated to engage in the training through regulatory requirements for a particular profession, and that workers previous experience of training and using technology, together with sense of self-worth, shaped their expectations and level of confidence in learning.

## Limitations

The authors note that the diversity of participants' backgrounds made it difficult to make suggestions to policy. The review team notes that the sampling approach was not fully described and the very small sample makes it unfeasible to draw generalisable conclusions.

## Morrell and Tennant (2010)

This (+) rated qualitative study, for the UK Department for Work and Pensions (DWP), explored the impact of employer policy on a range of retirement experiences and described the implications of retirement pathways for how people felt about this key transition and for other aspects of their lives.

The method involved in-**depth** interviews with individuals from across the UK aged 61-72, who had taken a range of different routes to retirement or continuing to work. The sample was drawn from respondents to the Family Resources Survey (FRS). Respondents aged 60-75 based in one of six regions (Greater Manchester, Yorkshire, West Midlands, Glasgow and Ayrshire, London, and the Southeast) were approached by letter, and those that did not opt out were random sampled within certain quotas to acquire a breadth of retirement pathways.

The interviewed sample included 51 people (25 male, 26 female) aged 61-72, fairly evenly split over the following retirement pathways; retired before 65; offered right to request; no request made; offered right to request, request accepted, offered right to request, request declined; not offered right to request, retired at 65; not offered right to request, worked past 65.

## Outcomes

Employer policies and approaches to retirement that engage individuals and involve them in decision-making had a bearing on experiences of the retirement process and attitudes towards outcomes. Involving individuals in decision-making enabled employers to meet their needs or temper the negative impacts on the individual of an undesirable outcome.

Providing clear information on retirement procedures, options, and pathways enabled individuals to make informed retirement choices, helped individuals feel part of the decision-making process, and adjusted retirement expectations if needed. Participants felt employers did not always provide this, and that individuals would be better equipped to make decisions and deal with the consequences of the retirement process if they knew at the outset what they knew as a result of going through the process. Information and guidance played an important role in giving

individuals a sense of ownership over retirement decisions but also minimising the gap between expectations and actual outcomes.

A clear and standardised approach to retirement supported individuals to own their retirement decision and facilitated the provision of suitable and relevant information and support. Individuals welcomed accessible employer approaches as well as those seen to be applied consistently to all employees. Specific aspects of implementation of the right to request flexible working were important, particularly the schedule used by employers according to legislative guidelines. This was considered to provide time for individuals to consider whether to make a request or to adapt to a decision they were not expecting.

The nature of the employer's communication to raise the issue of retirement or to outline retirement procedure could influence individual experiences and attitudes towards the entire process. Communications that encouraged continuing to work or articulated that the employer would work with the individual to reach a mutually acceptable outcome were welcomed. Right to request processes that involved some face-to-face discussion helped individuals feel engaged, and that their needs were being considered.

### Limitations

The researchers pointed out that much of the data was reliant on recollection, meaning the results are richly descriptive but not a detailed account of all the ways employers are facilitating retirement transitions. In addition the review team noted that only six (12%) of respondents worked for a company with fewer than 25 employees; and so employees in small workplaces were probably under-represented.

### Applicability to the UK

This study is set in the UK and so is applicable to the UK although as a qualitative study it may not be generalisable.

### Mountford (2013)

This (+) rated study set in a series of randomly selected residential care homes in an Australian city used semi-structured interviews lasting between 30 minutes and 1.5 hours with 20 managers and 20 care assistants (the latter aged at least 45 years) to investigate how HR strategies were being applied to retain older care workers.

Twenty care homes operated in the private sector and twenty facilities were not-for-profit. The care assistants were selected for participation by their managers. Thirty-

eight of the study participants were female and of the care assistants, just under half worked part-time and just over half spoke English as a second language.

### Outcomes

The workers reported that job satisfaction was influenced by how work was organised by managers and they valued personal relationships developed between managers and among colleagues, the trust that this generated and opportunity to share views openly. Factors influencing intention to stay with the current employer were provision of training, informal rewards such as small financial incentives (vouchers or cinema tickets).

Care assistants wanting to reduce their workloads were considering learning new skills to enable them to undertake other duties such as administering medication. Managers reported that they were willing to offer fewer or shorter shifts or different roles to staff whose age was affecting their capability. The weight of equipment had been reduced to make lifting tasks easier (eg laundry).

A factor regarded as deterring retention of these workers was payment of a flat wage rate to care assistants with no additional recognition of maturity or experience.

### Limitations

The author notes that no clear evidence on successful retention practices / outcomes was drawn out of the literature and evidence on policies primarily comes from managers and may be subject to bias as they are the people that run the organisation and are more likely to talk positive about practices.

The review team note that the study would have been strengthened by HR data on retention outcomes to triangulate evidence from interviews.

### Applicability to the UK

The findings are partially applicable to the UK but there may be differences in the structure of work, job content and management practices as well as workplace and wider cultures that influence both how older workers are managed and how they respond.

### National Seniors Australia (2006)

This (-) study by National Seniors Australia, a representative organisation for Australians aged over 50, examined **the** pathways between full-time work, part-time work and retirement among respondents to a household survey aged over 50 with the intention of retiring from the labour force some time in the future.

The study used data from the Multi-Purpose Household Survey (MPHS), conducted by the Australian Bureau of Statistics (ABS) as a supplement to their Labour Force Survey (LFS). The ABS-LFS uses a multi-stage stratified sample of dwellings. The 2008-09 MPHS collected data on retirement and retirement intentions, barriers and incentives to labour force participation, crime victimisation, use of ICT and socioeconomic and demographic data.

The following outcome variables were examined:

- Intended age at retirement
- Main reason influencing when participants intend to retire (categorised as eligibility for the age pension, financial security, health and other (including access to superannuation and retirement of partner))
- Retirement transition plans (those currently working full-time were asked about their intentions to change the way they work before retiring. The responses were categorised as continue with full-time work and change to part-time work)
- Main expected source of income in retirement (with regards to financial security, physical activity, mental activity, unpaid voluntary work, social activity)
- Plans for retirement for:
  - being financially secure
  - being physically active
  - being mentally active
  - doing unpaid voluntary work
  - being socially active

Each retirement plan variable was categorised by whether the respondent had thought about the plan at all, had thought about the plan only or whether they would continue with their current behaviour and had made plans.

Respondents were asked:

*'Have you thought about [being financially secure] after you permanently give up work? Have you made any plans to [be financially secure] after you permanently give up work?'*

The study sought to identify the extent to which older Australians had made plans across all of these domains and differences amongst sub groups. A variable was created which aggregated how many of the five domains a respondent had made plans for, resulting in a scale from zero to five.

The transition and planning variables were analysed by demographic and socioeconomic characteristics, including:

- Age in five-year groups
- Place of residence
- Relative socio-economic disadvantage
- Education (completed Year 12 (or equivalent) or not)
- Self-rated health: Excellent, very good, good or fair/poor;
- Employment status (full-time, part-time or unemployed)
- Marital status (married or not married)
- Marital status and partner's labour force status (married with partner employed, married with partner unemployed or not in the labour force, and not married)

Only respondents aged over 50 with the intention of retiring from the labour force some time in the future were included. Person level weights were applied.

Multivariate regression was undertaken on each outcome variable except intended retirement age. Multinomial logistic regression was conducted for the main reason influencing when to retire and the main expected source of income in retirement. Logistic regression was used to analyse the transition to retirement. Ordinal logistic regression was conducted for each of the retirement planning variables and for the analysis of retirement planning across all domains.

## Outcomes

The survey found that the most common reason influencing when mature age Australians intend to retire is financial security (34%), followed by health (26%) and eligibility for the Age Pension (11%).

### *Retirement transition plans:*

Thirty-seven per cent of full-time workers stated they intend to change to part-time work before they retire. An addition 30% reported they intend to stay in full-time work without changing conditions such as working from home. Six per cent would like to continue working full-time with changed conditions. The remainder did not know their intentions over changing work before retirement.

Multivariate analysis (excluding those who state they do not know what their transition plan would be) found those in the highest household income quintile were more likely than those in the lowest two to intend to change to part-time work

pre-retirement. Those least likely to intend to move to part-time work were in the oldest age group and lived in the second-lowest socioeconomic quintile. Education status was weakly related with intention to continue in part-time work ( $p < .10$ ). Those who had not finished high school were less likely to intend to change to part-time work compared to those who had finished. Gender, health, marital status, partner's employment status and place of residence were not significantly associated with the stated transition plan.

### *Intended retirement transition of planners*

The intended transition to retirement of workers who had made at least four plans was significantly different from those who had made fewer plans. Those who had made the most were more likely to intend to work part-time before retiring (54 versus 35%). They are less likely to intent to continue working full-time with unchanged conditions (22 versus 32%).

### **Limitations**

The authors pointed out that the survey data excluded mature age people living in very remote areas and non-private dwellings. They also thought that a drawback of the retirement planning questions was that they were quite general; providing very broad measures of planning for finances, being physically and mentally active, volunteering, and being socially active in retirement. These topics could have been interpreted in different ways by different respondents, and so the quality of data they produced could have been affected.

In addition the review team could not access the detailed statistical results and also noted that the population and sample demographics were not reported. Furthermore, in the report it was unclear whether appropriate measures were taken to avoid selection bias, although the survey was conducted as a supplement to the national Labour Force Survey and therefore could be assumed to be representative.

### **Applicability to the UK**

This quantitative study is set among a large representative sample of older workers in Australia and is partially applicable to the UK.

### **Newton (2006)**

This qualitative study (-) based on expert interviews and a literature and data review and workplace case studies examined the age-related barriers that currently deter employers from training workers of different ages.

Qualitative interviews with a range of national experts to inform the context for research and the issues to be explored, supplemented by a review of the current policy and academic literatures and secondary data analysis of the Labour Force Survey 2004, and National Adult Learning Survey, 2002 plus data from the Employer Training Pilots and Modern Apprenticeships. In addition, case studies of five organisations that demonstrate good practice in training in mixed-age workforce were conducted.

## Outcomes

There is a clear association between age and amount of training offered to and received by workers. Employers aged over 55 were less likely than other workers to participate in training or to have been offered it. Older employees were also less likely than younger or mid-life workers to take up any opportunities for training that were made available. Older workers were more likely only to have received on-the-job training.

For older workers there is a greater likelihood of training being offered by employers but then not delivered. Where there is engagement in training the evidence suggests that there is little difference in the performance of older and younger workers. Older workers were likely to remain in the workforce for longer and thus it is more worthwhile to train anyone who is likely to stay with the company.

The study also found evidence that older workers can limit their own horizons, eg through lack of confidence to train. It can also be difficult to motivate older workers to engage in training unless they are convinced that they have real value. Furthermore older workers are less likely to identify their own training needs.

The study argues that employers need to implement a training policy to facilitate access, making sure all managers understand and implement the policy – line managers are key in this. Employers need to:

- monitor training take-up
- relate training to career pathways so employees can make informed decisions about the training – this is particularly important for older workers whose career aspirations may be different
- discuss training as part of staff appraisal, and
- identify older workers' training delivery and learning preferences as the evidence suggested that older workers may prefer training that allowed for group learning opportunities. Furthermore work-based training, delivered in

bite-size chunks, draws on their knowledge and experience and offers opportunities to apply newly gained knowledge and skills.

### Limitations

This is a brief article describing a research study for the UK's Department for Work and Pensions. There is no reporting of the methods used, how 'experts' were chosen, why the case studies were chosen, or how many interviews were conducted.

### Applicability to the UK

The study is applicable to the UK but there has been substantial change in employment legislation affecting the default retirement age, pension provision and the economic context since the research was conducted. These may have consequently shaped employer attitudes and practices towards the employment of older workers.

### Noone et al. (2011)

The aim of this (+) rated study was to test for gender differences in retirement planning, perceptions of retirement, workforce involvement, and socioeconomic status, using a random survey sample of older people in New Zealand.

The study analysed a subsample of 2,277 working men and women aged 55-70 years old drawn from the New Zealand Health, Work and Retirement Survey, a longitudinal survey across two waves conducted in 2006 and 2008.

For the survey, 12,567 participants were randomly selected from the electoral roll and 6,662 postal questionnaires were returned. Respondents who were retired, born before 1946 or self-identified homemakers were excluded, leaving 2,692 cases for analysis. Then those with missing data on all indicators which compromised study were removed (N=112) and on demographic variables (N=303) leaving 2,277 for final analysis. A sub-sample of 1,126 was used for comparisons between women with (N=796) and without partners (N=330). The survey also oversampled from those of Maori ethnicity to increase their representation in analysis.

The analysis used two structural equation models. The first tested relationships: expected time to retirement, workforce involvement, perceptions of retirement, informal planning, and financial preparedness. The second tested the same relationship for a subsample containing only women (N=1,126).

## Outcomes

The survey found that higher levels of financial preparedness for retirement was associated with more positive perceptions of retirement, higher levels of informal planning and greater economic living standards ( $p < .001$  no coefficients reported). Women were less financially prepared for retirement ( $r = -.10$ ,  $SE = .05$ ,  $p = .05$ ); women without partners were more disadvantaged than women with in terms of living standards ( $r = -.29$ ,  $SE = .05$ ,  $p < .001$ ) and financial preparations ( $r = -.13$ ,  $SE = .06$ ,  $p = .02$ ).

Involvement with work was only weakly associated with retirement planning, and there was a weak indirect effect via retirement perceptions. Men and women perceived future finances in same way and expected to adjust equally as well to retirement. Retirement perceptions however did not influence financial preparations and the long-term well-being of women approaching retirement. Men and women reported similar levels of informal planning. Informal planning had an impact on financial preparedness after controlling for living standards, anticipated finances and gender – suggesting it is a function of socio-economic status and prior planning mechanisms.

The relationship between informal planning and financial preparedness was weaker for women than men. The authors interpreted this as possibly meaning for that for women, informal planning reflected maladaptive thoughts that had little impact on financial preparedness. The stronger association for men suggested more of a proactive response.

## Limitations

The authors thought that the single measure of informal planning was problematic as it does not enable certainty over which aspects of retirement individuals are thinking about or shed any light on their understanding of issues surrounding retirement. Also, the negative relationship between anticipated finances and informal planning suggests the variable might in fact be assessing worry over retirement finances rather than proactive planning mechanisms. In addition the reviewers thought that the assumption that there was a weaker relationship between informal planning and financial preparedness for women was due to maladaptive thoughts; but that for men the stronger association may be down to more proactive response was a very narrow interpretation.

## Applicability to the UK

This quantitative study is set among a large representative sample of older workers in New Zealand and is therefore partially applicable to the UK.

## Oakman and Howie (2013)

This (-) rated study about older employees in a large public service organisation in Australia and examined their experiences of employment and their intentions to retire using a survey followed up by focus groups.

This work formed part of a larger research project undertaken in 2007. A questionnaire (N=332) was completed by older employees (aged 40+) of a large public service organisation, in Melbourne. The sampling strategy and response rate was not reported. Focus group interviews (N=42) were conducted to explore issues raised in the questionnaire.

### Outcomes

The evidence indicated that mature workers were growing in confidence; they recognised limitations but were aware they had significant skills. They expected their employer to accommodate them by making modifications to their work in the later stages of their career. If these did not materialise, workers indicated they would move to other work or into retirement.

### *Personal influences*

Focus group participants were insightful about their limitations as they aged, expressed confidence about their expertise, liked to work in areas where they felt best utilised, and expressed a desire to mentor younger staff. Loyalty to family and partners was also evident and if duties relating to caring were compromised, leaving work was viewed as inevitable.

### *Organisational influences*

There were two main sub-themes relating to the impact of an organisation on intention to retire: policy – which represented the actions participants thought companies could take to influence retirement intentions; and perceptions - which represented more indirect influences of employers on retirement intentions.

Job satisfaction and the contributory factors varied greatly between participants. Participants agreed that as they grew older they placed greater importance on job satisfaction, particularly when their financial situation enabled them to make choices about when to retire. Participants discussed job satisfaction in relation to part-time work, and felt that if it was offered, it would greatly enhance the organisation's ability to retain older workers. Participants felt that the challenge was to ensure that part-time work provided job satisfaction.

Participants wanted greater control over their work, acknowledgement of their experience, and to contribute to the planning of work practices. This would

engender trust and respect, enhancing the attractiveness of the work environment. Many participants wanted to remain at work if some changes to their full-time status were initiated. They enjoyed their work, and criticisms pertained to organisational issues rather than the demands of their work. Focus group participants reported having control over certain aspects of their work, except for changes to policy, direction of the business, and setting work targets. This was frustrating and a barrier to job satisfaction.

### *Legislative influences*

This concerned government policies that regulate superannuation and age pension availability. Two sub-themes were developed from the data: superannuation and age pension. Participants highlighted superannuation as the most significant factor in determining retirement timing, although indicated they would choose to retire early regardless if job satisfaction was low and health issues developed. Adequate superannuation did not necessarily result in a desire to retire. Participants with sufficient superannuation reported they could enjoy work and make strategic choices about the work they did. This group were very amenable to the influence of organisations in attracting them to remain at work, and were seeking to improve the flexibility of their work arrangements. Salary levels in the final years of work were influential in the calculation of superannuation benefits, which was a disincentive to staying at work part-time. Participants who wanted to reduce their work hours felt unable to do so without significant penalties to their final superannuation pay out, which was a critical issue in the retention of mature age workers. Access to the government pension was not a strong influence on retirement intentions. Rather, most participants indicated that access to superannuation schemes had a greater influence.

### **Limitations**

A greater level of analysis (verified by an additional researcher) would have added richness, as would a broader sample. Having older workers from one firm limits the generalisability of the study.

### **Applicability to the UK**

This qualitative study is set among a relatively small sample of public sector workers in Australia and has limited applicability to the UK.

### **Olesen et al. (2012)**

The (++) study examined whether mental health predicts subsequent retirement in the general population in Australia, and whether this association varied with the

timing of retirement using data from the Household Income and Labour Dynamics in Australia (HILDA) survey.

Longitudinal data from 2,803 people aged 45–75 years were drawn from five waves of the Household Income and Labour Dynamics in Australia (HILDA) survey. Multi-level sampling was used to gain a representative sample of private households. The respondents were made up of 1,516 men and 1,287 women. The response rate for this sample at each wave of subsequent data collection was: 84.3% (Wave 2), 83.0% (Wave 3), 77.5% (Wave 4), and 75.7% (Wave 5).

Discrete-time survival analyses were used to estimate the association between mental health and retirement and retirement status was self-defined. Mental health was measured using the Mental Health Index (MHI-5). Explanatory variables were included in multivariate model. They were selected based on previous research and theory which were: age, physical health functioning (PF-10), income, financial hardship, spousal status, social support, social activity, workplace conditions, and job satisfaction. The relative influences of other health, social, financial, and work-related predictors of retirement were considered to determine the unique contribution of mental health to retirement behaviour.

### Outcomes

In unadjusted analysis, association between mental health and retirement is greatest in the youngest cohort of men (HRR 1.37, 95% CI 1.17–1.60), and progressively decreased throughout older cohorts (55–59 years HRR 1.17, 95% CI 1.02–1.34; 60–64 years HRR 1.19, 95% CI 1.01–1.39; 65–75 years HRR 1.01, 95% CI 0.81–1.26). Mental health did not predict retirement in women.

When covariates were adjusted in the model, mental health remained a predictor in retirement for men, but interaction with age did not. Most workforce variables did not independently predict retirement.

After age, physical functioning was the strongest predictor of retirement in men (1.38 CI 95% 1.24–1.53). The strongest predictor in women was spousal status (0.46 CI 95% 0.32–0.66) followed by physical functioning (1.25 CI 95% 1.14–1.36).

Using a broader definition of workforce exit which included those leaving paid work to become 'homemakers', the authors found mental health significantly predicted workforce exit amongst women in the youngest cohort (45–54), but not in other age groups.

### Limitations

The authors point out that the data does not consider those that re-enter the workforce therefore no implications for effective policies supporting older

employees to re-enter the workforce could be drawn. There was no information on whether retirement was planned or not.

### Applicability to the UK

The study was conducted in Australia, but due to its high representativeness of the population as a whole, the results are largely applicable to the UK.

### Patrickson (undated)

This (-) rated study set in Australia set out to examine the priorities of older versus younger people in seeking work and how elderly workers succeed in securing and keeping employment.

The study used interviews with 31 workers aged over 75 and used computerised software to aid the analysis. 16 were men, the age range was from 75 up to 91, majority being 75-81 (21 participants). Seventy-one per cent of people were in professional/managerial position and 84% were university graduates. The most common pattern of hours worked was 5-15 hours per week. No details of sampling method or data collection process are given.

### Outcomes

Results indicated participants scored highly on measures of human capital, occupied jobs where the supply of skilled labour was small and the demand was high, were well networked, in good health, above average in their proactive approach, and had already established reputations in their field.

However simply securing employment and receiving positive feedback was not enough for some participants, as another highly valued component contributing to their enjoyment was the opportunity to craft their own job albeit in different ways. For some this meant designing the way in which the work was done, for others it meant working where, when and how they felt most comfortable.

Crafting was undertaken by almost all the sample. Most common was autonomy in choosing how to do the work, followed by negotiating a delivery date for the work undertaken then scheduling it around other commitments. If self-employed or a contractor the pricing of jobs was within their jurisdiction. Many employees were able to choose whether to work at home or on the employer's premises and occasionally who they might work with if they were part of a team. They seemed to understand the value of their skill scarcity and used this to either negotiate or assume additional autonomy of value to them.

Positive outcomes reported in order of priority were psychological factors, such as an opportunity to exercise skills, substantial autonomy to craft their own ways of working and confirmation of professional identity and continued competence, followed by social factors, such as meeting people and financial factors. Few mentioned any drawbacks. An unexpected benefit was that working contributed to their maintaining their good health.

### Limitations

The review team noted that the recruitment method not reported, analysis not clearly described which makes it difficult to assess the reliability of the process and any sources of bias.

### Applicability to the UK

The small sample and lack of information on its representativeness makes it difficult to assess applicability of the findings to the UK so limited applicability can only be concluded.

### Pillay et al. (2006)

The aim of this (-) rated study was to investigate how the mature aged worker viewed the effect of timeframe, education level and occupation type on willingness to participate in transitional employment using a survey of local government employees in Australia.

### Method

A total of 1,120 local government employees aged over 50 years participated in the study. Fifty-eight per cent of the sample was within six or fewer years from retirement, 44% had been educated to university level, 26% were in a professional occupation and 23% were in management.

Aside from demographic data, survey questions asked respondents to respond to questions that were thematically clustered around themes including: work conditions; training and development; mutual roles and responsibilities; incentives and benefits; and community service usage, with reference to transitional employment. Response patterns were examined for each demographic category. These patterns were clustered into the themes for Transitional Employment (TE).

### Outcomes

The results of the study have shown that interest in transitional employment, and preferences relating to transitional employment differed according to timeframe

until retirement, education level, and occupation type. The findings demonstrated that transitional employment interventions could be more effective for older workers if the demographic characteristics of the intended recipients were incorporated into their design. For instance, on the job training or short courses might be most appropriate for older workers close to retirement, whilst lengthier courses might be preferable for workers with more than six years until retirement. The results also showed that current and past work and educational experiences influenced transitional employment preferences. Workers with low levels of formal education and low status physical jobs were the least receptive to transitional employment and represented a challenge as they might be reluctant to participate in training and development, and their jobs were detrimental to their health. The diverse preferences reported by mature aged workers also supported the need for greater flexibility of work conditions and training opportunities.

### Limitations

The study was rated (-). The age and gender of the participants were not recorded. Very little detail on the sampling and analysis procedures are reported. Some of the occupational groups could have been combined as a large number of groups makes it difficult to interpret the findings.

### Applicability to the UK

This quantitative study is set among local government workers in Australia has limited applicability to the UK.

### Pillay et al. (2008)

The aim of this (+) rated study was to investigate the effect of retirement timeframe, education level and occupation type on mature aged workers aspiration and willingness to participate in transitional employment and training. The study used a survey of 994 local government workers aged over 50 in Australia. Fifty-nine per cent were within six years of retirement, 47% had a university degree and 53% were in a professional/management role.

### Outcomes

The majority of participants were interested in transitional employment, and were prepared to undergo training and development and work with management staff in order to achieve this end. Two general perceptions of transitional employment emerged. The first was transitional employment as an opportunity for learning and career development or change, which was most commonly aspired to amongst respondents with more than six years until retirement, a university education, or a professional/managerial role. The second was transitional employment as it is more

traditionally viewed: as a chance to continue on in one's current role at reduced hours post retirement.

### Limitations

The authors point out that the data does not consider those that re-enter the workforce so no implications for effective policies supporting older employees to re-enter the workforce could be drawn. There was no information on whether retirement was planned or not or its timing. The response rate is not reported so it is not possible to determine how representative the results are. The research team noted that influences of sex and health on future employment intentions were not considered.

### Applicability to the UK

The study was conducted in Australia, and results are largely applicable to the UK but the authors note the local government sector had been subject to widespread recent change. This may have conditioned worker attitudes but it is not certain whether workers in comparable settings in the UK had been subject to similar kinds of workplace change.

### Pillay et al. (2010)

This (+) rated study using interviews with 25 workers set in local government organisations in Australia set out to investigate employers' knowledge and attitudes regarding age diversity issues, how local government councils respond to ageing issues through policy and practice and whether employers incorporate ageing issues in future business plans.

The study used a purposive sampling approach and the majority of interviewees were older workers in managerial positions, but sample did include some younger workers, and 'outdoor' workers. The research and interview questions informed coding categories used for analysis. Data were coded for key themes and placed in data matrices.

### Outcomes

Stereotyping of older workers was positive and negative. Knowledge and experience was seen as indispensable, but older workers were also judged to have lower physical capacity. This could create challenges for managing their occupational health and safety and lower productivity. Older workers were seen as often reluctant to retrain for less physically demanding jobs through lack of interest in other types of work, preference for current working conditions and belief in their own competence.

One council tried to accommodate 'outdoor' older workers through less physically demanding work roles.

There was no organisation-wide policy adopted for mature aged workers. Approaches were characterised by age neutrality and individual managerial discretion over changes to work environment, flexible working options and mentoring. The quality of individual manager-employee relationships was seen as critical to how constructive and open workers were able to be in discussions about retirement with managers, and the extent to which these took place. Flexible work, job share and part time were not seen as targeting mature workers, and were noted to be dependent on the suitability and availability of roles.

### Limitations

The authors note that the limited sample size and purposive sampling methods limit the generalizability of the findings.

### Applicability to the UK

The findings are partially applicable to the UK but differences in the management of workers in local government organisations and the small sample from one sector mean that the results cannot be generalised to the whole of the UK economy.

### Pit et al. (2010)

The purpose of this survey-based study (+) was to examine which health problems are associated with retirement due to ill health among Australians aged 45–64 years.

Participants were randomly selected from the national Medicare Australia health insurance database to take part in a survey (mode unreported). A total of 3,160 females and 1,933 males, who were recruited between 2006 and 2008, were studied. Retirees were asked why they had retired, and allowed multiple responses. In addition to sociodemographic factors and questions related to health, the reason for retirement was asked and coded bivariate (anyone who retired due to ill-health as one of the reasons vs those who had retired for other reasons). Health problems were categorised as either 'present' or 'absent', and self-reported health status was categorised into three groups. Logistic regression analysis were used to estimate odds ratios of retiring due to ill-health versus other retirement reasons while adjusting for location, age, marital status and education. A p-value of <0.01 was chosen for statistical significance because there is a potential for a greater risk of type I error due to multiple comparisons.

## Outcomes

The probability of retiring due to ill-health was 18% (572/3160) for women and 31% (599/1933) for men. After adjusting for socio-economic variables and other health problems, women who had been diagnosed with thrombosis, depression, osteoarthritis, or cancer (except melanoma and skin and breast cancer), were twice as likely to have retired early due to ill-health as women without these health problems. The number of health problems associated with retirement due to ill-health appeared to be greater for men. From most to least significant, stroke, cancer (except melanoma and skin and prostate cancer), osteoarthritis, depression, anxiety and heart disease had a significant association with retirement due to ill-health among male retirees. The strongest association with retirement due to ill health was in self-reported health status.

Compared to female retirees who reported excellent to very good health, women who rated their health as fair or poor were 7.67 times as likely (95% CI: 5.06–11.62) to have retired early due to ill-health. Also, women who rated their health as good were 2.85 times as likely (95% CI: 2.03–4.01) to have retired early due to ill-health. The same pattern emerged for male retirees, but the associations were slightly stronger for males who rated their health as fair or poor (OR: 8.87 (95% CI: 5.60–14.05)). The adjusted odds of retiring due to ill-health declined with increase in age for men but not for women. Only women aged between 50 and 54 had higher odds of being retired due to ill-health than women aged between 60 and 64 years. Single women had higher likelihood of being retired due to ill-health than their married counterparts, but no association was found for men after adjusting for other covariates. In comparison to men with a university degree, men with a trade or apprenticeship had the highest risk of being retired due to ill-health followed by men with an education equivalent to or lower than high school.

## Limitations

Causality could not be determined due to the cross-sectional nature of the study. Several questions do not necessarily reflect the situation at the time of retirement; depression or arthritis, for example, may have started after retirement, or a cancer may have been cured prior to retirement.

The other limitation was a low response rate (17.9%), thus it would not be appropriate to generalise to the general population. Further, the survey was in English and excluded the mentally impaired who could not sign their own consent form; probably not representative of NSW but may apply to English speakers and healthier people who are more likely to respond. In addition, it has been found in several studies that self-reporting of health problems may cause under-reporting. For example, respondents may experience poor health but not recognise that it is due to diabetes and not report it; as a result the association between diabetes and ill

health retirement would be underestimated. This may partly explain the stronger association with ill-health retirement from self-reported health status than individual health problems. Finally, the study did not include disease severity or factors to improve people's functioning, such as medication or other treatment.

### Applicability to the UK

The study is partially applicable to the UK but the low response rate may limit generalisability.

### Pit and Byles (2012)

This quantitative longitudinal study rated (+) examined the health problems associated with employment and their relationship with workforce participation among mid-aged women in Australia over time.

The study used data from five waves of the Australian Longitudinal Study on Women's Health (ALSWH). The initial sample was drawn from women aged 45 to 50 randomly selected from the national Medicare database. They were initially surveyed in 1996 (N=13,715) and subsequent surveys took place in: 1999 (N=12,338); 2002 (N=11,226); 2004 (N=10,905) and 2007 (N=10,638).

The survey outcome measures included:

- Measure of employment status: collected by self-report questionnaire and asked if they had spent more than 1 hour in various employment practices.
- Measures of demographic characteristics: Location was classified into urban and rural/remote according to the rural, remote and metropolitan areas index. Women were asked about their highest educational qualification, current marital status, if they had children living at home, being a carer was classified as yes or no. The relative socioeconomic disadvantage index was used which reflects the general socio-economic indicators that contain variables related to economic and social characteristics of families and households and education level and occupation of individuals. A higher score represents a greater advantage.
- Measure of health problems: at each point in time women were asked if they had been treated for a variety of conditions. Analysis was limited to survey points 3,4 and 5 because arthritis was only measured from s3 onwards, and as arthritis has been found to have a large impact on work to include this variable would distort findings.
- Measures of lifestyle: smoking was measured by number of cigarettes smoked a day and BMI was reported

- Measures of health status: Short form SF-36 Quality of Life questionnaire was used to create a measure of quality of life. A physical component and mental health component was derived from this score.

At each survey, demographic characteristics, health problems, lifestyle factors and quality of life were compared for women who were employed and those who were not using chi-squared tests for categorical variables and t-tests for continuous variables. Generalised estimating equations (GEE) were used to conduct nested multivariate longitudinal analyses, using the GENMOD statistical programme.

### Outcomes

The proportion of women who participated in each survey and who were employed in 2001, 2004 and 2007 were 77%, 72% and 67% respectively.

Attrition between surveys was associated with employment status, indicating an increase bias towards women who were more likely to be employed at each survey ( $p < 0.0001$  on chi-square).

Women's ongoing participation in the workforce at older ages was affected by both socio-demographic and health factors, with single women and those from more disadvantaged areas being more likely to work, and those with caring responsibilities of people they live with and health conditions being less likely to work ( $p < 0.005$ ).

Women who reported psychiatric conditions (OR=0.48, 0.3-0.78,  $p < 0.005$ ), diabetes (OR=0.82, 0.69-0.99,  $p < 0.0050$ ), depression (OR=0.81, 0.71-0.91,  $p < 0.0050$ ), anxiety (OR=0.84, 0.74-0.98,  $p < 0.0050$ ), and high blood pressure (OR=0.89, 0.80-0.98,  $p < 0.005$ ) were less likely to be employed than other women.

Being employed decreased as physical and mental health deteriorated and with self-reported conditions Back pain, arthritis, cancer, obesity and being a current smoker were associated with employment but not when quality of life is added to the model.

### Limitations

The authors noted that a higher proportion of women who responded to third fourth and fifth surveys were employed at the time of the first survey suggesting that a healthy cohort effect has taken place. This may underestimate the effect size of the relationship between health problems and employment, particularly for diseases with high mortality or morbidity rates, causing women with these health problems to not take part in follow up surveys.

In addition the study did not take into account women's previous or current occupational level or severity of disease and the authors noted that the survey relied on self-reported health measures which may not have been accurate.

### Applicability to the UK

The study is set in Australia and the most recent survey took place in 2007 and therefore is partially applicable to the UK.

### Pond et al. (2010)

This qualitative longitudinal study rated (-) examined how an individual's health affected their decision to retire among a sample of middle to older aged New Zealanders. The study was designed to identify how an individual's health and/or their response to their health status determined different retirement pathways.

The sample was selected from respondents to a large nationwide postal survey about health, work and retirement and who had specified that they would be willing to be interviewed face-to-face. The sample comprised 60 New Zealanders (32 women, 28 men) aged 55-70 in various stages of retirement and employment status.

A qualitative, longitudinal design was used. First interviews used a life course approach and asked about retirement and the factors that influenced workforce participation. The second set of interviews asked about work, retirement, health and well-being over the 18 months, and again what influenced their employment and retirement choices. Interviews were digitally recorded, transcribed, and coded the data using ATLAS.ti. Data were organised according to their common and distinguishing features. Transcripts from second interviews were compared and contrasted with the first to find common themes and any potential contradictions.

### Outcomes

Three retirement pathways were identified:

- 'impaired' (health and disability affect ability to work);
- 'maximisation of life' (retiring whilst healthy to fulfil other goals); and
- 'protective' (decisions motivated by individual concern to promote and protect health).

Several participants' health problems had impaired performance, comfort or ability to function at work, and consequently they had retired, reduced their hours or found alternative employment more suited to their health condition. There were cases of work participation being affected by an impairment caused by accidents and injuries (some were work-related), and others of musculoskeletal,

cardiovascular, respiratory and multiple health conditions. Although conceivable, no one reported poor mental health as leading to retirement or work reductions from late middle age, although a couple mentioned that poor mental health had affected their earlier working life. Because bodily health is inextricably linked with interpretative processes (McDonough and Amick, 2001), the study concluded that the impaired pathway is actually the process by which people's bodily ill-health and their interpretation of this interact to limit their ability to continue working as before.

Participants articulated two distinct variants of the maximisation pathway: 'optimising present good health' and 'maximising life following a health scare'.

### *Optimising good health whilst you have it*

Several participants retired/planned to retire explicitly because they were healthy, with the intention of maximising enjoyment of remaining good health. Several referred to inevitable decline, the unpredictability of health, and maximising non-work facets of life in remaining years. The impact of witnessing others die/ become ill was commonly noted. The health of close relatives was also used as a marker to predict one's own morbidity, creating either a sense of urgency or sufficient time. Some found work fulfilling and intended to continue, but many others believed that work competed with other important things in life, leading some to reduce/relinquish work whilst healthy. Notably, this was dependent on financial security and meeting one's costs to sustain desired living standard; it could not be achieved by those experiencing hardship and serious financial pressure.

### *Maximising life after a health scare*

A few participants decided to prioritise life outside work after a serious health scare. Those who experienced them were suddenly reminded of mortality, and reappraised their life, priorities and aspirations. Several participants referred to the importance of maximising remaining life, typically whilst healthy enough to engage in fulfilling activities. Witnessing others with serious illnesses or experiencing a health shock oneself reminded participants of their own vulnerability and the importance of taking advantage of remaining time. As many saw work as competing with available time for fulfilling activities, some retired or reduced work hours if they could afford to do so; those who continued to work were conscious of the risks of delaying retirement. This pathway is consistent with notions of positive ageing and the third age, during which older people remain active and enjoy their remaining healthy years before frailty and dependency.

Protecting one's health was a clear concern for most participants. Many engaged in physical activity and/or controlled their diet to maintain or improve health, and those who did not referred to ambitions or failings in this regard; this is not

surprising considering the ubiquity of the 'health promotion' discourse. Many conceptualised work as inimical to good health, leading some to choose less stressful jobs, reduce their hours or retire. Several participants did so to protect themselves from stress, and some had taken into account doctor's or partner's advice. Several who were still working made it clear that they would no longer tolerate stressful working conditions. Many expected retirement to improve health, mainly because they would have more time to exercise. Those who had retired spoke of the health benefits of less stress and more exercise, and some thought that retirement-related health benefits compensated for age-related health decline. There were, however, contradictory opinions about whether retirement negatively or positively influenced health: some believed people experience health benefits from work, and some thought people susceptible to decline or death shortly after retirement. Notably, however, seeing retirement as a phase lacking purpose and activity did not always associate with delaying retirement. Instead some participants explained they had developed other interests or transitioned into retirement gradually.

### Limitations

The authors identified that the sample was not ethnically representative (Maori were over-represented). The study also included an over-representative proportion of people living in 'hardship' and 'comfort', and a lower proportion with a 'good' living standard.

### Applicability to the UK

The study is set in New Zealand with a relatively small sample which limits its generalisability and makes it partially applicable to the UK

### Quine and Bernard (2006)

The objective of this (+) study was to explore the range of expectations and plans for retirement of Australian baby boomers and specifically understand baby boomers' attitudes and personal strategies and whether (and if so how) these vary by socioeconomic and other demographic factors, using a series of focus groups.

The focus groups comprised people born between 1946 and 1955, recruited through local clubs in New South Wales, Australia. The researchers sought to recruit participants who were similar to each other in social-economic status, gender and geographical location. Participants were offered a small incentive for their time. The 78 participants included 50 married, 11 'de facto', eight divorced, three separated, three widowed, three single; 36 were aged above 55, and 36 below 55 and 42 above 56; 32 worked full time, 29 were part time and 17 were not in the workforce; 28 had high urban status, 25 low urban status and 25 mixed rural status. There was a mix of educational attainment.

A semi-structured topic guide was developed by the researchers and used by the focus group facilitators with topics including ageing, working life, plans for retirement, adequacy of money in retirement, need to support others in retirement, housing, lifestyle, health, insurance, physical and emotional support needed. The focus groups lasted for around 90 minutes and were audiotaped with permission of the participants and transcribed. The interview data was analysed manually by two researchers, providing a measure of inter-rater reliability. The data were analysed through basic content and thematic analysis.

### Outcomes

Many participants had not made any retirement plans and of those who had these were often restricted to their finances, and more common among participants in higher social-economic groups. Planners had put into place financial plans and some thought into the near future post-retirement, whereas non-planners were living life on a 'day to day' basis. None of the participants, irrespective of their social-economic status, had given much thought to planning for their advanced old age and were unwilling to do so.

Socio-economic status was the variable that made the most difference in terms of the opportunity to plan. Age also appeared important, with younger baby boomers being less likely to have considered or planned for their old age. Apart from proximity to retirement the age demarcation may also be associated with the fact that older baby boomers who were public servants were more likely to qualify under the superannuation scheme.

Participants from low socio-economic background generally had less occupational opportunities and flexibility, less job satisfaction, less private health insurance and less money available for retirement

Enjoyment was an incentive to remain in the workforce. Those employed part time were more likely to report enjoyment, irrespective of their socio-economic status. Stress was viewed as a disincentive to remain in the workforce by participants from all backgrounds but was reported more frequently by high socio-economic status men with their own business.

### Limitations

The authors noted that there was a higher proportion of participants with tertiary education than in the baby boomer population. They attributed this to the deliberate selection of a sizeable number of participants from high socio-economic status backgrounds to enable comparison with low socio-economic status participants. However this may have skewed some of the results. The reviewers also note that

participants may have been more open in interviews if they felt intimidated in a focus group session.

### **Applicability to the UK**

This qualitative study is set in Australia with a relatively small sample and has limited applicability to the UK

### **Reynolds et al. (2012)**

The aim of this (+) rated study set in the UK was to identify the subjective benefits of working after the age of 65.

The study used semi-structured face to face or telephone interviews. Participants were recruited through local and national newspaper advertisements but the method of sifting is not specified. The sample consisted of 31 people aged between 65 and 91; 11 were women and 12 were men; 14 worked full-time and 17 were part-time. Various industries were represented. Data was coded according to key themes by all researchers and discussion was held to establish credibility of the findings.

### **Outcomes**

The study found at work stopped respondents getting bored and gave them a purpose. Work provided a platform for personal development. It made some feel valued and engaged. Working was thought to promote emotional and physical health/afforded way to stay in control over health and good health was an enabling factor. Part time working and self-employment were ways to continue to work later in life.

### **Limitations**

The authors noted that self-selection bias is evident because most participants were professional and in good health. None were from manual professions and only a few were in a situation in which they were obliged to work out of financial necessity.

### **Applicability to the UK**

The study is partially applicable to the UK but cannot be generalised to the whole population because of the small and unrepresentative sample.

## Rice et al. (2011)

The aim of this (++) study was to identify common symptoms and conditions that predict early work exit at the population level in the UK using the English Longitudinal Study of Ageing (ELSA).

This was a four-year cohort study (follow-up waves in 2004 and 2006) of a total of 1,693 workers aged 50-65 of community dwelling respondents to the English Longitudinal Study of Ageing (ELSA). Age- and gender adjusted logistic regression models were used to examine predictive effects of potential confounders on risk of early retirement.

Respondents chose the best description of their current situation: retired; employed; self-employed; unemployed; permanently sick or disabled; looking after home or family or other. Individuals were classified as 'in work' if they answered 'self-employed' or 'employed'. Outcome measures classified respondents into those who made the transition from working at baseline to not working at 4-year follow-up, and those who remained in employment throughout. The following baseline health predictors were considered: general health (excellent, very good or good versus fair or poor); long-standing limiting illness (any longstanding illness, disability or infirmity which limits activities); activities of daily living (ADLs) and instrumental ADLs (IADLs) difficulties. Respondents were asked whether a doctor had ever told them that they have (or have had) any cardiovascular or chronic conditions. Analyses restricted to those with a prevalence of 10% or more (asthma, hypertension, arthritis and any heart condition). Also considered were those with no diagnosed conditions compared with those with one, two or three or more conditions. Responses dichotomised to compare individuals reporting no difficulty with those reporting any degree of difficulty or being 'unable to do this'. Respondents with problems were asked to choose which symptoms made walking difficult from a show-card of 17 symptoms, including leg or foot pain and shortness of breath. Respondents were asked whether they were often troubled with pain, and if so to rate the severity of the pain (from 0 to 10) when walking. Symptomatic pain when walking was considered as a dichotomous variable (no pain versus any pain) and trends for pain severity. ELSA included the validated eight-item version of the Centre for Epidemiological Studies Depression (CES-D) symptoms index. This research considered three or more symptoms as identifying depression in line with previous studies that have used the eight-item scale. Individuals were asked about income, wealth and pensions. ELSA-derived financial variables were used to create baseline measures for net total (non-pension) wealth; pension wealth (private plus state pensions) assuming retirement at the state pension age, and income from employment. The following factors were also considered as potential confounders for early work exit: partner retirement (whether respondents had a partner who retired during the follow-up period); education; activity level of job; smoking status; alcohol consumption frequency; body mass index.

## Outcomes

A total of 308 (18.2%) individuals moved out of employment during the follow-up period. Advancing age, female gender, partner retirement, greater pension wealth, high alcohol consumption and fair or poor self-rated health were all associated with work exit. Accounting for these factors, reported difficulty walking a quarter of a mile was predictive of early work exit (OR = 2.23; 95% CI 1.42–3.52), especially where symptoms included lower limb pain and/or shortness of breath. Symptomatic depression (measured by Centre for Epidemiological Studies Depression scale) was also predictive of early work exit (OR = 1.52, CI 1.07, 2.18). About 50.8% of early retirees reported one or more of these specific health symptoms (depression, general pain, mobility limitations and leg pain when walking).

## Limitations

Thanks to cohort design and appropriate analytical approach, the study was rated as (++) . The authors point out, however, as in any cohort study, if the characteristics of individuals who drop out of the study differ from those remaining in the study, inferences drawn at the population level may not be valid. To account for attrition, ELSA created longitudinal weights for individuals who were present at all three waves. These weights were based on a sequence of attrition models for each wave, which is multiplied by the weight created at the previous wave. The sequential nature of the weighting attempts to reduce any bias arising between each wave of ELSA. In addition to using survey weights to account for attrition, it was tested whether the baseline outcomes investigated were different in the sample (baseline workers present at all study waves) compared with the baseline workers who dropped out of the study.

## Applicability to the UK

This highly rated population based study was conducted in the UK which makes it generalisable to UK older workers.

## Royal College of Nursing (2013)

This (+) rated survey of RCN members aimed to gather the views of RCN members aged 60 and over about their experience of work and retirement in the light of proposed pension changes.

An online survey was sent to all RCN members who were aged 60 or over and/or in a retired membership category; 1,470 members replied, a response rate of 21%.

## Outcomes

Among those who had returned to work in a health care organisation after retirement, working shortened hours, having flexible working, not having night shifts, being in a less physically demanding role, having management support and being in a less stressful role were all important factors helping in the return to work in health care employment.

## Limitations

Limitations noted by the review team are uncertainty whether there are gender differences and variations by nursing specialism, whether the responses would be any different from other generations working in the NHS and lack of investigation of response bias, limiting the generalizability of the findings given the low response rate.

## Applicability to the UK

The findings are partially applicable to the UK but cannot be generalised to the whole nursing population or to other occupations or sectors.

## Schofield D et al. (2010)

This survey-based study examined the retirement intentions of dentists in New South Wales, Australia.

A postal survey was mailed to all 768 dentists aged 50+ on the Australian Dental Association's New South Wales database. The survey received 153 responses, a response rate of 20%.

The survey collected demographic and practice characteristics; information on dentists' intended age of retirement and expected reasons for leaving the workforce; as well as financial details such as the value of assets and debts, expected sources of funding for their retirement, and superannuation information. A one-sample t-test was used to test differences between the age at which dentists wished to retire and the age at which they thought they realistically would. One-way ANOVAs examined differences in intended retirement age between groups. Multivariate regression was used to establish what influences dentists to retire by identifying predictors of intended retirement age; missing values were replaced by the mean for that variable. Variables were entered in five steps: demographic variables; partner variables covering 'education, employment, income, and health'; work variables; property ownership; and location variables. Statistical analyses were conducted using SPSS with significance set at  $p = 0.05$ .

## Outcomes

On average, the survey found that dentists in New South Wales intended to retire at 66, and would do so earlier, at the age of 64 if they had the choice ( $p < 0.05$ ). Only nine per cent of survey respondents thought that they would retire before 60.

Dentists with children intend to retire significantly later than those without ( $p < 0.05$ ).

Study participants were asked to indicate which of a number of possibilities they predicted would be the reason for their future retirement. For all dentists, the most common responses were to have more leisure time (51%), being able to afford to stop working (49%) and job stress or pressure (23%; multiple responses could be selected and there was no ranking of the responses). Males were more likely than females to expect to retire due to a lack of interesting work, with no female dentists indicating that this would be a reason for retirement. Females more often predicted their retirement to be associated with ill health. Female dentists expecting to retire because their spouse wanted them to predicted a significantly older retirement age than males retiring for the same reason ( $p < 0.05$ ), while the reverse is true for dentists who envisage themselves leaving the workforce because they can afford to do so ( $p < 0.05$ ). Multivariate regression analysis revealed that of a number of variables entered, only age and home ownership were significant predictors of intended retirement age, with 27% of the variance attributable to current age and home ownership responsible for a further three per cent ( $p < 0.05$ ), suggesting that paying off debt is an important determinant of retirement.

Some dentists transition into retirement via part-time work. Two-thirds of the dentists in this study worked in a practice where part time work was available. Of these, 71% were either currently working part time or considering part time work in the future. Of the dentists for whom part time hours were not available in their current practice, two thirds reported that they would like the option.

Over half, 54% of survey respondents declared a desire to continue working at reduced hours at either their current location or in another practice after ceasing full time work. Following retirement from their current practice, 37% of dentists did not intend to work in dentistry at all, while 27% planned to work as a locum part time.

## Limitations

The authors did not identify any limitations, however, the review team noted the relatively low response rate (20%) and that there was no mention in the study of control variables. Furthermore, the data were not represented graphically nor collated in one accessible format.

## Applicability to the UK

The study is set among a particular occupational group in a region of Australia and therefore is of limited applicability to the UK.

## Shacklock et al. (2009)

This (+) rated study used a survey of workers aged over 50 in a single large public sector organisation in Australia to investigate perceptions of work-related factors influence older workers intention to continue paid work and whether the factors vary between men and women.

The survey achieved a response rate of 38% with 379 respondents, of which 67.3% were male, and 31.9% female with a mean age of 55 years.

The survey investigated the importance of five potential factors affecting older workers intentions: autonomy, interpersonal relations, work environment, flexibility and attachment to work. Items used a 7 point scale from 1 strongly agree to 7 strongly disagree.

## Outcomes

Three work-related factors were significantly related to older workers' intention to continue paid work, including importance of work ( $\beta = -.142$ ,  $p < .05$ ), flexibility ( $\beta = .120$ ,  $p < .05$ ) and interests outside of work ( $\beta = .407$ ,  $p < .001$ ). Work-related factors influencing older workers' decisions to continue paid work were found to be different between men and women. Factors having greater influence on the intention of women aged over 50 to continue working were interpersonal relationships ( $\beta = -.220$ ,  $p < .05$ ), autonomy ( $\beta = .197$ ,  $p < .05$ ), flexibility ( $\beta = .327$ ,  $p < .001$ ). The authors suggest that interpersonal relationships may have a negative influence for women because of the nature of jobs performed which may limit the development of personal relationships. For men aged over 50, the significant factor influencing the decision to continue working was importance of work ( $\beta = -.156$ ,  $p < .05$ ).

## Limitations

The authors note that the study population is limited to a single large public sector organisation in Queensland Australia so the findings cannot be generalised to other organisations. They also note that bias due to use of self-reported data could limit the generalizability of the findings.

## Applicability to the UK

The study is set in a single organisation in Australia and therefore is of limited applicability to the UK.

## Shacklock and Brunetto (2012)

The aims of the study were to examine the impact of seven variables on the intention of hospital nurses to continue working as nurses and to investigate whether there are generational differences in these impacts.

Data were collected using a postal survey instrument containing 15 demographic measures (eg age, gender), and eight variables. The variables were measured by rating on a scale from 1 to 6: leader-member exchange was measured by using a 6-item validated instrument; work-family conflict was measured using Netemeyer et al., validated instrument (6 item measure), perception of autonomy was a 3-item measure, attachment to work was operationalised by the researchers using the empowerment literature (3 items), importance of working was measured using 3 items from the Meaning of Work study, interpersonal operations measured using Glaser et al. (5 items), flexible working arrangements measured using 3 items, intention to continue nursing was measured using items specifically developed for the study.

Nine hundred responses were obtained with a response rate of 36%. The sample was considered to be representative of the Australian nursing population.

Nursing staff were employed in seven private hospitals including large, small and medium acute care hospitals, and a teaching hospital. Ninety-six per cent of the respondents were women; 54% were aged between 44-64 years (Boomers). Seventy-nine per cent of the whole sample were married or living with a partner, 12% were single and seven per cent divorced. Thirty-three per cent had worked at the hospital for more than 15 years, eight per cent between 10-15 years, 18% between 5-10 years and 29% between 1-5 years, 12% for <1 year. 58% worked part-time, 28% worked full-time and 13% were casual.

## Outcomes

For nurses in the older group (Boomers), there were relationships between the intention to continue nursing and 5 variables: work-family conflict (-0.14,  $p<0.001$ ), perceptions of autonomy (0.15,  $p<0.001$ ), attachment to work (0.25,  $p<0.001$ ), interpersonal relationships (0.12,  $p<0.05$ ) and the importance of working (0.12,  $p<0.05$ ).

## Limitations

The authors noted that private hospital nurses and public sector hospital nurses' intentions to remain in nursing may be influenced differently as the public and private health sectors are different in Australia. Common method bias is a possibility in self-report cross-sectional studies where common method variance may influence the significance of relationships between variables. There may also be differences in nursing intentions based on their area of specialisation, as certain cultures exist within certain specialties. Nursing may also be different from other occupations as it is dominated by women and regarded as a caring profession, and offers a variety of working arrangements. This may condition expectations and attitudes affecting the decision to continue working.

The review team noted that the findings were not generalizable to other sectors and that any differences in how factors affected nurses aged over 65 were not explored.

## Applicability to the UK

The study is restricted to a single occupation in a subsector in Australia and therefore is partially applicable to the UK.

## Shacklock (2006)

This (+) rated study using 30 semi-structured interviews with employees aged at least 50 selected via snowball sampling in an Australian public university and sought to explore the meaning of work to older workers and why they may wish to continue working.

Fifteen males and 15 females were interviewed for an average of 96 minutes each and transcripts were analysed thematically using a qualitative analysis software package.

## Outcomes

A large majority of interviewees stated that working was one of the 'most important' or 'more important' things in their lives. Family was ranked more important than working by most staff, although a small proportion of academic staff ranked working as more important, and overall academic staff ranked working as more important to their lives than general staff.

Most of those participants who rated 'working' as important or very important and found meaning in working wanted to continue working, and past the age of 65 years whereas those who rated working as less important intended to stop working once they reached retirement age.

Older workers enjoyed being able to exercise their talents, intellectual stimulation, and the monetary reward. Both academic and general staff found a variety of meanings of working but the majority were related to satisfaction, challenge, and achievement. A key meaning of work for most of the academic staff was being able to help or see other people grow and learn.

Autonomy and variety were key characteristics that were most important to interviewees about their jobs, while flexibility was a key feature that had a positive influence on people's intentions to continue working.

### Limitations

It has limited generalizability due to a small sample size, being conducted in a single organisation and industry. People working in academic roles may have particular intrinsic motivating factors for working which do not apply for those in other occupations. Finally, with only one trained coder interpreting the data, there was no inter-rater reliability to improve validity of the analysis.

### Applicability to the UK

The findings have partial applicability to the UK as the study was conducted in a country with similar Higher Education institutions, but the small sample size and setting in a single organisation limits the possibilities for generalizability.

### Smeaton et al. (2009)

This (+) rated mixed method study aimed to investigate what are the needs and preferences of older people in relation to work; what are the obstacles to the achievement of those preferences and what are the means by which those obstacles may be overcome.

The study used a random sample of individuals between 50 to 75 years of age surveyed by telephone (N=1,494). The data was weighted by age, gender and county using the 2001 Census. In addition, interviews with stakeholders (N=14) and employers (N=10) were conducted.

### Outcomes

One-fifth of survey respondents were not happy with their level of seniority, one-fifth felt the degree of flexibility in the hours they work is not ideal and nearly one-fifth would like to see a change in the flexibility of their working locations. A little over half (55%) of all men and women aged between 50 and 75 are dissatisfied with some aspect of their job.

The most common cause of work dissatisfaction among respondents was hours of work, with 18% wanting fewer hours and 15% wanting more control over the hours worked. The more hours worked, the more likely an individual will state the working hours were not ideal. The most common reasons given for not working their preferred hours was that it would be incompatible with their occupation (20%), that they cannot afford to or that it would involve a pay cut (19%), that their employer would not allow it (13%) and that their hours are a requirement of the job (10%). Similar reasons were given for not working with their preferred reasons for flexibility, and 68% of employees reported they could attain their preferred jobs or flexibility if the jobs available paid better salaries.

Nineteen per cent of men and 21% of women over 50 were not happy with their level of responsibility. Sixty-three per cent of respondents felt a more inclusive recruitment policy among employers would better facilitate the achievement of their ideal jobs. Sixty-one per cent felt that economic conditions were to blame for the lack of part-time or flexible work, although the report cites some more reactive examples such as reduced hours, four day weeks or merged shifts.

Forty-seven per cent also felt training may help them to secure the jobs or employment conditions they needed or preferred.

Levels of underemployment escalated over time. This could suggest that older workers downshift later in life to maintain more manageable levels of responsibility, workload or pressure, so promoting longevity. The need to reduce responsibility, pressure and employment challenges could be overstated with many individuals wishing to maintain promotion, development and training opportunities and continue to pursue work-related challenges. Main reasons given by respondents working below capacity were a preference for work that is not too demanding or stressful (17%), a lack of work that makes use of my skills or qualifications (13%), or wanting to leave a more stressful or demanding job (10%).

Seventy-four per cent of older workers were in work that they agreed or strongly agreed makes good use of their skill and experience. This may explain why one-quarter of employees who could afford to retire now, nevertheless remain working. A substantial minority of older workers were exposed to stressful working conditions (39%), long working hours (32%) or getting tired at work (32%), particularly those in professional occupations. Sixty per cent of those in fair or poor health and dissatisfied with some aspect of their job noted that it would be helpful if employers were more sensitive to health needs. Fifty-three per cent of unemployed older people claimed that they needed flexitime or other flexible hours in order to return to work.

Older workers employed in the skilled trades, sales and personal service jobs were more likely to be planning delayed retirement compared with individuals in other

occupational groups. Work experiences such as long hours, using skills, stress and fatigue were not associated in either direction with delayed retirement plans.

Twelve per cent of those who planned to carry on working above pension age, would like to work on a full-time basis, while 38% of men and 42% of women would like more flexible employment in their current job in terms of hours or days worked. Half of all men and women would favour a more intermittent flow of employment. This depends upon employers being willing and able to recruit older individuals and offer part-time or flexible employment. As interviews with employers suggested, in some sectors this may be unrealistic. Interviews with employers suggested that individual and business needs should be balanced. An organisation must be in a position to support requests to continue working beyond SPA, while businesses need to take into account succession planning and the need to manipulate staff numbers in line with the business cycle.

### Limitations

There were several limitations to the study. The analysis procedures were not fully described; method of analysis on survey data was limited to cross-tabulations only and evidence from qualitative interviews was sparse. The evidence base for organisational good practice was not fully described. The response rate of the survey was only 21% which could have caused bias in findings, ie in those who had experienced problems may have been more likely to respond (although the effective response rate might be higher as some of those refusing to take part were outside of the target age range).

### Applicability to the UK

The study was conducted in the UK including rural and urban areas thus the results are generalisable to the population as a whole.

### Smith et al. (2010)

This (+) rated study set in Australia set out to identify views of the strengths and weaknesses of mature-aged workers, understand how mature-aged workers respond to training opportunities and how do (and can) companies organise training processes to make them suited to mature-aged workers.

The study used interviews with experts and case studies set in three manufacturing organisations. In one organisation four interviews were conducted in total, including two factory floor interviewees (aged 60 and 61), four interviews in the second organisation including two factory floor interviewees (aged 50 and 57) and 10 interviews in the third organisation, with six factory floor interviews (age ranged

from 45 to 68). The sample was recruited through personal contacts in companies known to be open to research participation.

### Outcomes

Overall older workers showed enthusiasm for learning and were glad to be given the opportunity to learn for a new phase in later life. But it also found that older workers lacked confidence to undertake training because they had been outside the formal education system for a long time and had fewer qualifications than younger workers. The findings showed that older workers preferred training to be work-based and practical, and 'just-in-time' to assist with particular tasks when they needed a job. This study also found older workers had more anxiety about assessment of new learning and were less willing to respond to questions in groups. Health problems such as diabetes and short-sightedness could affect older workers ability to learn.

### Limitations

The authors note that the study was small in scale, that only two female mature workers were captured through the case studies – the study was in the manufacturing industry which is male-dominated and so a gender bias was to be expected, but it does mean that the findings might not apply to other industries, particularly those with a larger female workforce. One of the researchers died suddenly before the thematic analysis was carried out, and therefore the authors were unable to compare their themes with his, or discuss his data with him. The research is confined to shop-floor workers in manufacturing and does not address the training of mature-aged managers and professionals. The review team noted that the study was confined to the manufacturing sector and therefore not generalizable to others, and the selection of case studies through personal contacts may have led to some bias in the attitudes of managers

### Applicability to the UK

The study is partially applicable to the UK but is limited to the manufacturing sector so cannot be generalised to the whole of the UK economy.

### Talbot et al. (2011)

This (+) rated study was based on an online/paper survey of workers aged at least 45 from a range of sectors across the UK supplemented with 17 telephone interviews lasting around 20 minutes each and sought to identify how commuting may affect an older person's ability to continue working and the possibilities for adapting travel to accommodate changing personal needs and job circumstances.

A snowball sampling approach was used and 1,215 respondents completed the survey, of which 63% were female, 28% were aged 45-49, 36% were aged 50-55, 25% were aged 56-60 and 10% were aged over 60. Seventy-eight per cent of respondents worked in the public sector, 15% worked in other organisations, mostly charities, and six per cent worked in private sector organisations. Interviewees were selected from the survey respondents and the researchers sought to ensure a balance of older/younger workers, men/women, and types of journey to work (eg village to city) were covered.

### **Outcomes**

Twenty-five per cent of workers reported encountering specific difficulties in their journey to work, 32% anticipated future problems and 19% had considered retiring or changing jobs as a result.

A common perceived problem was cost of petrol/diesel and running a vehicle reported by 49% of respondents, with some workers reporting concern that this might in the future outweigh the benefits of working. A further problem reported by 22% of respondents was 'stress' resulting from traffic congestion and worry due to late arrival at work. Health concerns were reported by 14% of respondents covering specific medical conditions and unspecified aches and pains which affected mobility and experience of commuting, and in some cases were anticipated to deteriorate.

A common solution reported by respondents was to time the journey to work to avoid peak travel periods, which was facilitated by employers which operated flexi-time schemes.

In contrast, many respondents reported barriers to working from home including nature of their work requiring them to attend their workplace or not having access to the necessary IT equipment at home.

### **Limitations**

The authors note that a number of workers from the public sector were facing reduced income due to the combined effects of salary freezes with inflation and the possibility of forced relocation due to funding cuts. Combined with relatively generous pension options this may lead such workers to consider retirement more readily than workers in other sectors and thereby the study may overstate the potential impact of commuting on older workers.

## Applicability to the UK

The findings are applicable to the UK but are limited by the high share of workers from public sector organisations.

## Taylor et al. (2013)

This (+) rated qualitative study set in Queensland, Australia, used a telephone survey of firms employing more than 50 workers each to assess current attitudes and practices towards older labour amid recent tightening of labour supply. It sought to examine employer perceptions regarding the need to act on workforce ageing and to explore the relationship between perceived competition for labour and workforce ageing as potential determinants of organisational policy towards older workers.

The response rate was 30%. Large organisations with at least 200 employees made up 53% of responding organisations and 47% employed between 50-199 staff. Seventy-three per cent of firms were profit-seeking and 27% were government or not for profit. Fifty-seven per cent of employees were male. Twenty per cent of staff were aged over 50 and 27% were younger than 30, 53% aged between 30 and 50.

Respondents representing organisations were predominantly male (64%), with an average age of 45 years and ranged from 22-69 years old. Forty-one per cent were HR managers/officers, 17% were directors/CEOs, 14% were regional or department managers, 12% were general managers, 10% were heads/directors of department and six per cent were in administrator or other roles.

Multivariate regression analysis deployed characteristics of workplace labour supply strategies to create composite dependent variables with a range of organisational characteristics, respondent perceptions and attitudinal variables used as independent variables.

## Outcomes

Sixty per cent of all organisations expected to experience workforce ageing over the next five years. The majority of organisations felt that action was required in this period with one third of public employers reporting the need to act was immediate.

Providing retraining for older workers was not a common response, although continuous career development supported by training was rated highly. Knowledge capture and transfer including coaching and mentoring were important overall. Maintaining the health and well-being of workers was important for public and not-for-profit organisations. Other strategies to address labour supply issues across sectors included increasing job flexibility and promoting employment for women,

investing in labour saving technology and recruiting younger workers specifically for employers in the public sector.

The factors that were most likely to influence organisations to take action to address labour supply were organisational size, with large organisations almost three times more likely than medium ones to adapt their HR strategies, followed by whether organisations were experiencing an increase in job role complexity. Of lesser importance was whether employers were experiencing competition for labour from within Australia, where employers experiencing such competition were almost twice as likely to apply these responses.

Some firms were more likely to adopt flexible employment policies including part-time retirement, reduction of working hours before retirement, early retirement schemes, extra leave for older workers and decreasing the workload for older workers to address labour supply. The firms most likely to adopt these policies were:

- expecting a substantial loss to retirement over the next five years where employers were twice as likely to use flexible employment strategies for older workers
- larger with such organisations 70% more likely to use these responses
- employed more older workers where for every percentage point increase in employees over the age of 50, the probability of using these responses rose by two per cent
- experiencing competition for labour from within Australia where employers experiencing such competition were 40% more likely to use these responses
- experiencing a shortage of critical skills where employers were 40% more likely to apply these responses
- concern about workforce productivity due to ageing over the next five years with such employers 50% more likely to apply these responses.

Factors which made firms less likely to adopt these strategies were:

- having problems recruiting machinery operators and drivers where employers were half as likely to employ these responses
- experiencing difficulties recruiting labourers where organisations were 60% less likely to apply these responses
- experiencing increases in job stress where employers were 40% less likely to apply these responses

- operating in the private sector where organisations were 35% less likely to apply these responses

### Limitations

The authors note that the methodology may lead to reporting of policy rather than practice and each company relies on a single respondent. There is a need to undertake longitudinal studies to understand how employer policy and practice may change over time.

### Applicability to the UK

This study is partially applicable to the UK but has some limitations. The study team noted that the research was conducted in a context of tight labour supply prior to the global financial crisis and subsequent change in demand for workers in different sectors may have influenced the degree of priority that firms give to using older workers.

### Then et al. (2014)

This (++) rated systematic review of studies investigated the longitudinal effects of psychosocial work conditions on cognitive functioning and dementia. It included 17 articles of which two were eligible for inclusion within this review based on geographical setting in the UK. They used the Whitehall II study of civil servant work conditions and health outcomes.

The population was the working population equal to or older than 17, who had exposure to psycho-social work environment characteristics (ie stress, mental load, workload, effort, reward, shift work, time pressure, job insecurity, institutional changes like downsizing or merger, social support/mobbing, bullying, leadership style, climate and work-related justice. Outcome measures were long-term cognitive (dis)abilities: measured in terms of errors, injuries, processing speed, alertness, distraction, memory, testing of intellectual skills (eg intelligence). Publications included only articles in journals. The papers were identified through database searches of Medline and PsychInfo for material published up until 2011 and written in German or English. Papers were evaluated through title and abstract screening by two independent researchers, full paper screening and a quality assurance rating assessing internal validity and likelihood of potential bias.

### Outcomes

The review found that in one paper working more than 55 hours per week was associated at follow-up with significantly decreased perceptual reasoning and vocabulary among 'elderly' workers, aged at least 40 because they had been in the

workforce for over 20 years at follow up. The review found that in a separate analysis at follow-up, all cognitive abilities (memory, reasoning, vocabulary, verbal fluency) were significantly decreased in individuals who reported low levels of organisational justice, covering the concept of how fairly treated people feel in the workplace.

### Limitations

The authors note that interpretation of the review findings should be made with caution, as they cannot exclude the possibility of a publication bias or selective reporting within the identified studies. Even though they aimed to include a broad range of psychosocial work conditions, they could not be sure that there might not be others which they did not consider.

### Applicability

The findings are applicable to the UK but working conditions may vary substantially in settings outside the central civil service such as private sector firms.

### Winwood et al. (2006)

This (+) rated set in two hospitals in Australia aimed to identify the relationship between age, domestic responsibilities, recovery from shiftwork, related fatigue and the evolution of maladaptive health outcomes among full-time working female nurses.

From 2,400 nurses surveyed, 1,280 nurses responded (54% response rate), from which a purposive sample of 846 nurses working full-time was selected. The mean participant age was 39.6 years, 439 were partnered and 284 had dependents.

In addition to providing demographic details (including age), participants completed the Occupational Fatigue Exhaustion Recovery Scale (OFER), that measures fatigue that chronic fatigue (OFER-CF), acute fatigue (OFER-AF) and recovery between shifts (OFER-IR). Variations in fatigue were examined using General Linear Model Multivariate Analysis.

OFER is a new instrument containing 15 items to form 3 subscales: chronic fatigue (OFER-CF), acute fatigue (OFER-AF) and recovery between shifts (OFER-IR). The OFER-IR subscale includes items such as 'Recovering from work between shifts isn't a problem for me' and uses a Likert type response scales between 0 'strongly disagree' to 6 'strongly agree' for all items. The OFER scale has been reported to possess robust psychometric characteristics of construct and convergent validity, and internal reliability ranging from 0.8 to 0.85. It has been validated as a gender bias-free measure of fatigue/recovery among several populations, including nurses.

## Outcomes

Significant differences were found in all of the dependent variables according to age group [Wilks' = 0.951;  $F(12, 2196) = 4.99$ ,  $P < 0.001$ ]. The OFER-CF (chronic fatigue) scores of the >55 group were significantly lower than for all other groups except the 35–44 years group [ $F(4,832) = 3.79$ ,  $P = 0.005$ ]. Similarly, the OFER-AF (acute fatigue) scores of the >55 group were significantly lower than for all other age groups except the 35–44 year group [ $F(4,832) = 3.75$ ,  $P = 0.005$ ]. Lastly, the >55 group OFER-IR (recovery) scores were significantly higher than all other groups [ $F(4,832) = 13.14$ ,  $P < 0.001$ ].

The study states that observations suggest that increasing age was associated with decreased chronic fatigue and increased recovery outcomes. Older participants tended to work fewer high-stress shift patterns. ( $F(3, 833) = 28.17$ ,  $P < 0.001$ ). More nurses with greater work responsibilities tended to work fewer of the high-stress shift patterns ( $p < 0.001$ ).

The study notes that the findings are best explained by the common practice of senior nurses who are older and more experienced with greater job responsibility, acquiring progressively more latitude over the shifts they work, and for more administrative work functions to be undertaken during the day rather than at night. However, both factors clearly confound the simple association between age and nursing work-strain, as senior job category nurses also tended to be older.

## Limitations

The study is subject to limitations of all correlational, self-report study designs, and thus causality cannot be inferred from them. In addition, health of the nurses was not included in the analysis and may have affected findings.

## Applicability to the UK

The sample was representative of nurses in Australia, but only partly applicable to UK because the working conditions of nurses in Australia may vary from the UK.

## 4 Discussion

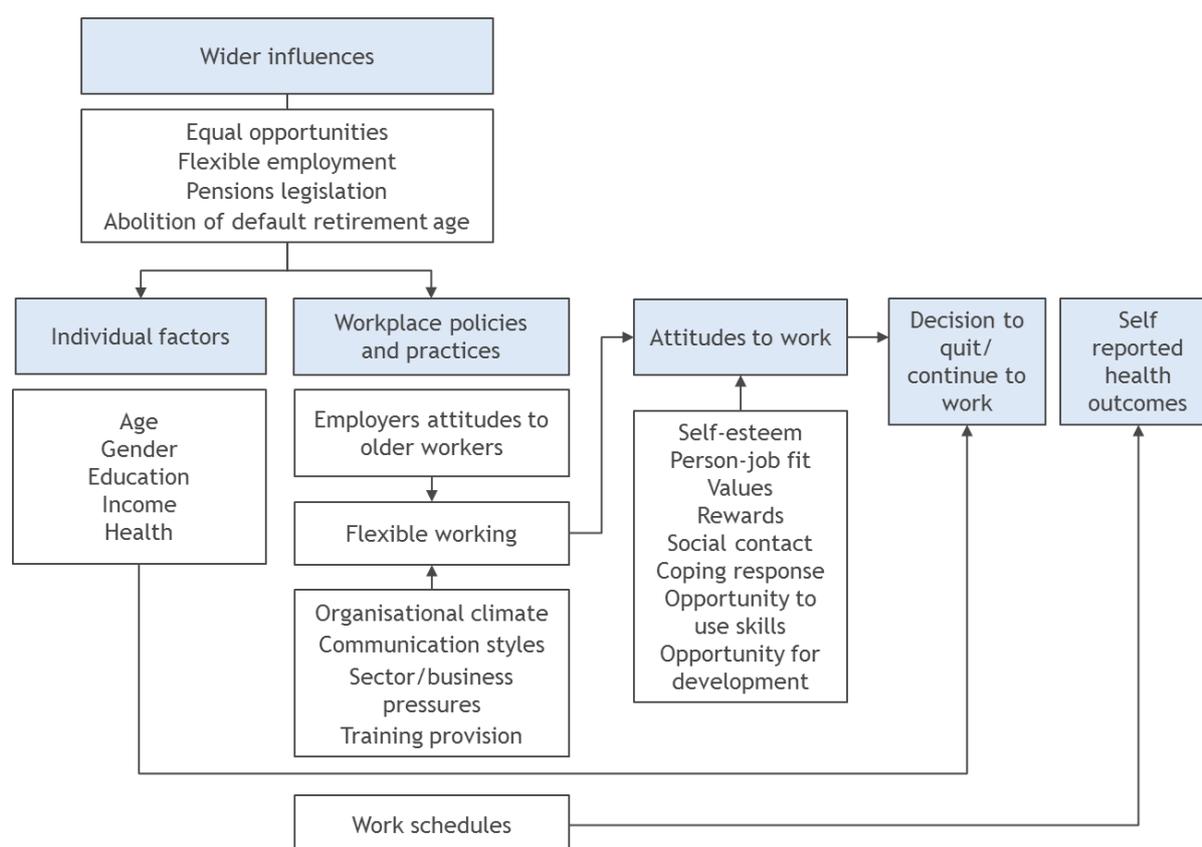
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This review includes evidence from 67 studies about the barriers and facilitators that affect the extent to which workplaces seek to promote and support the health and well-being of older workers, retain older workers beyond state retirement age and the quality and outcomes of retirement planning.

It is important to emphasise that the evidence presented in this review is based on observational studies which can only identify associations between variables and do not establish causality. In addition, there are very few studies which have directly linked management-led intervention to health and well-being outcomes among older people.

A total of 67 studies met the criteria for inclusion in this third review and focussed on workplace policies, practices or interventions implemented in employing organisations that contained evidence about the barriers or facilitators for organisations to protect and promote the health and well-being of older workers, and to support workers who wish to continue in employment up to and beyond state pensionable age.

This chapter presents the evidence statements based on the studies summarised in Chapter 3 and the implications of the findings are discussed. Figure 4.1 below is intended to serve as an organising framework to guide the reader through the evidence statements. It will be noted that there is very little evidence on health and well-being outcomes, behavioural outcomes and business performance outcomes and links between policies, practices and decision-making. This reflects some of the evidence gaps in the research literature which are discussed later in this chapter.

**Figure 4.3: Factors affecting employment outcomes of older workers**

## 4.1 Evidence statements from the included studies

### 4.1.1 Older workers' experience of work

#### Attachment to work

Experience of work is likely to be an important consideration in influencing worker decisions about continuing employment or retirement. Fourteen studies summarised in Evidence Statement 1a found evidence on the factors that influence aspects of work that older people particularly value, enjoy and which enhance their continuance commitment to staying in a role.

#### Evidence Statement 1a: Older workers' attachment to work

There is moderate evidence from thirteen studies,  $(++)^1$ ,  $(+)^{2,3,5,7,8,9,10,11,12}$  and  $(-)^{4,6,13}$ , seven UK<sup>1,3,4,6,7,9,10</sup> and six Australia<sup>2,5,8,11,12</sup>, that a number of factors contribute to older workers' attachment to work. The studies included a large scale survey of workers aged between 50 and 71 across multiple sectors $(++)^1$ , a large scale survey of care workers with an average age of 51 $(+)^3$ , a qualitative study of residential care workers aged at least 45 and their managers $(+)^5$ , a survey of UK managers with an average age of 52  $(-)^6$ , a survey of Australians aged between 50 and 74  $(+)^8$ , a meta-analysis of 60 studies on economically active people aged at least 50<sup>9</sup>, a qualitative study of older workers aged between 50 and 68 in the North West of England $(+)^7$ , a qualitative study  $(+)$  with 31

workers aged over 65 in the UK<sup>10</sup>, a survey (+) of public sector workers aged over 50 in Australia<sup>11</sup>, a survey (+) of nurses in Australia with 54% aged over 44<sup>12</sup>, a qualitative study(-) with 31 people still working and aged over 75 in Australia<sup>13</sup>, a survey (+) of UK nurses aged over 60<sup>14</sup>, and small scale qualitative studies of UK hotel workers aged at least 50(-)<sup>4</sup>, and 30 staff aged at least 50 in a university(+)<sup>2</sup>. This evidence is mostly directly applicable to the UK. The factors identified were:

- friendships and personal relationships with colleagues<sup>1,4,5,6,10,12,13</sup>
- contribution to self-esteem and identity<sup>3,7,10,13</sup>
- opportunity to use creativity and intellectual capacity<sup>2</sup>
- good match between job content and personal skill profile<sup>1</sup>
- opportunity that work provides to help others<sup>2</sup>
- personal fulfilment<sup>6</sup> and work enjoyment<sup>8</sup>
- personnel leadership<sup>9</sup>
- using professional skills<sup>9,13</sup>
- being appreciated<sup>9</sup>
- having a good atmosphere at work<sup>9</sup>
- using work to maintain emotional and physical health<sup>10,13</sup>
- avoidance of boredom<sup>10</sup>
- supplementing income<sup>10,13</sup>
- opportunities to continue learning and take on new challenges<sup>10</sup>
- attachment to job content and purpose<sup>11,12</sup>
- flexibility of working arrangements<sup>11,13,14</sup>
- autonomy in the workplace<sup>12,13</sup>
- relative importance of work compared to other aspects of life<sup>12</sup>
- absence or low level of work-family conflict<sup>12</sup>
- working shortened hours, not having night shifts, being in a less physically demanding role, having management support and being in a less stressful role<sup>14</sup>

One study<sup>11</sup> found differences between men and women's attachment to work with factors having greater influence on the intention of women aged over 50 to continue working as interpersonal relationships ( $\beta = -.220, p < .05$ ), autonomy ( $\beta = .197, p < .05$ ), flexibility ( $\beta = .327, p < .001$ ). For men aged over 50, significant factors include importance of work ( $\beta = -.156, p < .05$ ).

<sup>1</sup> McNair (2006) (++)

<sup>2</sup> Shacklock (2006) (+)

<sup>3</sup> Bernard and Phillips (2007) (+)

<sup>4</sup> Jenkins (2014) (-)

<sup>5</sup> Mountford (2013) (+)

- <sup>6</sup> Macleod et al. (2010) (-)
- <sup>7</sup> Carmichael (2013) (+)
- <sup>8</sup> Agnew et al. (2012) (+)
- <sup>9</sup> Crawford et al. (2010) (+)
- <sup>10</sup> Reynolds et al. (2012) (+)
- <sup>11</sup> Shacklock et al. (2009) (+)
- <sup>12</sup> Shacklock and Brunetto (2012) (+)
- <sup>13</sup> Patrickson (undated)
- <sup>14</sup> Royal College of Nursing (2013) (+)

These studies were conducted with workers who are in employment and do not therefore necessarily capture the precise motivations for older people to remain in or leave employment but they may indicate factors that employers should focus on enhancing when seeking to attract or retain older workers in employment. No studies were located which made links between these factors and the health and well-being outcomes for older workers.

#### 4.1.2 Impact of work on older workers' health outcomes

##### Shift work impact on older workers' health

Direct evidence on the impact of work on health outcomes was located in two studies dealing with the experience of shift work among older women and the results are presented in Evidence Statement 1b.

##### Evidence Statement 1b: Shift work impact on older workers' health

- There is mixed evidence from two surveys both rated (+), and a meta-analysis rated (+), one study conducted with a sample of 846 nurses working full-time in two hospitals in Australia<sup>1</sup>, one based on a survey of 3273 New Zealand nurses<sup>2</sup>, and one based on a meta-analysis including 60 studies<sup>3</sup>, that work, especially shift work involving night duty and flexible shifts, has a negative impact on health among older people<sup>3</sup> and specifically older women<sup>1,2</sup>. Two studies<sup>1,2</sup> examined the impact of shift work on health among nurses, of which one<sup>1</sup> focused on fatigue. The evidence is partially applicable to the UK.
- The first study showed that shift work including set shifts, scheduled and rotating shifts had a negative impact on both physical and mental health of nurses, with fatigue and sleep disruption was cited by many respondents. Both single and partnered respondents reported these outcomes but respondents with partners were more likely to be able to cope with shift work. The authors suggest this is because those without partners may have a more varied set of activities outside work which are more difficult to accommodate around shifts.
- In the second study, nurses were divided into four groups: those working single shifts with no night shifts, single shifts with night duty, multiple shifts with no night duty and multiple shifts with night duty. The study found higher maladaptive chronic fatigue where the work pattern consisted of multiple rather than single shifts

(particularly when night duty is part of the rotation), ie higher stress shift patterns. Reduced levels of recovery between shifts were found where the work pattern involved rotated shifts rather than single shifts, and poorest when night duty was involved. Mean scores for chronic fatigue and recovery were consistently poorer among those working permanent night duty compared to those working a single shift during the day<sup>1</sup>.

- Increasing age was associated with decreased chronic fatigue and increased recovery outcomes. The authors suggest this could be partly explained by senior nurses tending to work fewer of the high stress shift patterns<sup>1</sup>.
- The meta-analysis concluded that night work should be limited or avoided for workers aged over 45, that older workers should be given priority to transfer to day work or a shift of preference, that older workers should have increased rest periods or shorter working hours and that arranging more frequent health checks, giving training and counselling on sleep management, diet, exercise and stress is advisable for shift workers<sup>3</sup>.

<sup>1</sup> Winwood (2006) (+)

<sup>2</sup> Clendon & Walker (2013) (+)

<sup>3</sup> Crawford et al. (2010) (+)

### Impact of psychosocial work conditions on cognitive functioning

Direct evidence on the impact of work on health outcomes was located in a systematic literature review and the results are presented in Evidence Statement 1c.

#### Evidence statement 1c: impact of psychosocial work conditions on cognitive functioning

There is moderate evidence from a systematic review<sup>1</sup> (++) of 17 papers (2 set in the UK) that, among the longitudinal study of civil servants (Whitehall II) covering 2214 people in one study and 4531 in the second paper, working more than 55 hours per week was associated at follow-up with significantly decreased perceptual reasoning and vocabulary among 'elderly' workers. The age of the workers was not stated but must have been greater than 40 years because they had been in the workforce for over 20 years at follow up. The review found at follow-up, all cognitive abilities (memory, reasoning, vocabulary, verbal fluency) were significantly decreased in individuals who reported low levels of organisational justice, which refers to how fairly treated people feel in the workplace.

<sup>1</sup> Then et al. (2014)

This points to the impact of both structural elements of working conditions and management treatment in affecting working capacity among older people. These factors may influence their capability to continue to work later in life and the type of work which people are capable of undertaking.

### 4.1.3 Employer attitudes to older workers

#### Factors affecting employer intent to recruit older workers

Employer attitudes in decision-making about whether to recruit older workers are key to the provision of opportunities for older people to continue in employment, especially for those wishing to change jobs later in their career or to take up a different type of role as part of transitions to retirement. Evidence was found in six studies of specific enabling factors that shaped employer intentions to recruit older people beyond employers' existing experience of and attitudes to older workers, as shown in Evidence Statement 2a, and the evidence from one study shows that stereotyping of older workers can be challenged through education and information of employers.

#### Evidence Statement 2a: Factors facilitating employer intent to recruit and support older workers

There is weak evidence from six studies<sup>1,2,3,4,5,6</sup>, four UK<sup>1,4,5,6</sup> and two in Australia<sup>2,3</sup>, three (+) and three (-), that holding positive attitudes towards older workers is associated with intent to employ them and willingness to make workplace adjustments for them. The findings are partially applicable to the UK.

One qualitative study<sup>1</sup> (+) involving 40 group interviews with employers of varying sizes in four areas of Scotland found those with positive experiences of employing older workers were more likely to express intent to employ them in the future and to contemplate making workplace adjustments to accommodate their needs.

Two (+) rated surveys of employers, one of nursing recruiters in Queensland<sup>3</sup> and one in five Australian states<sup>2</sup> comparing responses of an intervention group and a control group to assess the effects of interventions to reduce age discrimination among firms with 10-50 staff, found that holding positive attitudes towards older workers was associated with expressed willingness to recruit older people. In one study<sup>2</sup> this was facilitated by the use of a factsheet challenging ageist stereotypes and 'cognitive dissonance' material declaring a booklet would be published listing employers who believed that age discrimination in hiring was morally wrong and supported the principle giving older workers a 'fair go'. Employers receiving both inputs reported:

- a significantly greater preference for hiring older workers than did employers who received either input alone or the control group (CDFS  $F(1,263) = 4.69, p < .05$ ).
- significantly more positive stereotyping of older workers' skills and abilities than employers who received CD, FS or the control

One (-) rated survey<sup>4</sup> of employers across OECD countries found that the UK had the highest proportion of employers holding positive stereotypes of older workers as more loyal and more reliable, and fewest negative stereotypes of older workers being less motivated, less flexible, less productive, less technologically orientated, and slower learners and the largest proportion of employers who reported that they were trying to recruit older workers (44%).

A survey of 578 SMEs<sup>5</sup> in the UK found that 61% of SMEs sought to recruit a mixture of ages and regarded knowledge-sharing as the main benefit of an age-diverse workforce, followed by improved problem-solving and enhanced customer service. Almost nine in 10

(86%) SMEs surveyed agree that the knowledge and skills of mature employees is highly valuable.

A small (-) qualitative study<sup>6</sup> with eight managers in the legal and retail sectors In Manchester, UK, found that older workers are valuable due to their level of experience and ability to handle customers.

<sup>1</sup> Loretto and White (2006) (+)

<sup>2</sup> Gringart et al. (2010) (+)

<sup>3</sup> Gringart et al. (2012) (+)

<sup>4</sup> Harper et al. (2006) (-)

<sup>5</sup> McCartney and Worman (2014) (-)

<sup>6</sup> Dewhurst et al. (undated) (-)

A set of eight studies was located which investigated barriers to employer intentions to employ older people. These centre on the availability of alternative preferred sources of labour, assumptions about the kind of work that older people are seeking and lack of knowledge and awareness in handling an ageing workforce.

### Evidence Statement 2b: Barriers to employer intentions to employ older workers

There is moderate evidence from eight studies, five (+) and three (-), three set in Australia and five set in the UK, that a number of factors negatively affect employer self-reported intention to recruit older workers. The studies included telephone interviews with 50 employers in various sectors in Scotland(+)<sup>1</sup>, a qualitative study involving 40 group interviews with employers of varying sizes in four areas of Scotland(+)<sup>2</sup>, interviews with HR managers and analysis of employment data in five councils in Victoria, Australia(-)<sup>3</sup>, interviews with five hotel managers in the UK(-)<sup>4</sup>, a survey of 7,218 employees and focus groups with 94 senior staff in UK universities(+)<sup>7</sup>, a telephone survey of firms across a variety of sectors in one state in Australia(+)<sup>5</sup>, interviews with eight managers in legal and retail firms in Manchester, UK (-)<sup>8</sup>, and interviews with 12 senior managers from a variety of sectors in Australia(-)<sup>6</sup>. The evidence is mostly directly applicable to the UK but it should be noted that all the UK studies pre-date recession and legislative changes to pension provision and statutory retirement ages which may have affected employer views.

These factors identified were:

- opportunities to recruit an alternative labour supply such as younger staff<sup>2,3,4</sup>, migrant workers<sup>1,4</sup>, women<sup>5</sup>
- lack of knowledge and awareness of age management techniques and strategies<sup>1,2,6</sup>
- assumptions that older workers are seeking full-time roles<sup>4</sup>, would not accept sectoral working conditions<sup>1</sup>, are unwilling to work unsocial hours or would want higher pay than the sectoral norm<sup>1</sup>
- lack of recognition of age as an equality issue by some managers<sup>4</sup>
- insufficient time to plan organisational staffing due to the right to request working beyond a stated retirement age which only requires three months' notice and was leading to some Higher Education institutions adopting a default response of rejecting requests<sup>7</sup>

- perceptions that younger workers are better performers and older workers are more expensive and are not able to work as many hours per week or to modify these hours to meet business needs<sup>8</sup>
- perceptions that older workers lack enthusiasm and adaptability<sup>8</sup>

<sup>1</sup> Hollywood and McQuaid (2007) (+)

<sup>2</sup> Loretto and White (2006) (+)

<sup>3</sup> McKeown (+)

<sup>4</sup> Jenkins (2008) (-)

<sup>5</sup> Taylor et al. (2013) (+)

<sup>6</sup> Martin et al. (2014) (+)

<sup>7</sup> Manfredi and Vickers (2009) (-)

<sup>8</sup> Dewhurst et al. (undated) (-)

#### 4.1.4 Age discrimination

Following on from employer attitudes towards hiring older people, a key set of factors that may influence older workers' attachment to work, their well-being and inclination to work beyond state pension age is how they are treated and perceived by managers and colleagues. Four studies were located that showed evidence of perceived and actual age discrimination against older workers and some suggestion from this age group that it should be tackled through training provision for managers and other staff.

##### **Evidence Statement 2c: Worker perceptions of age discrimination and the need for management training**

There is moderate evidence from four studies, two (+) and two (-), two based in the UK and two in Australia, that a minority of older workers report having experienced workplace discrimination because of their age, that discrimination is likely to be indirect, subtle and/or covert and that workers would welcome training for line managers and younger staff to reduce stereotyping and improve management of older employees. The evidence is relatively recent and mostly directly applicable to the UK.

A (+) qualitative study<sup>1</sup> involving 48 interviews and two focus groups with older workers in a range of occupations set in Australia found that 10% reported actual age discrimination and 14% reported suspected discrimination.

A (-) rated qualitative study<sup>4</sup> with 12 workers aged at least 50 in the UK hotel sector found only a few people had experienced ageism in the workplace but that interview comments indicated that workers may have experienced age discrimination without recognising it.

A (-) rated survey of UK managers<sup>3</sup> with an average age of 52 found that 40% believed they had been disadvantaged by age in making job applications and seeking promotions.

A (+) rated mixed methods study<sup>2</sup> involving focus groups and a survey of workers aged over 45 in construction, finance, and aged care sector in Australia found that around one in five of those working in finance and aged care and around a third of those working in construction believed that colleagues had negative or very negative attitudes to older

workers continuing to work beyond normal retirement age. Those working in finance identified subtle discrimination and harassment.

The same study<sup>2</sup> found that a majority of workers felt that supervisors and younger workers should receive training as a way of tackling age-biased stereotypes and a (-) rated survey of UK managers<sup>3</sup> with an average of 52 found that nearly half believed that training should be given to line managers on managing older workers.

<sup>1</sup> Billett et al. (2011) (+)

<sup>2</sup> Lundberg et al. (2011) (+)

<sup>3</sup> Macleod et al. (2011) (-)

<sup>4</sup> Jenkins (2009) (-)

#### 4.1.5 Attitudes and access to learning opportunities

Much labour market research shows the importance of maintaining skills as part of lifelong learning to enable career transitions. Gaining access to and making use of such opportunities is likely to be particularly important for workers who wish to move employers or change roles as part of phased retirement or to optimise their health and well-being in later working life. Fifteen studies illustrated moderate evidence on how access to learning opportunities was affected by the attitudes of older workers and managers to training provision for staff later in their working lives.

##### Evidence Statement 3: Older workers and training

There is moderate evidence from fifteen studies, twelve (+) and three (-), five UK and ten in Australia, that older worker attitudes towards training and employer perceptions of older workers' attitudes may affect learning opportunities offered and taken up. The studies found that this may have implications for older workers' continued labour market participation and outcomes such as job quality. The studies are mostly directly applicable to the UK.

Two studies, one (+)<sup>1</sup> and one (-)<sup>6</sup>, the first involving 40 group interviews with employers of varying sizes in four areas of Scotland and the second involving secondary survey analysis and case studies, examined worker interest and perceived interest in training. The first<sup>1</sup> found that employers perceived that that older workers might lack confidence, have less interest and be more reluctant to request training. The authors identify this as one of the beliefs held by employers that may affect management practices towards older workers. The second<sup>6</sup> found that older workers lacked confidence to train, were less likely to identify their own training needs and were harder to engage in training unless they perceived it to be of value.

One study<sup>2</sup> (+) set in Australia involving face-to-face interviews with 12 senior managers across a variety of sectors found that some managers believed that younger workers were more willing to learn. Most respondents expected workers to be proactive in identifying learning needs, expecting that by the time workers reached the age of 45 they should know what support they required.

One study<sup>3</sup> (+) using telephone interviews with 50 employers in Scotland found common perceptions that older staff are less adaptable to change and slower to acquire new skills. Training and development was less likely to be considered for older workers as older workers were seen as being reluctant to participate.

A survey<sup>5(+)</sup> of 128 recruitment decision-makers in companies with between 10 and 50 employees set in Australia found that older workers were viewed as less adaptable to new technology, less interested in technological change and less trainable. Similarly a (+)qualitative study<sup>8</sup> of older workers (aged 45 and older) across a range of occupations and sectors in Australia found employers tend to see older workers as less capable in terms of physical ability, capacity for learning and adaptability to change.

Two studies, one (+) and one (-), the first using interviews with 12 senior managers in a variety of sectors in Australia<sup>2</sup> and the second using an online questionnaire of 1,120 Australian local government staff<sup>4</sup> noted that older workers with lower education may need more support to engage in learning and development, and such staff may be reluctant to participate in training and development.

A qualitative (+)study<sup>8</sup> involving 48 interviews and two focus groups with older workers in a range of occupations set in Australia reported that some participants felt negative perceptions of older workers led some employers not to support development or saw no need for training older workers whose performance was adequate.

A (+)mixed methods study<sup>7</sup> involving focus groups and a survey of workers aged over 45 in construction, finance, and aged care sector in Australia found that one in five or less of the four sample saw their employer's attitude as negative towards supporting training for older workers continuing in work beyond retirement.

A (+) survey<sup>12</sup> of 268 white collar Australian workers aged over 50 found that nearly two thirds believed they had the same opportunities to train and learn as younger workers and regarded themselves as being as adaptable as younger colleagues. About equal shares (40%) were interested or not interested in undertaking retraining in their current job. There were statistically significant gender variations with 88% of women reporting a belief that they were not too old to learn compared 76% of men ( $w_2 = 8.059$ ,  $df = 2$ ,  $p = .018$ ).

A qualitative (+) study<sup>9</sup> with 16 workers aged 55-87 in Scottish hotels and their managers found that older workers reported challenges in their jobs due to lack of training, particularly in IT. This was due to a presumption among managers that the core skills required in the sector are in customer service work which older staff would bring with them from previous work experience.

A meta-analysis<sup>10</sup> of 60 studies (+) found that training and learning are important to maintain older workers cognitive functioning, but older workers need to be given adequate learning opportunities and the mode of learning needs to be adapted to include time to reflect. The authors note a study which showed that older workers are keen to update their skills, including computing skills, and that their preferred learning modes are in-service training, in-house training, on-the-job training and one-on-one training, using more experienced workers as mentors. These findings are echoed in a set of three case studies of manufacturing organisations<sup>13</sup> in Australia (+) which showed that older workers preferred training to be work-based and practical, and 'just-in-time' to assist with particular tasks when they needed a job. This study also found older workers had more anxiety about assessment of new learning and were less willing to respond to questions in groups.

A survey of local government workers<sup>11</sup> (+) aged over 50 in Australia found that 89% were prepared to undertake training and development to enable them to move into transitional employment as they progressed towards retirement. Those in managerial/professional roles or possessing a degree were most likely to perceive this as an opportunity for learning, development and career change. A set of three case studies of manufacturing organisations<sup>13</sup> in Australia (+) also found that older workers showed

enthusiasm for learning and were glad to be given the opportunity to learn for a new phase in later life.

A small scale qualitative study<sup>13</sup> of workers aged over 50(-) in Australia found that workers were motivated to engage in the training through regulatory requirements for a particular profession, and that workers previous experience of training and using technology, together with sense of self-worth, shaped their expectations and level of confidence in learning. In contrast, a small scale study<sup>15</sup> with 25 workers in local government organisations in Australia (+) found that older workers were seen as often reluctant to retrain for less physically demanding jobs through lack of interest in other types of work, preference for current working conditions and belief in their own competence.

A series of three small case studies<sup>14</sup> set in manufacturing organisations in Australia (+) found that older workers lacked confidence to undertake training because they had been outside the formal education system for a long time and had fewer qualifications than younger workers. This study also found that health problems such as diabetes and short-sightedness could affect older workers ability to learn.

<sup>1</sup> Loretto and White (2006) (+)

<sup>2</sup> Martin et al. (2014) (+)

<sup>3</sup> Hollywood and McQuaid (2007) (+)

<sup>4</sup> Pillay et al. (2006 (-)

<sup>5</sup> Gringart et al. (2005) (+)

<sup>6</sup> Newton (2006) (-)

<sup>7</sup> Lundberg et al. (2011) (+)

<sup>8</sup> Billett et al. (2011) (+)

<sup>9</sup> Boreham et al. (2009) (+)

<sup>10</sup> Crawford et al. (2010) (+)

<sup>11</sup> Pillay et al. (2008) (+)

<sup>12</sup> Dymock et al. (2012) (+)

<sup>13</sup> Meyers et al. (2010) (-)

<sup>14</sup> Smith et al. (2010) (+)

<sup>15</sup> Pillay et al. (2010) (+)

This evidence suggests that, notwithstanding the introduction of legislation to combat age discrimination, some stereotypes and assumptions exist about the capabilities of older workers.

#### 4.1.6 Flexible working for older workers

##### Enabling factors and barriers to implementing flexible working for older people

A key factor which is likely to influence worker inclination and capability to continue working beyond the state pension age is the availability of employment which may meet their personal needs and inclinations. Some studies explored the implementation of flexible working options such as reduced or flexible hours and

Evidence Statements 4a and 4b identify the factors which facilitate or hinder employer implementation of such policies.

### Evidence Statement 4a: Factors facilitating implementation of flexible working for older workers

There is weak evidence from six studies<sup>1, 2, 3, 4, 5, 6</sup>, four (+) and two (-), five set in the UK<sup>1, 2, 3, 4, 5</sup>, and one set in Australia<sup>6</sup>, that a number of factors contribute to the effective implementation of flexible working for older staff. The studies include one with face-to-face interviews with 50 employees with a mean age of 61 across a variety of sectors in workplaces which offered flexible working policies(+)<sup>1</sup>, one using interviews and workshops with HR managers in seven large UK employers(-)<sup>2</sup>, one using interviews with 16 hotel workers in Scotland aged 55-87 and managerial staff<sup>4</sup>, one using eight interviews with managers in the legal and retail sectors in Manchester, UK (-)<sup>5</sup>, one using interviews with 25 workers in local government in Australia (+)<sup>6</sup>, and a large scale survey of older care workers(+)<sup>3</sup>. The findings are fully applicable to the UK. The factors are:

- Adequate policy/project planning and resourcing<sup>1</sup>
- integration of flexible working for older staff as part of a broader diversity policy<sup>2</sup>
- trust between managers and employees<sup>1, 2, 3</sup>
- support from colleagues<sup>3</sup>
- effective communication of the policies to workers, including avoidance of jargon<sup>2</sup>
- use of workplace champions<sup>2</sup>
- provision of expert advice on financial implications of flexible working to workers<sup>2</sup>
- effective liaison between HR staff and pension fund staff<sup>2</sup>
- awareness of costs and benefits of the policy<sup>2</sup>
- management leniency to deviate from strict contractual requirements in recognition of the needs and benefits of employing older workers<sup>4, 6</sup>
- availability of a wide range of tasks covered by an organisation's activities, offering opportunities for older workers to continue to work<sup>5</sup>

<sup>1</sup> Alden (2012) (+)

<sup>2</sup> Employers Forum on Age and IFF (2006) (-)

<sup>3</sup> Bernard and Phillips (2007) (+)

<sup>4</sup> Boreham et al. (2009) (+)

<sup>5</sup> Dewhurst et al. (undated) (-)

<sup>6</sup> Pillay et al. (2010) (+)

These enabling factors are commonly recommended in the broader literature on effective change management and introduction of Human Resource Management policies, procedures and processes with a focus on planning, resourcing, mobilising support and communications.

Seven studies provided evidence on the barriers to implementing flexible working for older workers.

## Evidence Statement 4b: Barriers to implementation of flexible working for older workers

There is moderate evidence from seven studies<sup>1,2,3,4,5,6,7</sup>, two(-) and five (+), six in the UK and one in Australia, that a number of factors act as barriers to the implementation of flexible working for older staff.

The studies include one with face-to-face interviews with 50 employees with a mean age of 61 across a variety of sectors in UK workplaces which offered flexible working policies(+)<sup>3</sup>, one using interviews and workshops with HR managers in seven large UK employers(-)<sup>1</sup>, a large scale survey of older care workers in the UK(+)<sup>2</sup>, a telephone survey of firms employing more than 50 staff in Australia(+)<sup>4</sup>, a survey and telephone interviews with workers aged at least 45 predominantly employed in UK public sector organisations(+)<sup>5</sup>, interviews with eight managers in the legal and retail sectors in Manchester, UK (-)<sup>7</sup> and one based on a telephone survey of people aged over 50(+)<sup>6</sup>. The findings are mostly directly applicable to the UK.

The factors acting as barriers to implementation of flexible working are:

- negative attitudes of managers<sup>1</sup>,
- communicating working time options available in a way that was clearly understood by staff<sup>1</sup>,
- overcoming jargon associated with financial aspects of retirement such as pensions planning for staff<sup>1</sup>,
- earlier rather than later discussions between HR and pensions fund staff<sup>1</sup>,
- managing employee expectations that flexible working would be available to all staff seeking phased retirement<sup>1</sup>,
- employee reluctance to downshift and reduce responsibility<sup>1</sup>
- operational pressures on business provision<sup>3,4</sup>, economic conditions<sup>6</sup>, and the nature of the job<sup>6</sup> requiring attendance at the place of work<sup>5</sup> which impeded provision of flexible hours, part-time and/or home working
- succession planning and the need to adapt to the business cycle<sup>6</sup>
- workers' lack of understanding of flexible working provisions and their individual eligibility<sup>2</sup>
- organisational cultures deterring some staff from disclosing information about their personal circumstances and motivations for seeking flexible working<sup>2</sup>
- having problems recruiting machinery operators, drivers and labourers<sup>4</sup>
- organisations reporting experiencing increases in job stress<sup>4</sup>
- workers lacking requisite IT equipment which prevented homeworking<sup>5</sup>

<sup>1</sup> Employers Forum on Age and IFF (2006) (-)

<sup>2</sup> Bernard and Phillips (2007) (+)

<sup>3</sup> Alden (2012) (+)

<sup>4</sup> Taylor et al. (2013) (+)

<sup>5</sup> Talbot et al. (2011) (+)

<sup>6</sup> Smeaton et al. (2009) (+)

<sup>7</sup> Dewhurst et al. (undated) (-)

The barriers to implementation reflect a mix of external pressures and internal organisational factors. The internal barriers consist of a range of general and commonly experienced project management challenges in implementing new Human Resource Management policies and those specific to the implementation of contractual changes with technical implications for retirement income.

### Impacts of flexible working for older workers

Evidence from five studies was located on the impacts of flexible and part-time working for older people. These generally focus more on self-reported attitudinal outcomes rather than behavioural outcomes or organisational outcomes and are shown in Evidence Statement 4c.

#### Evidence Statement 4c: flexible working impacts for older workers

There is moderate evidence from five studies<sup>1,2,3,4,5</sup>, three rated (+), one rated (-) and one rated (++) ,four in the UK and one set in Australia, that offering flexible working to older employees is associated with positive attitudinal outcomes, and in one study reportedly affects staff retention. The studies are mostly directly applicable to the UK.

One (+) study<sup>1</sup> based on face-to face interviews with 50 employees with a mean age of 61 across a variety of sectors in workplaces which offered flexible working policies in the UK found that self-reported benefits of flexible working were positive perceptions of work, home life and financial outcomes for individuals and enhanced self-reported goodwill and increased commitment in the workplace.

One (++) study<sup>2</sup> based on analysis of two survey samples of people aged over 50 in the UK found that older employees working part-time hours reported more positive attitudes to work than older workers with full-time hours.

One (+) study set in Australia<sup>3</sup> involving 12 focus groups with workers aged at least 49 found that those people working part-time were more likely to report enjoyment of work.

One qualitative (+) study with 56 people aged 50-68 in the North West of England found that for some of the interviewees who suffered health problems because of the inflexibility of the organisation or workplace, the only option was to leave their employment<sup>4</sup>.

One (-) survey of UK managers<sup>5</sup> found that around 60% of respondents reported that their organisations offered part-time and flexible working to all employees, in line with a general pattern of providing employment benefits in an age-free way and these policies were considered important strategies for retention of older workers.

<sup>1</sup> Alden (2012) (+)

<sup>2</sup> McNair (2006) (++)

<sup>3</sup> Quine and Bernard (2006) (+)

<sup>4</sup> Carmichael et al. (2013) (+)

<sup>5</sup> Macleod et al. (2010) (-)

#### 4.1.7 Role of line managers in retirement process

Interactions between managers and older workers can play a key role in the process of retirement. Two studies were found which examined line manager roles and the support they received to perform it, as shown in Evidence Statement 5.

##### Evidence Statement 5: Role of line managers in retirement process

There is weak evidence from two(+) qualitative studies<sup>1,2</sup>, one using a survey of 129 managers in UK universities<sup>1</sup> and one using interviews with 25 managers in local government organisations in Australia<sup>2</sup>.

The first study<sup>1</sup> found that around 70% of line managers felt they had a moderate amount of discretion in managing the retirement process and most perceived it was a shared responsibility with HR staff.

Nearly half of line managers had received no training about operating without a fixed retirement age and nearly 45% of line managers had received no training around the wider implications of retirement.

Eighty-three per cent of line managers considered that that they had a moderate of support or more from their own line manager to find flexible working solutions for older workers. Ninety per cent of respondents felt that their own line managers would provide moderate or higher levels of support for decision-making about retirement. A series of factors were associated with managers believing they had some responsibility in the timing of an employee's retirement:

- being female (2.09 times more likely than for males)
- being aged over 50 (2.49 times more likely than those aged 50 or under)
- experience of managing employees aged over 65 years (2.18 times) more likely than a manager without experience of managing employees aged over 65 years actors

The second study<sup>2</sup> found that the quality of individual manager-employee relationships was seen as critical to how constructive and open workers were able to be in discussions about retirement with managers, and the extent to which these took place.

The findings are partially applicable to the UK but the setting in public sector organisations limits their generalisability.

<sup>1</sup> Davies et al. (2013) (+)

<sup>2</sup> Pillay et al. (2010) (+)

The evidence suggests that line managers are aware of a shared responsibility with HR staff in managing older workers but some have had limited training, and previous experience of managing older staff, being female or being an older worker sensitises managers to their role in managing retirement.

#### 4.1.8 Management initiatives - training and rewards

In addition to adjustments to working time and patterns, organisations may deploy a range of techniques and initiatives to encourage staff retention. One study was found of these being applied to retain older workers and their impact, as shown in Evidence Statement 6.

##### Evidence Statement 6: Management initiatives - training and rewards

There is weak evidence from one (+) qualitative study<sup>1</sup> using interviews with 20 managers and 20 care assistants aged at least 45 in randomly selected residential care homes in an Australian city that providing training and small, informal rewards (eg vouchers) positively influences older workers' intention to stay with the current employer. The findings are partially applicable to the UK.

<sup>1</sup> Mountford (2013) (+)

#### 4.1.9 Proximity to workplace

Three studies were found relating to commuting among older workers outlined in Evidence Statement 7.

##### Evidence Statement 7: Proximity to workplace

There is weak evidence from three UK studies, one (++)<sup>1</sup> based on analysis of a sample of older workers extracted from four national UK datasets, one (+) based on a telephone survey of people aged over 50<sup>3</sup> and one (+) based on interviews and a survey of 1215 workers aged at least 45 from a variety of sectors<sup>2</sup>, that proximity to the workplace may affect older workers' employment choices. The evidence is fully applicable to the UK but the availability of generous pension arrangements to the large proportion of public sector workers in the second study may lead to overstatement of the impact of commuting on older workers' employment decisions.

One (++) study<sup>1</sup> found that a significantly greater proportion of workers after state pension age were travelling short distances to work compared to those pre- state pension age. The authors comment that this may indicate the importance of work locations to decisions about employment after state pension age and that workers may wish to focus on job opportunities which are close to home.

A second (+) study<sup>2</sup> found that 19% of workers had considered retiring or changing jobs as a result of specific current or future difficulties in their journey to work.

A third (+) study<sup>3</sup> found that a fifth of workers aged over 50 wanted greater flexibility in their work location.

<sup>1</sup> Cebulla et al. (2007) (++)

<sup>2</sup> Talbot et al. (2011) (+)

<sup>3</sup> Smeaton et al. (2009) (+)

The studies are not able to illustrate the impact of commuting on labour market participation and retirement decisions due to the research design and methods

adopted, and it would be useful if these could be investigated through longitudinal studies of older workers into their retirement.

#### 4.1.10 Older workers' retirement-decision making

##### Retirement decision-making and financial status

A more substantial body of evidence was located on retirement decision-making, although there was limited evidence about how employer activities and initiatives affect this. The dominant factors identified were financial status and health, with mixed evidence on the role of job satisfaction. The findings are illustrated in Evidence Statements 8a, 8b and 8c.

##### Evidence statement 8a: Retirement decisions and financial status

There is moderate evidence from six studies that planning for retirement and the decision to retire at a non-standard age is associated with an employee's financial position both at work and their potential income in retirement. The higher individuals' current income/potential pension, the more likely they will make retirement plans and retire early. Two of the studies, both (+), are set in New Zealand<sup>1 2</sup>, one (+) survey of workers aged at least 50 was set in the UK<sup>6</sup>, and three in Australia<sup>3 4 5</sup> of which two are rated (+) and one is rated (-). The findings are mostly directly applicable to the UK.

- A (+) mixed method survey-based study of New Zealanders aged 50-70 found that an individual's financial position has an important influence on retirement decision-making<sup>1</sup>.
- A survey-based study (+) set in New Zealand found that higher levels of financial preparedness for retirement was associated with more positive perceptions of retirement, higher levels of informal planning and greater economic living standards ( $p < .001$  no coefficients reported)<sup>2</sup>.
- A (+) qualitative study of older people in Australia found that retirement planning was more likely among people in higher socio-economic groups<sup>3</sup>.
- A Australian household survey (+) found that the nature and timing of individuals' retirement plans was related to their overall labour market position<sup>4</sup>.
- A national survey (-) of older workers in Australia found that the most common reason influencing the intention to retire was financial security (34% of respondents), followed by health (26%) and eligibility for the state pension (11%). The survey also found that those in the higher income and education categories were more likely to have planned for their financial security and physical, mental and social activity in retirement<sup>5</sup>.
- A telephone survey<sup>6</sup> rated (+) of older workers in the UK found that those employed in the skilled trades, sales and personal service jobs were more likely to be planning delayed retirement compared with individuals in other occupational groups, reflecting lower income levels than those in higher skilled managerial and professional occupations.

<sup>1</sup> Davey et al. 2008 (+)

<sup>2</sup> Noone et al. (2011) (+)

- <sup>3</sup> Quine and Bernard (2006) (+)
- <sup>4</sup> Cobb-Clark and Stillman (2009) (+)
- <sup>5</sup> National Seniors, 2006 (-)
- <sup>6</sup> Smeaton et al. (2009) (+)

These findings may have implications for the health and retirement outcomes of different labour market groups and for labour market inequalities, since those with the highest incomes, most favourable pension prospects and possibly skill levels may be in the position of having greatest freedom of choice over labour market exit. This also has important implications for employers in terms of managing organisational needs against employee preferences and for public policy more generally. Workers in lower skilled roles with lower incomes may be seeking to work beyond the current typical retirement age and businesses will need to consider how to manage expectations as well as meet their obligations under employment legislation. Lastly, there are broader societal implications and potential wider public costs arising from the emergence of a segment of the population with inadequate retirement incomes and who are no longer capable of working in their existing jobs. The growing number of organisations closing final salary or defined benefit pension schemes in favour of career average pension schemes may be a further driving factor encouraging individuals with insufficient pension provision to remain in work for longer.

### Health and retirement decision-making

#### Evidence statement 8b: Health and retirement decision-making

There is moderate and slightly mixed evidence from 14 studies of the impact of health on older employees' retirement decisions. Three of the studies were conducted in New Zealand of two<sup>5 13</sup> (+) and another<sup>9</sup> (-), six studies in Australia, of which four<sup>6 8 10 12</sup> (+) one<sup>7</sup> (++) and one (-). The remaining five studies<sup>1 2 3 4</sup> were conducted in the UK, four<sup>2 3 4 14</sup> (+) and one<sup>1</sup> (++) . The evidence is mostly directly applicable to the UK.

Eight studies indicated that poor health or certain health conditions, especially mental health conditions, were the main reason for giving up work among older workers<sup>5, 4, 3, 2, 6, 1, 13, 14</sup>. Two studies<sup>8, 7</sup> found that early retirement as a result of poor health was most common among younger age groups. One study<sup>9</sup> found a complex relationship between an individual's health and their decision to retire. Some chose to retire while they were still healthy enough to enjoy leisure activities, while others retired early because of ill-health or to protect themselves from further ill-health (including mental ill-health). One study found that 60% of retired workers surveyed were forced into retirement with personal health and health of family members being key influencing factors<sup>12</sup>. Another study found no relationship between health and retirement planning<sup>10</sup>.

- A four year (++) cohort study of 1,693 older workers in the UK found that fair or poor self-rated health was associated with work exit. Symptomatic depression was also a predictor of early work exit (OR=1.52, CI 95% 1.07, 2.18)<sup>1</sup>.

- A (+) qualitative study of 23 UK dentists found that the main reason for early retirement was depression, followed by musculoskeletal disease and specific skin conditions<sup>2</sup>.
- A (+) questionnaire study of 537 teachers in Scotland concluded that the most common reason for ill-health retirement was mental health disorders (37%) followed by musculoskeletal conditions (18%). The effect of age was not determined<sup>3</sup>.
- According to a (+) qualitative study of 56 people in North West England, health was the most cited reason for giving up full-time work. The influence of age on retirement decision could not be determined because all study subjects were over 50 years of age<sup>4</sup>.
- A (+) mixed method study of New Zealanders aged 50-70 found that the most important reason for giving up employment was poor health<sup>5</sup>.
- A (+) longitudinal cohort study on women's health in Australia found that being employed decreased as physical and mental health deteriorated. Women with following conditions were less likely to be employed at the end of the follow-up: diabetes, high blood pressure, depression, anxiety, and other psychiatric conditions<sup>6</sup>.
- A (++) longitudinal study of 2.803 people in Australia aged 45-75 found that retirement was greatest in the youngest cohort of men (HRR 1.37, CI 95% 1.17-1.60) and progressively decreased throughout older cohorts. In the final model, poor mental health remained a predictor in retirement for men and the interaction with age disappeared<sup>7</sup>.
- A (+) population based study of 3160 females and 1933 males in Australia found that men were more likely to retire due to ill-health (OR 2.85 CI 95% 2.03-4.01) and the effect declined with increased age<sup>8</sup>.
- A qualitative longitudinal study (-) found that individuals in New Zealand adopted different pathways to retirement related to their health including an 'impaired health pathway' (health and disability affect ability to work); a 'maximisation of life pathway' (retiring while healthy to fulfil other goals) and 'a protective pathway' (motivated by individual concern to promote and protect health)<sup>9</sup>.
- However an analysis of (+) rated Australian household survey found no evidence that the way in which middle-aged Australians were forming their retirement plans depended on their own health status<sup>10</sup>.
- Analysis of a survey (-) of 153 dentists aged 50 or over in New South Wales, Australia found that of a number of (unspecified) variables entered, only age and home ownership were significant predictors of intended retirement age, with 27% of the variance attributable to current age and home ownership responsible for a further three per cent ( $p < 0.05$ )<sup>11</sup>.
- A survey of Australians (+) aged between 50 and 74 found that of those retired, only 40% had stopped work at a time of their own choosing and 60% were nudged or forced out of the workplace with personal health or health of family members as dominant factors<sup>12</sup>.
- A survey(+) of 6,662 New Zealanders aged 55 to 70 found that health status was significantly associated with the decision to work, with, for example, a 10% decline in health below the mean score associated with a fall in labour force participation (eg into retirement) of three to four percentage points. The drop in participation is more than proportional for males, but less for females<sup>13</sup>.

- A survey (+) of 1,875 50 to 64 year olds in Great Britain for that, having a generalised anxiety disorder among men was associated with an odds ratio of 3.1 (95% CI 1.2-7.8) for being early retired, and having a depressive disorder was associated with an even higher odds ratio of 4.3 (95% CI 1.7-11.0). For women, there was no significant association between being early retired and mental health disorders.

- 1 Rice et al. 2011 (++)
- 2 Hill et al. 2010 (+)
- 3 Brown et al. 2006 (+)
- 4 Carmichael et al. (2013) (+)
- 5 Davey et al. (2008) (+)
- 6 Pit and Byles, 2012 (+)
- 7 Olesen et al. (2012) (++)
- 8 Pit et al. (2010) (+)
- 9 Pond et al. (2010)
- 10 Cobb-Clark and Stillman, 2009 (+)
- 11 Schofield et al. (2010) (-)
- 12 Agnew et al. (2012) (+)
- 13 Enright and Scobie (2010) (+)
- 14 Buxton et al. (2005) (+)

### Job satisfaction and retirement decisions

Evidence Statement 8b shows mixed evidence on the relationship between health outcomes and labour market withdrawal. However there is no evidence on the enabling factors or barriers that may affect employers in taking preventive action to improve older workers' health and discourage early labour market exit due to lack of research evidence in this area.

#### Evidence statement 8c: Job satisfaction and retirement decisions

There is moderate but mixed evidence from five primary studies, one set in the UK (++), three in Australia (two (+) and 1 (-)) and one in New Zealand (+), that retirement decisions are associated with job satisfaction, supplemented by evidence from one (+) review study. This evidence is partially applicable to the UK.

A UK household survey rated (++) found that 39% of workers aged 51 to 70 who were still in employment were working even though they could afford to retire<sup>1</sup>. All of these people said they enjoyed working with colleagues and that their job was well suited to their skills.

A (+) rated qualitative study of older people in Australia found that enjoyment at work was an incentive to remain in the workforce<sup>2</sup>.

A (-) rated mixed method study among older public service employees in Australia found that as employees aged they placed greater importance on job satisfaction as a reason to stay in work, particularly when their financial situation enabled them to make choices about when to retire<sup>3</sup>. However a (+) study using data from an Australian household survey found that individuals who were uncertain about retirement plans or never

expected to retire were not significantly happier in their jobs than those forming retirement plans<sup>4</sup>.

A survey (+) of 1,958 New Zealanders aged between 40 and 64 found no significant relationship between retirement intentions and satisfaction with work.<sup>5</sup>

In addition one review study (+) found that self-rated poor quality of work experience was significantly associated with early retirement intentions.<sup>6</sup>

<sup>1</sup> McNair (2006) (++)

<sup>2</sup> Quine and Bernard (2006) (+)

<sup>3</sup> Oakman and Howie (2013) (-)

<sup>4</sup> Cobb-Clark and Stillman (2009) (+)

<sup>5</sup> Cameron and Waldegrave (2010) (+)

<sup>6</sup> Lancaster et al. (2011) (+)

On balance, Evidence Statement 8c suggests that employers should pay some attention to ways of enhancing job satisfaction if seeking to retain employees beyond state pension age because it may influence worker decision-making about retirement.

### Choice and control in retirement decision-making

The final set of evidence statements 8d, 8e and 8f point to the significance of the retirement decision-making process and in particular, the role of informed choice, control and support that may be required to help workers make optimal decisions.

#### Evidence statement 8d: Informed choice and control over retirement decisions

There is moderate evidence from four studies, three rated (+) and one rated (-), three set in Australia and one in the UK, that employees who exercised higher levels of choice and control over their retirement had better outcomes than those with less choice, that those with higher incomes are more likely to intend to exert choice in the form of phased retirement, and a need to improve informed choices among particular ethnic minority sub-groups. The evidence is mostly directly applicable to the UK.

A survey-based panel study (+) found that 12 months after retiring, Australian retirees who had greater control over their retirement decision displayed significant increases in positive affect ( $\beta = 0.12$ ,  $p < 0.01$ ), decreases in negative affect ( $\beta = 0.15$ ,  $p < 0.01$ ), and increases in life satisfaction ( $\beta = 0.15$ ,  $p < 0.01$ ) than at the point of retirement. They were also more likely to say that they had adjusted well to retirement ( $\beta = 0.39$ ,  $p < 0.001$ )<sup>1</sup>.

A qualitative study (+) involving interviews with older workers and retirees in the UK found that involving individuals in decision-making enabled employers to meet their needs or temper the negative impacts on the individual of an undesirable outcome. Providing clear information on retirement procedures, options, and pathways enabled individuals to make informed retirement choices, helped individuals feel part of the decision-making process, and adjusted retirement expectations if needed<sup>2</sup>.

A qualitative study (+) conducted among older members of six ethnic minority groups in the UK found a need to improve understanding of financial products and planning, unmet need in relation to information about pensions and other financial issues and suggested that information, advice and guidance would help generate informed decision-making<sup>3</sup>.

A national survey rated (-) of older Australian workers found that those with the highest household income and those who had undertaken more retirement planning were more likely than those in the lowest income groups to intend to change to part-time work before retirement<sup>4</sup>. This may suggest a need to improve the informed choice capabilities among those on low incomes in the interests of maximising their financial security in retirement.

<sup>1</sup> De Vaus et al. (2007) (+)

<sup>2</sup> Morrell and Tennant (2010) (+)

<sup>3</sup> Barnes and Taylor (2006) (+)

<sup>4</sup> National Seniors, 2006 (-)

This evidence statement points to the potential role for employers in educating and signposting employees to information on retirement options and choices.

Evidence on whether phased or abrupt retirement positive affects life and health outcomes is not clear cut as shown in Evidence Statement 8e. There may be a range of confounding factors such as the relative health status of those retiring gradually or abruptly.

One piece of evidence points to the need for additional support for vulnerable labour market groups to help them make optimal choices about retirement.

#### **Evidence statement 8e: Older disabled workers may need particular support with retirement decision-making**

One study (+) set in Australia and based on a series of qualitative interviews with workers with disabilities (aged 50-74) and their support providers found that most older disabled workers wanted to continue working beyond retirement age but needed particular flexibility and understanding to enable them to make an active choice about retirement<sup>1</sup>.

The evidence is partially applicable to the UK.

<sup>1</sup> McDermott and Edwards (2012) (+)

#### **4.1.11 Phased retirement and health outcomes**

Lastly one study examined the impact of phased retirement on health outcomes.

#### **Evidence statement 8f: Gradual retirement**

There is weak and mixed evidence on the benefits of gradual retirement from one (+) rated Australian study. The evidence is partially applicable to the UK.

A survey-based Australian panel study rated (+) found that gradual retirement was positively associated to a small extent with self-reported improved health 12 months into retirement (difference between T0 and T1:  $\beta = 0.14$ ,  $p < 0.01$ ) but those who retired gradually were significantly less satisfied with their retirement after a year than those who had retired abruptly ( $\beta = -0.12$ ,  $p < 0.05$ ), again to a small extent. Whether or not a person retired gradually or abruptly made no difference to the level of positive or negative affect, life satisfaction, self-image, or marital cohesion<sup>1</sup>.

<sup>1</sup> De Vaus

#### 4.1.12 Conclusions

The limitations of the evidence base reviewed for Research Question 3 reflect wider challenges also associated with earlier reviews for Research Questions 1 and 2 concerning the effectiveness and cost-effectiveness of interventions to promote and support the health and well-being of older workers and in the area of pre-retirement planning and training. There is a dearth of evidence on the outcomes and impact of management-initiated interventions in this field, and the overall quality of research in this area was both disappointing and surprising, consistent with the evidence of large scale literature reviews on related topics (see Lancaster et al., 2011, Farrow and Reynolds, 2012 and Crawford et al., 2009). A possible limitation of this review is the exclusion of studies from other European countries and the USA, together with limiting the search strategy to focus on studies published from 2005 onwards. Initial sifting of literature outside the geographical focus for the review showed a similar lack of studies of interventions and management-led initiatives of relevance to the research questions and targeted at older workers.

Despite some prominent examples of reportedly good practice in managing older workers available via case studies in grey literature and the trade press, little documented process or impact evaluation was located, and many of the studies on employer practices included in this review are up to a decade old. Since then, both the labour market context and the employment policy context has changed significantly, and indeed recession and consequent more abundant labour supply for some occupational groups may have reduced employer need and appetite to consider the management of older employees. Moreover, the studies from an employer perspective considered for this review may reflect a degree of employer passivity in taking action in this area, albeit with evidence of emerging awareness of the need to manage older workers and to consider the impact of the abolition of the default retirement age. For some employers this appears to be coupled with a degree of ignorance in the growth and potential issues presented by an ageing workforce and a 'mainstreaming' approach to the management of diversity. This is of concern on at least two grounds. First, the abolition of the default retirement age in 2011 means that employers will have to start considering how to manage workers whose transition to retirement can no longer be assumed. Second, government reforms to

increase the age at which people are eligible for the state pension will lead to those lacking adequate alternative pension provision in particular seeking to remain in work for longer.

There are also clear methodological considerations arising from this review for research in this field. There is an urgent need for research which uses mixed methods and deploys both employer and worker perspectives to examine employer practices with regard to recruitment, retirement planning and transitions. Those commissioning, designing and undertaking research also need to confront the challenge that to examine long-term impacts of working in later life, it will be essential to conduct longitudinal studies. This review urges research commissioners to prioritise funding of high quality studies into the impact of workplace level interventions on health and well-being outcomes which will seek to track the health and well-being of individuals during the lifespan of the intervention and onwards *beyond* the end of their working lives.

## Appendix 1: List of countries eligible for inclusion in the study

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AUSTRALIA (OECD)

NEW ZEALAND (OECD)

UNITED KINGDOM (OECD, Europe)

## Appendix 2: Quality Assessment Forms and Checklists

This appendix shows the quality appraisal checklists for correlate/associative studies and qualitative studies reviewed for Research Question 3 and the guidance notes for applying them.

### Quality appraisal checklist - quantitative studies reporting correlations and associations checklist

<b>Study identification:</b> Include full citation details	
<b>Study design:</b> <ul style="list-style-type: none"> <li>Refer to the glossary of study designs (<a href="#">Appendix D</a>) and the algorithm for classifying experimental and observational study designs (<a href="#">Appendix E</a>) to best describe the paper's underpinning study design</li> </ul>	
<b>Guidance topic:</b>	
<b>Assessed by:</b>	
<b>Section 1: Population</b>	
<b>1.1 Is the source population or source area well described?</b> <ul style="list-style-type: none"> <li>Was the country (eg developed or non-developed, type of health care system), setting (primary schools, community centres etc.), location (urban, rural), population demographics etc. adequately described?</li> </ul>	++  +  -  NR
	Comments:

	NA	
<b>1.2 Is the eligible population or area representative of the source population or area?</b> <ul style="list-style-type: none"> <li>Was the recruitment of individuals, clusters or areas well defined (eg advertisement, birth register)?</li> <li>Was the eligible population representative of the source? Were important groups underrepresented?</li> </ul>	++ + - NR NA	Comments:
<b>1.3 Do the selected participants or areas represent the eligible population or area?</b> <ul style="list-style-type: none"> <li>Was the method of selection of participants from the eligible population well described?</li> <li>What % of selected individuals or clusters agreed to participate? Were there any sources of bias?</li> <li>Were the inclusion or exclusion criteria explicit and appropriate?</li> </ul>	++ + - NR NA	Comments:
<b>Section 2: Method of selection of exposure (or comparison) group</b>		
<b>2.1 Selection of exposure (and comparison) group. How was selection bias minimised?</b> <ul style="list-style-type: none"> <li>How was selection bias minimised?</li> </ul>	++ + - NR NA	Comments:
<b>2.2 Was the selection of explanatory variables based on a sound theoretical basis?</b> <ul style="list-style-type: none"> <li>How sound was the theoretical basis for selecting the explanatory variables?</li> </ul>	+ + -	Comments:

	NR NA	
<p><b>2.3 Was the contamination acceptably low?</b></p> <ul style="list-style-type: none"> <li>• Did any in the comparison group receive the exposure?</li> <li>• If so, was it sufficient to cause important bias?</li> </ul>	++ + - NR NA	Comments:
<p><b>2.4 How well were likely confounding factors identified and controlled?</b></p> <ul style="list-style-type: none"> <li>• Were there likely to be other confounding factors not considered or appropriately adjusted for?</li> <li>• Was this sufficient to cause important bias?</li> </ul>	++ + - NR NA	Comments:
<p><b>2.5 Is the setting directly applicable to the UK?</b></p> <ul style="list-style-type: none"> <li>• Did the setting differ significantly from the UK?</li> </ul>	++ + - NR NA	Comments:
<b>Section 3: Outcomes</b>		
<p><b>3.1 Were the outcome measures and procedures reliable?</b></p> <ul style="list-style-type: none"> <li>• Were outcome measures subjective or objective (eg biochemically validated nicotine levels ++ vs self-reported smoking -)?</li> <li>• How reliable were outcome measures (eg inter- or intra-rater reliability scores)?</li> </ul>	++ + - NR NA	Comments:

<ul style="list-style-type: none"> <li>Was there any indication that measures had been validated (eg validated against a gold standard measure or assessed for content validity)?</li> </ul>		
<p><b>3.2 Were the outcome measurements complete?</b></p> <ul style="list-style-type: none"> <li>Were all or most of the study participants who met the defined study outcome definitions likely to have been identified?</li> </ul>	++ + - NR NA	Comments:
<p><b>3.3 Were all the important outcomes assessed?</b></p> <ul style="list-style-type: none"> <li>Were all the important benefits and harms assessed?</li> <li>Was it possible to determine the overall balance of benefits and harms of the intervention versus comparison?</li> </ul>	++ + - NR NA	Comments:
<p><b>3.4 Was there a similar follow-up time in exposure and comparison groups?</b></p> <ul style="list-style-type: none"> <li>If groups are followed for different lengths of time, then more events are likely to occur in the group followed-up for longer distorting the comparison.</li> <li>Analyses can be adjusted to allow for differences in length of follow-up (eg using person-years).</li> </ul>	++ + - NR NA	Comments:
<p><b>3.5 Was follow-up time meaningful?</b></p> <ul style="list-style-type: none"> <li>Was follow-up long enough to assess long-term benefits and harms?</li> </ul>	++ +	Comments:

<ul style="list-style-type: none"> <li>Was it too long, eg participants lost to follow-up?</li> </ul>	<p>-</p> <p>N</p> <p>NA</p>	
<b>Section 4: Analyses</b>		
<p><b>4.1 Was the study sufficiently powered to detect an intervention effect (if one exists)?</b></p> <ul style="list-style-type: none"> <li>A power of 0.8 (ie it is likely to see an effect of a given size if one exists, 80% of the time) is the conventionally accepted standard.</li> <li>Is a power calculation presented? If not, what is the expected effect size? Is the sample size adequate?</li> </ul>	<p>++</p> <p>+</p> <p>-</p> <p>NR</p> <p>NA</p>	Comments:
<p><b>4.2 Were multiple explanatory variables considered in the analyses?</b></p> <ul style="list-style-type: none"> <li>Were there sufficient explanatory variables considered in the analysis?</li> </ul>	<p>++</p> <p>+</p> <p>-</p> <p>NR</p> <p>NA</p>	Comments:
<p><b>4.3 Were the analytical methods appropriate?</b></p> <ul style="list-style-type: none"> <li>Were important differences in follow-up time and likely confounders adjusted for?</li> </ul>	<p>++</p> <p>+</p> <p>-</p> <p>NR</p> <p>NA</p>	Comments:
<p><b>4.6 Was the precision of association given or calculable? Is association meaningful?</b></p> <ul style="list-style-type: none"> <li>Were confidence intervals or p values for effect estimates</li> </ul>	<p>++</p> <p>+</p>	Comments:

given or possible to calculate? <ul style="list-style-type: none"> <li>Were CIs wide or were they sufficiently precise to aid decision-making? If precision is lacking, is this because the study is under-powered?</li> </ul>	– NR NA	
<b>Section 5: Summary</b>		
<b>5.1 Are the study results internally valid (ie unbiased)?</b> <ul style="list-style-type: none"> <li>How well did the study minimise sources of bias (ie adjusting for potential confounders)?</li> <li>Were there significant flaws in the study design?</li> </ul>	++ + –	Comments:
<b>5.2 Are the findings generalisable to the source population (ie externally valid)?</b> <ul style="list-style-type: none"> <li>Are there sufficient details given about the study to determine if the findings are generalisable to the source population?</li> <li>Consider: participants, interventions and comparisons, outcomes, resource and policy implications.</li> </ul>	++ + –	Comments:

### ***Qualitative Studies: Checklist***

<b>Study identification:</b> Include author, title, reference, year of publication	
<b>Guidance topic:</b>	<b>Key research question/aim:</b>
<b>Checklist completed by:</b>	
<b>Theoretical approach</b>	
<b>1. Is a qualitative approach appropriate?</b>	Appropriate Comments:

<p>For example:</p> <ul style="list-style-type: none"> <li>• Does the research question seek to understand processes or structures, or illuminate subjective experiences or meanings?</li> <li>• Could a quantitative approach better have addressed the research question?</li> </ul>	<p>Inappropriate</p> <p>Not sure</p>	
<p><b>2. Is the study clear in what it seeks to do?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Is the purpose of the study discussed – aims/objectives/research question/s?</li> <li>• Is there adequate/appropriate reference to the literature?</li> <li>• Are underpinning values/assumptions/theory discussed?</li> </ul>	<p>Clear</p> <p>Unclear</p> <p>Mixed</p>	<p>Comments:</p>
<p><b>Study design</b></p>		
<p><b>3. How defensible/rigorous is the research design/methodology?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Is the design appropriate to the research question?</li> <li>• Is a rationale given for using a qualitative approach?</li> <li>• Are there clear accounts of the rationale/justification for the sampling, data collection and data analysis techniques used?</li> <li>• Is the selection of cases/sampling strategy</li> </ul>	<p>Defensible</p> <p>Indefensible</p> <p>Not sure</p>	<p>Comments:</p>

theoretically justified?		
<b>Data collection</b>		
<p><b>4. How well was the data collection carried out?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Are the data collection methods clearly described?</li> <li>• Were the appropriate data collected to address the research question?</li> <li>• Was the data collection and record keeping systematic?</li> </ul>	<p>Appropriately</p> <p>Inappropriately</p> <p>Not sure/inadequately reported</p>	<p>Comments:</p>
<b>Trustworthiness</b>		
<p><b>5. Is the role of the researcher clearly described?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Has the relationship between the researcher and the participants been adequately considered?</li> <li>• Does the paper describe how the research was explained and presented to the participants?</li> </ul>	<p>Clearly described</p> <p>Unclear</p> <p>Not described</p>	<p>Comments:</p>
<p><b>6. Is the context clearly described?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Are the characteristics of the participants and settings clearly defined?</li> </ul>	<p>Clear</p> <p>Unclear</p>	<p>Comments:</p>

<ul style="list-style-type: none"> <li>• Were observations made in a sufficient variety of circumstances</li> <li>• Was context bias considered</li> </ul>	Not sure	
<p><b>7. Were the methods reliable?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Was data collected by more than 1 method?</li> <li>• Is there justification for triangulation, or for not triangulating?</li> <li>• Do the methods investigate what they claim to?</li> </ul>	<p>Reliable</p> <p>Unreliable</p> <p>Not sure</p>	Comments:
<b>Analysis</b>		
<p><b>8. Is the data analysis sufficiently rigorous?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Is the procedure explicit – ie is it clear how the data was analysed to arrive at the results?</li> <li>• How systematic is the analysis, is the procedure reliable/dependable?</li> <li>• Is it clear how the themes and concepts were derived from the data?</li> </ul>	<p>Rigorous</p> <p>Not rigorous</p> <p>Not sure/not reported</p>	Comments:
<p><b>9. Is the data 'rich'?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• How well are the contexts of the data described?</li> <li>• Has the diversity of perspective and content been explored?</li> </ul>	<p>Rich</p> <p>Poor</p> <p>Not sure/not</p>	Comments:

<ul style="list-style-type: none"> <li>• How well has the detail and depth been demonstrated?</li> <li>• Are responses compared and contrasted across groups/sites?</li> </ul>	<p>reported</p>	
<p><b>10. Is the analysis reliable?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Did more than 1 researcher theme and code transcripts/data?</li> <li>• If so, how were differences resolved?</li> <li>• Did participants feedback on the transcripts/data if possible and relevant?</li> <li>• Were negative/discrepant results addressed or ignored?</li> </ul>	<p>Reliable</p> <p>Unreliable</p> <p>Not sure/not reported</p>	<p>Comments:</p>
<p><b>11. Are the findings convincing?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Are the findings clearly presented?</li> <li>• Are the findings internally coherent?</li> <li>• Are extracts from the original data included?</li> <li>• Are the data appropriately referenced?</li> <li>• Is the reporting clear and coherent?</li> </ul>	<p>Convincing</p> <p>Not convincing</p> <p>Not sure</p>	<p>Comments:</p>
<p><b>12. Are the findings relevant to the aims of the study?</b></p>	<p>Relevant</p> <p>Irrelevant</p> <p>Partially relevant</p>	<p>Comments:</p>

<p><b>13. Conclusions</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• How clear are the links between data, interpretation and conclusions?</li> <li>• Are the conclusions plausible and coherent?</li> <li>• Have alternative explanations been explored and discounted?</li> <li>• Does this enhance understanding of the research topic?</li> <li>• Are the implications of the research clearly defined?</li> </ul> <p><b>Is there adequate discussion of any limitations encountered?</b></p>	<p>Adequate</p> <p>Inadequate</p> <p>Not sure</p>	<p>Comments:</p>
<p><b>Ethics</b></p>		
<p><b>14. How clear and coherent is the reporting of ethics?</b></p> <p>For example:</p> <ul style="list-style-type: none"> <li>• Have ethical issues been taken into consideration?</li> <li>• Are they adequately discussed eg do they address consent and anonymity?</li> <li>• Have the consequences of the research been considered ie raising expectations, changing behaviour?</li> <li>• Was the study approved by an ethics committee?</li> </ul>	<p>Appropriate</p> <p>Inappropriate</p> <p>Not sure/not reported</p>	<p>Comments:</p>

<b>Overall assessment</b>		
<b>As far as can be ascertained from the paper, how well was the study conducted? (see guidance notes)</b>	++ + -	Comments:

Checklist items are worded so that 1 of 5 responses is possible:

++	Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
+	Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have addressed all potential sources of bias for that particular aspect of study design.
-	Should be reserved for those aspects of the study design in which significant sources of bias may persist.
Not reported (NR)	Should be reserved for those aspects in which the study under review fails to report how they have (or might have) been considered.
Not applicable (NA)	Should be reserved for those study design aspects that are not applicable given the study design under review (for example, allocation concealment would not be applicable for case control studies).

In addition, the reviewer is requested to complete in detail the comments section of the quality appraisal form so that the grade awarded for each study aspect is as transparent as possible. Each study is then awarded an overall study quality grading for internal validity (IV) and a separate one for external validity (EV):

++	All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.
+	Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.
-	Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

## Quality appraisal checklist - quantitative studies reporting correlations and associations

This checklist<sup>3</sup> has been developed for assessing the validity of studies reporting correlations. It is based on the appraisal step of the 'Graphical appraisal tool for epidemiological studies (GATE)', developed by Jackson et al. (2006).

This checklist enables a reviewer to appraise a study's internal and external validity after addressing the following key aspects of study design: characteristics of study participants; definition of independent variables; outcomes assessed and methods of analyses.

Like GATE, this checklist is intended to be used in an electronic (Excel) format that will facilitate both the sharing and storage of data, and through linkage with other documents, the compilation of research reports. Much of the guidance to support the completion of the critical appraisal form that is reproduced below also appears in 'pop-up' windows in the electronic version<sup>4</sup>.

There are 5 sections of the revised GATE. Section 1 seeks to assess the key population criteria for determining the study's **external validity** – that is, the extent to which the findings of a study are generalisable beyond the confines of the study to the study's source population.

Sections 2 to 4 assess the key criteria for determining the study's **internal validity** – that is, making sure that the study has been carried out carefully, and that the identified associations are valid and are not due to some other (often unidentified) factor.

Checklist items are worded so that 1 of 5 responses is possible:

++	Indicates that for that particular aspect of study design, the study has been designed or conducted in such a way as to minimise the risk of bias.
+	Indicates that either the answer to the checklist question is not clear from the way the study is reported, or that the study may not have

<sup>3</sup> Appraisal form derived from: Jackson R, Ameratunga S, Broad J et al. (2006) The GATE frame: critical appraisal with pictures. Evidence Based Medicine 11: 35–8.

<sup>4</sup> Available from CPHE on request.

	addressed all potential sources of bias for that particular aspect of study design.
–	Should be reserved for those aspects of the study design in which significant sources of bias may persist.
<b>Not reported (NR)</b>	Should be reserved for those aspects in which the study under review fails to report how they have (or might have) been considered.
<b>Not applicable (NA)</b>	Should be reserved for those study design aspects that are not applicable given the study design under review (for example, allocation concealment would not be applicable for case–control studies).

In addition, the reviewer is requested to complete in detail the comments section of the quality appraisal form so that the grade awarded for each study aspect is as transparent as possible.

Each study is then awarded an overall study quality grading for internal validity (IV) and a separate one for external validity (EV):

- ++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.
- + Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.
- – Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.

## Quality appraisal checklist - qualitative studies

This qualitative checklist<sup>5</sup> is designed for people with a basic understanding of qualitative research methodology, and is based on the broadly accepted principles

<sup>5</sup> This checklist is based on checklists in:

Spencer L. Ritchie J, Lewis J et al. (2003) [Quality in qualitative evaluation: a framework for assessing](#)

that characterise qualitative research and which may affect its validity. The following notes provide suggestions for completing the checklist.

The studies covered by this checklist are studies which collect and analyse qualitative data, usually (but not exclusively) textual (written), spoken or observational data. Qualitative data are occasionally collected by structured questionnaires (for example, as thematically organised free text comments), but such data needs to be carefully scrutinised as it may not meet acceptable quality criteria for consideration as a qualitative study.

The checklist's questions are framed in such a way so that it can encompass the variety of ways qualitative research is conducted. Care must be taken to apply the checklist in a way that matches the research methodology.

Please note that the sub questions given as examples under each question are intended to highlight some of the key issues to be considered for that question. They are not intended to be exhaustive. Please add any additional considerations in the comments box.

In some circumstances it may be necessary to analyse qualitative material using a different approach, where the goal will be to seek to extract underlying theories, propositions and principles from the data, rather than focusing on the quality of the study per se. This may be appropriate where the aim is to gain particular insights into social processes.

## Notes on the use of the qualitative studies checklist

### Section 1: theoretical approach

This section deals with the underlying theory and principles applied to the research.

#### **1. Is a qualitative approach appropriate?**

A qualitative approach can be judged to be appropriate when the research sets out to investigate phenomena which are not easy to accurately quantify or measure, or

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[research evidence](#). London: Government Chief Social Researcher's Office  
Public Health Resource Unit (2006) [10 questions to help you make sense of qualitative research](#)  
[accessed 7 July 2008]

North Thames Research Appraisal Group (NTRAG): 1998 Critical review form for reading a paper describing qualitative research [British Sociological Association](#) (BSA)

where such measurement would be arbitrary and inexact. If clear numerical measures could reasonably have been put in place then consider whether a quantitative approach may have been more appropriate. This is because most qualitative research seeks to explain the meanings which social actors use in their everyday lives rather than the meanings which the researchers bring to the situation.

Qualitative research in public health commonly measures:

- personal/lives experiences (for example, of a condition, treatment, situation)
- processes (for example, action research, practitioner/patient views on the acceptability of using new technology)
- personal meanings (for example, about death, birth, disability)
- interactions/relationships (for example, the quality of the GP/patient relationship, the openness of a psychotherapeutic relationship)
- service evaluations (for example, what was good/bad about patients experiences of a smoking cessation group).

## **2. Is the study clear in what it seeks to do?**

Qualitative research designs tend to be theory generative rather than theory testing; therefore it is unlikely that a research question will be found in the form of a hypothesis or null hypothesis in the way that you would expect in conventional quantitative research. This does not mean however that the paper should not set out early and clearly what it is that the study is investigating and what the parameters are for that. The research question should be set in context by the provision of an adequate summary of the background literature and of the study's underpinning values and assumptions.

### **Section 2: study design**

Considers the robustness of the design of the research project.

## **3. How defensible is the research design?**

There are a large number of qualitative methodologies, and a tendency in health to 'mix' aspects of different methodologies or to use a generic qualitative method. From a qualitative perspective, none of this compromises the quality of a study as long as:

- The research design captures appropriate data and has an appropriate plan of analysis for the subject under investigation. There should be a clear and reasonable justification for the methods chosen.

- The choice of sample and sampling method should be clearly set out, (ideally including any shortcomings of the sample) and should be reasonable. It is important to remember that sampling in qualitative research can be purposive and should not be random. Qualitative research is not experimental, does not purport to be generalisable, and therefore does not require a large or random sample. People are usually 'chosen' for qualitative research based on being key informers.

### Section 3: data collection

#### 4. How well was the data collection carried out?

Were the method of data collection the most appropriate given the aims of the research? Was the data collection robust, are there details of:

- how the data were collected?
- how the data were recorded and transcribed (if verbal data)?
- how the data were stored?
- what records were kept of the data collection?

### Section 4: trustworthiness

Assessing the validity of qualitative research is very different from quantitative research. Qualitative research is much more focused on demonstrating the causes of bias rather than eliminating them, as a result it is good practice to include sections in the report about the reflexive position of the researcher (what was their 'part' in the research?), about the context in which the research was conducted, and about the reliability of the data themselves.

#### 5. Is the role of the researcher clearly described?

The researcher should have considered their role in the research either as reader, interviewer, or observer for example. This is often referred to as 'reflexivity'. It is important that we can determine: a clear audit trail from respondent all the way through to reporting, why the author reported what they did report, and that we can follow the reasoning from the data to the final analysis or theory.

The 'status' of the researcher can profoundly affect the data, for example, a middle aged woman and a young adult male are likely to get different responses to questions about sexual activity if they interview a group of teenage boys. It is important to consider age, gender, ethnicity, 'insider' status (where the interviewer/researcher is part of the group being researched or has the same

condition/illness, for example). The researcher can also profoundly influence the data by use of questions, opinions and judgments, so it is important to know what the researchers' position is in that regard and how the researcher introduced and talked about the research with the participants.

### **6. Is the context clearly described?**

It is important when gauging the validity of qualitative data to engage with the data in a meaningful way, and to consider whether the data are plausible/realistic. To make an accurate assessment of this it is important to have information about the context of the research, not only in terms of the physical context – for example, youth club, GP surgery, gang headquarters, who else was there (discussion with parents present or discussion with peers present are likely to cause the participant to position himself very differently and thus to respond very differently) – but also in terms of feeling that the participants are described in enough detail that the reader can have some sort of insight into their life/situation. Any potential context bias should be considered.

### **7. Were the methods reliable?**

It is important that the method used to collect the data is appropriate for the research question, and that the data generated map well onto the aims of the study. Ideally, more than 1 method should have been used to collect data, or there should be some other kind of system of comparison which allows the data to be compared. This is referred to as triangulation.

## **Section 5: analysis**

Qualitative data analysis is very different from quantitative analysis. This does not mean that it should not be systematic and rigorous but systematicity and rigour require different methods of assessment.

### **8. Is the data analysis sufficiently rigorous?**

The main way to assess this is by how clearly the analysis is reported and whether the analysis is approached systematically. There should be a clear and consistent method for coding and analysing data, and it should be clear how the coding and analytic strategies were derived. Above all, these must be reasonable in light of the evidence and the aims of the study. Transparency is the key to addressing the rigour of the analysis.

### **9. Are the data rich?**

Qualitative researchers use the adjective 'rich' to describe data which is in-depth, convincing, compelling and detailed enough that the reader feels that they have achieved some level of insight into the research participants experience. It's also important to know the 'context' of the data, that is, where it came from, what prompted it and what it pertains to.

### **10. Is the analysis reliable?**

The analysis of data can be made more reliable by setting checks in place. It is good practice to have sections of data coded by another researcher, or at least have a second researcher check the coding for consistency. Participants may also be allowed to verify the transcripts of their interview (or other data collection, if appropriate). Negative/discrepant results should always be highlighted and discussed.

### **11. Are the findings convincing?**

In qualitative research, the reader should find the results of the research convincing, or credible. This means that the findings should be clearly presented and logically organised, that they should not contradict themselves without explanation or consideration and that they should be clear and coherent.

Extracts from original data should be included where possible to give a fuller sense of the findings, and these data should be appropriately referenced – although you would expect data to be anonymised, it still needs to be referenced in relevant ways, for example if gender differences were important then you would expect extracts to be marked male/female.

### **12–13. Relevance of findings and conclusions**

These sections are self-explanatory.

### **Section 6: ethics**

### **14. How clear and coherent is the reporting of ethics?**

All qualitative research has ethical considerations and these should be considered within any research report. Ideally there should be a full discussion of ethics, although this is rare because of space limitations in peer-reviewed journals. If there are particularly fraught ethical issues raised by a particularly sensitive piece of

research, then these should be discussed in enough detail that the reader is convinced that every care was taken to protect research participants.

Any research with human participants should be approved by a research ethics committee and this should be reported.

## Section 7: overall assessment

### **15. Is the study relevant?**

Does the study cast light on the review being undertaken?

### **16. How well was the study conducted?**

Grade the study according to the list below:

++ All or most of the checklist criteria have been fulfilled, where they have not been fulfilled the conclusions are very unlikely to alter.

+ Some of the checklist criteria have been fulfilled, where they have not been fulfilled, or not adequately described, the conclusions are unlikely to alter.

– Few or no checklist criteria have been fulfilled and the conclusions are likely or very likely to alter.



## Appendix 3: Inclusion and quality checklist

### Inclusion/exclusion checklist

#### Population

Does the study population include:

	Yes	No		
Self-employed persons with no appointed line manager			Yes >	exclude
Sole traders			Yes >	exclude
Unemployed individuals			Yes >	exclude
No adults aged 50 or over			Yes >	Exclude

#### Publication details

Was the study:

	Yes	No		
Published before 2005			Yes >	exclude
Published in a language other than English			Yes >	exclude
A dissertation or thesis			Yes >	exclude

#### Setting

Is the study exclusively set in:

	Yes	No		
A workplace or amongst workers			No >	exclude
A country on the checklist (see below)			No >	exclude

Country Checklist (for RQ3 only include UK, Australia, New Zealand)
Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States

**Relevance**

Does the study examine:

	Yes	No		
Age or specific needs of/impact on older workers (must have at least 51% as over 50)			No >	exclude
Organisational/community policies, initiatives and interventions that focus on health and well-being, supporting older workers, retirement planning and training, and/or counteracting/challenging ageism			No >	exclude
Issues relevant to the economic evaluation			No >	exclude

Does the study focus on:

	Yes	No		
Changes to employment/health and safety legislation			Yes >	exclude
Changes to organisational structure			Yes >	exclude
Activities for line managers that are NOT about training/mentoring to help managers manage older workers/counteract ageism/assist pre-retirement planning			Yes >	exclude
Whole workforce interventions that focus on physical activity, mental well-being, smoking cessation and long-term sickness absence/returning to work			Yes >	exclude
Interventions/support that employees can access on their own			Yes >	exclude

Statutory provision to employees


Yes > exclude

Does the study focus on chronic illnesses (without considering prevention and specific effects on over 50s )

Yes > exclude

**Intervention**

Does the study examine:

Employees over 50

Yes	No

No > exclude

Entire workforces where at least 51% of employees are over 50

No > exclude

How interventions targeted at 'older' workers under 50 may impact on them at over 50?

No > exclude

Interventions commissioned by organisations, but delivered by third party organisations

No > exclude

**Study information**

For RQ1 and RQ2, does the study:

Employ qualitative methodology

Yes	No

No > exclude

Examine the effect/impact on health and well-being

No > exclude

Include an explicit measure of health and well-being

No > exclude

Clearly explain its methodology

No > exclude

Include control group and/or have more than one measure point

No > exclude

For RQ3 does the study:

Include one of the following: document analysis, focus groups, interviews, observations, cross-sectional survey logy  
 Clearly explain its methodology  
 Make its evidence explicit

Yes	No		
		No >	exclude
		No >	exclude
		No >	exclude

**Other information**

Is the study:

A review  
 Experimental/observational  
 Economic  
 Qualitative  
 A book  
 NB can have more than one study type

Yes	No

Is the study set in:

USA?  
 UK?  
 Europe?  
 Other OECD?  
 Multiple eligible locations?

Yes	No

Which RQ is the paper relevant for?

RQ1  
 RQ2  
 RQ3

Yes	No

Is the study:

- An economic evaluation
- A systematic review/meta-analysis
- A book/book chapter

Yes	No

For RQ1 and RQ 2, does the study have:

- A control group
- Two or more time measure points

Yes	No

Does the sample:

- Include/focus on volunteers

Yes	No

## Appendix 4: Sample search strategies

MEDLINE 1996 to July 2014 (via OVID)

Search strategy 5 August 2014

Set	Searches	Results
1	(over adj2 "50").ti,ab.	9908
2	(over adj2 "55").ti,ab.	1277
3	(over adj2 "60").ti,ab.	7445
4	(over adj2 "65").ti,ab.	4672
5	((age* or old* or elder* or grey or silver or pensioner or senior) adj (worker* or employee* or people* or person* or woman or women or man or men or colleague* or earner* or operative* or volunteer* or population* or workforce or staff* or labourer* or laborer* or executive* or manager* or administrator* or personnel)).ti,ab.	190687
6	"third age*".ti,ab.	229
7	"baby boomer*".ti,ab.	662
8	(later adj2 life adj4 (worker* or employee* or people* or person* or woman or women or man or men or colleague* or earner* or operative* or volunteer* or population* or workforce or staff* or labourer* or laborer* or executive* or manager* or administrator* or personnel)).ti,ab.	308
9	(aged/ or middle aged/) and (worker* or employee* or people* or person* or woman or women or man or men or colleague* or earner* or operative* or volunteer* or population* or workforce or staff* or labourer* or laborer* or executive* or manager* or administrator* or personnel).ti,ab.	787984
10	(third adj2 (career* or job*)).ti,ab.	25
11	((age* or old* or elder* or grey or silver or pensioner or senior) adj2 (nurse* or physician* or doctor* or therapist* or paramedic* or surgeon* or dentist* or midwife or midwives or pharmacist* or lawyer* or teacher* or professor* or academic* or firefighter* or ambulance* or police* or miner* or driver* or trucker*)).ti,ab.	7416
12	(middle adj age* adj (worker* or employee* or people* or person* or woman or women or man or men or colleague* or earner* or operative* or volunteer* or population* or workforce or staff* or labourer* or laborer* or executive* or	5905

	manager* or administrator* or personnel)).ti,ab.	
	(exp occupational groups/ or exp administrative personnel/ or exp clergy/ or exp doulas/ or exp ethicists/ or exp faculty/ or exp emergency responders/ or exp foreign professional personnel/ or exp health personnel/ or exp allied health personnel/ or exp anatomists/ or exp caregivers/ or exp "coroners and medical examiners"/ or exp dental staff/ or exp dentists/ or exp faculty, dental/ or exp faculty, medical/ or exp faculty, nursing/ or exp health educators/ or exp health facility administrators/ or exp infection control practitioners/ or exp medical chaperones/ or exp medical laboratory personnel/ or exp medical staff/ or exp nurses/ or exp nurse	34746
13	administrators/ or exp nurse anesthetists/ or exp nurse clinicians/ or exp nurse midwives/ or exp nurse practitioners/ or exp nurses, community health/ or exp nurses, international/ or exp nurses, male/ or exp nurses, public health/ or exp nursing staff/ or exp personnel, hospital/ or exp pharmacists/ or exp physician executives/ or exp physicians/ or exp veterinarians/ or exp inventors/ or exp laboratory personnel/ or exp lawyers/ or exp librarians/ or exp military personnel/ or exp "missions and missionaries"/ or exp police/ or exp research personnel/) and (age* or old* or elder* or grey or silver or pensioner or senior).ti,ab.	
14	exp Workplace/ or exp Employment/ or exp Work/ or exp Industry/	193247
15	((job* or employ* or work*) adj (place* or site* or setting* or location* or organisation* or organization*)).ti,ab.	4719
16	(workplace* or business* or shop* or factory or factories or company or companies or office* or industry or industries).ti,ab.	149591
17	exp Retirement/	3648
18	(retirement or retired or unretirement or redeployment).ti,ab.	7176
19	((retire* or pre-retire* or unretire*) adj2 (revers* or plan* or decision* or delay* or adjust* or late* or post*)).ti,ab.	588
20	((work or employment or flex* or retire*) adj2 transition).ti,ab.	244
21	((flex* or part-time or "part time") adj4 (career* or employ* or work* or time* or job* or hour* or intervention*)).ti,ab.	5303
22	((third or 3rd or encore or bridge) adj (work or career* or job* or employ*)).ti,ab.	76
23	"fourth pillar".ti,ab.	6
	((regulat* or adapt* or adjust* or change* or modif* or redesign* or re-design*) adj2 (premise* or building* or work* or equipment or office* or shop* or industry or industries or factory or factories or company or companies or practice* or hour* or responsib* or environment* or job*)).ti,ab.	28260
24		
25	(reasonable adj1 adjustment*).ti,ab.	33
26	(job* adj2 design).ti,ab.	119
27	((employ* or work* or job*) adj3 (training or mentor*)).ti,ab.	4947
28	((employ* or work* or job*) adj2 (pattern* or shift* or rota* or roster*)).ti,ab.	4828
29	((welfare or pension* or benefit* or tax* or work or employment) adj4 (barrier* or facilitat* or incentive* or disincentive* or penalt*)).ti,ab.	3641
30	Ageism/ or (ageism or (age adj2 discriminat*)).ti,ab.	682
31	((job* or work* or employ*) adj2 (shar* or return*)).ti,ab.	5950

32	(engage* and (civi* or job* or work* or employ* or staff* or worker* or workforce*)).ti,ab.	13168
33	(performance adj2 manage*).ti,ab.	645
34	(recruit* adj4 (civi* or job* or work* or employ* or staff* or worker* or workforce*)).ti,ab.	2503
35	exp "Personnel Staffing and Scheduling"/ and (age* or old* or elder* or grey or silver or pensioner or senior).ti,ab.	970
36	exp Accidents, Occupational/ and (age* or old* or elder* or grey or silver or pensioner or senior).ti,ab.	1531
37	exp Occupational Diseases/ and (age* or old* or elder* or grey or silver or pensioner or senior).ti,ab.	8842
38	((retention or retain) adj4 (worker* or employee* or people* or person* or woman or women or man or men or colleague* or earner* or operative* or volunteer* or population* or workforce or staff*)).ti,ab.	2069
39	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13	890363
40	14 or 15 or 16	311640
41	17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38	86767
42	39 and 40 and 41	7574
43	limit 42 to (english language and humans and yr="2000 -Current")	5781

**Notes:**

Set 11 is a free-text search for a number of key professions, including health service personnel, which might not be picked up by using the generic words such as worker or staff

Set 39 represents older workers.

Set 40 represents the workplace

Set 41 covers workplace interventions

Set 42 combines all these three sets

and set 43 limits the results to English language, Humans and 2000 to current.

So set 43 is the results to be downloaded to EndNote and sifted there.

## Appendix 5 Evidence Tables

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## Agnew et al. (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p>Authors: Agnew, J. R., Bateman, H., &amp; Thorp, S. Year of publication: 2012 Citation: Agnew, J. R., Bateman, H., &amp; Thorp, S. (2012). Work, money, lifestyle: Plans of Australian retirees. UNSW Australian School of Business Research Paper, (2012ACTL15). Quality rating: -</p>	<p>Research questions: This study presents new insights into the retirement preparedness of Australians at the later stages of working life. Leaving paid work, managing finances, changing daily activities and dealing with longevity are four key areas for pre-retirees to consider; the discussion examines attitudes in each of those areas and, where possible, compares expectations with typical experiences. Research approach: Qualitative Data collection: Survey Method(s): Survey data collected and analysed. Fieldwork took place in May 2011 with the aim of collecting information about the financial knowledge base, values and plans of retirement</p>	<p>Sample population: 920 Australians aged between 50 and 74 Sampling approach: Members of the PureProfile internet panel Inclusion/exclusion criteria: Age (50-74) Number and characteristics of participants: 920 aged 50-74 Response rate (if relevant): Not stated</p>	<p><b>Workforce transition</b> A majority of pre-retirees have not formulated plans for leaving their jobs, possibly because retirement timing is outside the control of many, or because they continue to enjoy work. Of those not-yet-retired, up to 60% had done virtually no planning around the work-retirement transition. This group indicated that they had not really given any thought to leaving the workforce or had only just started thinking about it without making any decisions. Around 30% had some plans in place and had started talking to their employer. Fewer than 40% had discussed retirement with their partners and fewer than 20% with their friends. Low levels of discussion around retirement suggest little scope for sharing social capital. When asked to nominate a retirement age, around 70% suggest an age, typically 65, whereas around 10% state they do not intend to stop working and 20% cannot give an intended retirement age. While the majority of pre-retirees expected to decide for themselves when they will stop paid work, responses of the already-retired show that the decision is often made for people. Of those who had already retired, only 40% said they decided for themselves when to stop work and the remaining 60% were either forced to retire or nudged out of the workplace. When asked to rank reasons for retiring, 'wanting to do other things' was first in importance. Exogenous factors beyond the control of subjects, like personal health and the health of other family members, ranked second and fourth. Personal health was twice as important as the third-ranked 'no longer needing to work - had enough income'. <b>Financial retirement planning</b> Estate planning appears to be well covered by many mid-life Australians. Around two thirds of respondents said they had thought about leaving a financial or material bequest. Of those, nearly 60% had made a will. Further investigation into financial planning stages shows that the majority has gone no further than reviewing their current financial position. Only about one in three in this age group has clear goals and plans in place to achieve them. Unsurprisingly,</p>	<p>Limitations identified by author: None Limitations identified by review team: Working paper so still in progress; perhaps more robust quantitative analysis would have been beneficial Evidence gaps/recommendations for future research: Could be replicated abroad/elsewhere, or with those aged 75+ Source of funding: Not Stated</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>age                      Australians.                      The survey had one common section answered by all and three supplementary sections each answered by around one third of respondents. The common questions covered demographics, values, survival probabilities, bequests and retirement planning. The three supplementary surveys focussed on 1) income and wealth (including superannuation), 2) more detailed retirement plans and 3) knowledge of superannuation concepts,</p>		<p>50% of pre-retirees in our survey expected their living standard to decline (either 'somewhat' or 'a lot') after retirement.</p> <p><u>Activities and retirement lifestyle</u></p> <p>When Australian pre-retirees were asked to rank eight prospects for their retirement from best to worst, 'having a chance to travel' was clearly first. 'Taking it easy' and 'having time with your partner' were also highly ranked. Others rated time for interests as important, and looked forward to less pressure, with time to spend on hobbies or sport. Access to these attractive features of retirement is contingent on financial security. Spending more time with children and 'being your own boss' were less preferred prospects, as was having time for volunteering. Further questioning showed some mismatch between expectations and realisations. Around 40% of pre-retirees have given little thought to what they will do after work. Travel and leisure activities figure prominently in the priorities of people who have made plans. By contrast, when we asked the same question of the retired, carer responsibilities and volunteering are more important than anticipated. Close to 45% of the sample of not-yet-retired anticipated continuing paid work in some capacity after formal retirement. Of these 60% stated that work enjoyment rather than needing more money was the main reason for returning to work.</p> <p><u>Life expectancy</u></p> <p>As retirements lengthen, a critical factor in all planning areas is subjective life expectancy. The average current age for respondents in the survey was 60.5 years. The average age to which they expected to live across all age groups was 83 years for males and 84 for females. Compared with Life Table estimates, women in their 50s underestimated their lifetimes by seven years on average, and women in their 60s by five years on average. Men were more accurate: men in their 50s underestimated by six years but men in the 60-70 cohort estimated close to actuarial expectation. In other words, most women and younger men still anticipate a much shorter retirement than they are likely to experience. When we asked people about the survival of their partners, similar biases emerged. Somewhat surprisingly, patterns of optimism and pessimism were not constant across the lifespan. Compared with (improved) population estimates, the typical survey respondent was pessimistic about near-term survival (say to ages 75-85) but</p>	

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p data-bbox="338 320 660 491">Age Pension and retirement income product features.</p> <p data-bbox="338 501 660 671">Setting(s): Members of the PureProfile internet panel, aged between 50 and 74</p> <p data-bbox="338 681 660 703">Dates: May 2011</p>		<p data-bbox="911 320 1668 400">optimistic about survival at very old ages (say from age 90 onwards). This may reflect uncertainty about survival patterns at very old ages.</p>	

Alden E (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Alden E.</p> <p><b>Year of publication:</b> 2012</p> <p><b>Citation:</b> Flexible employment: how employment and the use of flexibility policies through the life course can affect later life occupation and financial outcomes., Age UK research report</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> how do flexibility policies to support older workers exist in 'practice' for employees aged 50+.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews and survey data</p> <p><b>Method(s):</b> Semi-structured interviews, supplemented by analysis of pre-existing survey data</p> <p><b>Setting(s):</b> Older workers in South East England</p> <p><b>Dates:</b> Interviews completed September-November 2010</p>	<p><b>Sample population:</b> Employees aged 50+ living in the South East</p> <p><b>Sampling approach:</b> Stratified random sampling, although it does not state from where</p> <p><b>Inclusion/exclusion criteria:</b> see population</p> <p><b>Number and characteristics of participants:</b> 50 employees, 26 Male, 24 Female. Average age of 61.</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> Firstly, existing data from three surveys was reviewed; the Labour Force Survey, the Workplace Employment Relations Survey, and data within the EHRC 'Older Workers: employment preferences, barriers and solutions' (2009) project. From this, flexible working was defined, and the prevalence and motivations for it were ascertained. Phase 2 was a qualitative study involving a semi-structured, 2 hour face-to-face interview. The review of quantitative data gathered in Phase 1 was used as guidance for questions to be included in the qualitative interview schedule. The qualitative data were transcribed and analysed using NVivo8.</p> <p><b>Key findings relevant to the review:</b></p> <ul style="list-style-type: none"> <li>• There were examples of large employers managing flexibility policies well, which appeared to require focussed effort, planning and support. These organisations provide excellent case studies for employers not currently offering flexible options, on how it can be achieved successfully.</li> <li>• Due to business needs, some roles may be more adaptable to flexible employment options than others. Informal flexibility policy agreements tend to be most usual in organisations, with mixed reviews by workers on management success. While some organisations and managers appeared to handle requests and management of flexible working well, for others, there exists a need for education to help organisations, managers and workers to see that flexible options, however limited, are possible for most roles.</li> <li>• Mutual trust is the foundation of negotiations on flexibility. Therefore, 'unknown' employees and applicants seeking flexibility have difficulty accessing it.</li> <li>• There are costs involved and resources needed in</li> </ul>	<p><b>Limitations identified by author:</b> Relatively small geographical scope. Broader area would be more representative. Qualitative data from employers would enhance this work. Little clarifying data; difficult to discern where data on policy is derived and what the answers are based upon.</p> <p><b>Limitations identified by review team:</b> Methodologically, a second researcher coding and analysing the data may have provided a more robust analysis. Being confined to one geographical region of the UK which is more affluent than other regions, may lead to external economic factors affecting the sample's perceptions which may not be consistent with workers in other regions. It also lacks data from employers on factors affecting implementation of flexibility options which may influence worker perceptions.</p> <p><b>Evidence gaps/recommendations for future research:</b> Broaden the scope of this work, and interview employers as well as workers</p> <p><b>Source of funding:</b> Age UK</p>

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Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>implementing and supporting a successful flexible employment policy in the workplace. However, as presented by workers in organisations where significant resources were used to implement flexible working programmes, the return on investment for employers appeared to be positive in regards to employee goodwill, value and increased commitment.</p> <ul style="list-style-type: none"><li>• Evidence suggested that where flexible options were present, older workers had a much more positive outlook on their work and home lives and reported better financial outcomes than those who did not.</li></ul>	

**Barnes H & Taylor R (2006)**

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Barnes, H. and Taylor, R.</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Barnes, H. and Taylor, R. (2006). <i>Work, saving and retirement among ethnic minorities: A qualitative study.</i> Research report no.396. Department for Work and Pensions: London.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <p>The key objectives of the research were to:</p> <ul style="list-style-type: none"> <li>• understand the expectations and priorities of ethnic minority pensioners and people of working age (aged 40 or over) with regard to work, retirement and pensions;</li> <li>• understand the ways people from ethnic minority groups save and make financial plans and provision for later life;</li> <li>• understand feelings about extending working life for ethnic minority groups;</li> <li>• identify differing needs amongst ethnic minority groups in relation to work, retirement and pensions.</li> </ul> <p><b>Research approach:</b> Qualitative interviews</p> <p><b>Data collection:</b> Semi-structured interviews</p>	<p><b>Sample population:</b></p> <p>The final sample of 60 respondents consisted of five men and five women from each of the six ethnic minority groups: Indian, African, Chinese, Caribbean, Bangladeshi and Pakistani. Of the 60, 13 were retired and three were working after state pension age. In terms of age cohorts: 16 were over 60; 22 were in the 50-59 group; and 22 were in the 40-49 group. Twenty-two of those under state pension age were currently in employment, 11 were self-employed and 11 were not employed (this group included the unemployed and those unable to work due to ill-health or caring responsibilities). No one in the sample was under state pension age and retired. The final sample included 19 low income, 17 medium income and 24 high income households.</p> <p>Over half the sample was married and most were living in two generation families. However, there were also extended families where three generations lived in the same house, couples without children, adults living with parents, lone parents, and in two cases, grandparents with legal responsibility for a grandchild. Most had bought or were in the process of buying their homes, a smaller proportion were in council or rented accommodation. Individuals had spent very different amounts of time in the UK, with the great majority arriving prior to the 1990s. Around 10% arrived after 1990. A fifth of the sample were born in the UK and could be defined as second generation, although a small number of these had returned to their country of origin for their education before</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>A scoping exercise consisting of interviews with key informants was conducted to flag up potential research issues and develop research tools. Interviews were conducted by an independent research agency as community interpreters were thought to develop a better quality and depth of interview. Interviews were conducted in the respondents preferred language. Individuals were given an incentive to take part. Interviews included a short section to get characteristics of individuals, and then covered their work history and key events in their life, their expectations about retirement and later life, their household incomes and financial decision making, pensions and the person’s knowledge of pensions. Interviews were taped, translated when needed and transcribed verbatim. Field notes were also made to contextualise the interviews. Analysis were conducted with NVivo using a grounded theory approach to capture themes related to subgroups.</p> <p><b>Key findings relevant to the review:</b></p> <p>There was considerable diversity in the experiences of the interviewees. One key distinction was between migrants and those born and educated in the UK. Many of the former found work in low paid, unskilled sectors and whilst some went to further and improve their situation (for example, self-employment), others remained in low paid work for the rest of their lives. Seven profile groups emerged from the data: women who have never worked, lone parents, self-employed, workers in ethnically segmented labour markets, workers from declining industries, the second generation and dual earner households. Some ethnic groups were over-represented in some categories, but these had implications for retirement and pension decisions made by individuals from particular communities.</p> <p>As well as work and education, household finances, attitudes to money and financial products had an impact on retirement planning. Those on low incomes tended not to be working and had large families and those well off were in work, had higher incomes and had fewer, if any children. Those with a sufficient</p>	<p><b>Limitations identified by author:</b> None reported</p> <p><b>Limitations identified by review team:</b> <b>Evidence gaps/recommendations for future research:</b> Non-reported</p> <p><b>Source of funding:</b> Not reported</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p><b>Method(s):</b> Interviews with people from the six main ethnic minority groups in the UK ie Indian, Pakistani, black Caribbean, black African, Bangladeshi and Chinese, including both those below and above state pension age</p> <p><b>Setting(s):</b> London and Birmingham</p> <p><b>Dates:</b></p>	<p>returning in their 20s to find work. There were a range of religious affiliations mentioned. The largest group were Muslim. There were smaller numbers of Christians, Hindus, Sikhs and Buddhists and a significant proportion who stated they had no religious affiliation.</p> <p><b>Sampling approach:</b> Structured approach</p> <p><b>Inclusion/exclusion criteria:</b> Not reported</p> <p><b>Number and characteristics of participants:</b> See above</p>	<p>income were aware of using a range of financial products, but there was little evidence of financial advice, and for all incomes saving products used may not have been the most efficient.</p> <p>Most said their knowledge of pensions was limited. There was a general awareness re: entitlement to state pensions, but people could not always make the distinction between tax and NI. Among those who were on an occupational pension scheme there was a general understanding of the principles of a defined contribution scheme. Dual earner households and those born in the UK had a relatively advantaged position and were unlikely to be negatively affected in relation to retirement and pensions. But lone parents, women who had never worked and segmented industries faced challenges re: access to pension schemes and saving enough to retire. Experiences of those who were self-employed varied. Most interviewees stated that they would probably continue to work after the state pension age (mostly those self-employed, or those in professional/managerial roles and if their health allowed them to and if their employers were happy to continue to employ them), however, others stated they would prefer to retire.</p> <p>Despite the unmet need in relation to pension information and other financial issues, interviewees suggested that it could be beneficial or helpful to have pension and retirement planning briefings for all employees amidst the provision of other financial services.</p>	

**Bernard and Phillips (2007)**

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Bernard, M. and Phillips, J.E.</p> <p><b>Year of publication:</b> 2007</p> <p><b>Citation:</b> Bernard, M. and Phillips, J.E. (2007). Working carers of older adults, <i>Community, work and family</i>, 10, 139-160.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The study was designed to: evaluate formal strategies used by working carers of older adults to help them manage work or care roles; identify what helps and hinders working carers; elicit carers' views on managing work and care; articulate employer perspectives and identify areas where the public, voluntary and private sectors can work in partnership to respond to the needs of working carers.</p> <p><b>Research approach:</b> Multi-method</p> <p><b>Data collection:</b> Data collected in 5 phases</p> <p><b>Method(s):</b> Profiling of the 2 organisations, screening questionnaires, in-depth questionnaire and semi-structured interviews</p> <p><b>Setting(s):</b> Two public sector organisations, a social services department and a national health service trust. Both served a mix of urban and rural populations.</p>	<p><b>Sample population:</b> Carers in an NHS Trust and a Social services department</p> <p><b>Sampling approach:</b> Willingness to participate and respond to questionnaire. Interviewees were selected taking into account gender, job type and hours as well as the distance they live from their care recipient.</p> <p><b>Inclusion/exclusion criteria:</b> Deliberately over-sampled male carers because they were so rare in the questionnaire survey</p> <p><b>Number and characteristics of participants:</b> 8953 were sent screening questionnaires, 2,440 responded (27%).365 were identified as carers for someone aged 60 or above. A lengthier survey was sent to those who had identified a willingness to participate further, of these 204 (56%) responded, 94 from the NHS Trust and 11 from the SSD. 48 then chosen for interview. Of the 48 interviewees 8 male and 40 female. Of men 5 were full time and 3 part time, of the women two job-shared, 18 worked part-time, and 20 full-time. Ages ranged from 32-70 with a mean of 51. 5 carers lived with the person they cared for, 9 lived at least 60 minutes away. 7 were former carers in that they had ceased caring in the time between the screening</p>	<p><b>Brief description of method and process of analysis:</b> The first phase consisted of compiling a profile of the two organisations. This was followed by sending out a screening questionnaire, To identify carers they applied a screening questions from the 2001 census, yielding a sample agreeing to take part in the third phase of the study, being sent a more detailed questionnaire about the care they give etc. From these questionnaires a sample was chosen for interviewing, and finally interviews with senior and middle managers completed the design.</p> <p><b>Key findings relevant to the review:</b> 92% of carers in both organisations were female and had a mean age of 48, the majority were married and lived with at least one other person. Ethnic variation was minimal, with 94-96% if carers in the two organisations classed as white. Nearly all carers were on permanent contracts and approximately 2/3 of them worked full-time, with larger percentages of male workers working fulltime in both organisations. The majority of carers in both organisations commuted to work in 40 or less minutes. The majority if carers were invested in their work, and felt that work is important to who they are, and 60% said they would work even if they did not need the money. Over ¾ said they were too tired because of work to do family things and almost 3/5 felt they</p>	<p><b>Limitations identified by author:</b> Not reported</p> <p><b>Limitations identified by review team:</b> Generalisability to other sectors, as individuals in these caring roles may undertake more caring responsibilities and cope better. Demands placed on carers due to nature of work may be higher than in other occupations so may be easier for employers in other sectors to implement flexible working. Dominated by female workers. No participants had left the occupation due to not coping with dual demands so sample may not be representative of broader population of all carers. Self-selecting reasons to participate</p> <p><b>Evidence gaps/recommendations for future research:</b> Not reported</p> <p><b>Source of funding:</b> Not reported</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>Women outnumbered men in both organisations, with men often taking the more managerial and senior positions, and both organisations had a predominantly white workforce</p> <p><b>Dates:</b> Not reported</p>	<p>questionnaire and the main questionnaire.</p> <p><b>Response rate (if relevant):</b> See above</p>	<p>did not get enough family time. Most felt that their employer tried to help them meet their family responsibilities and that their manager was flexible, colleagues understanding and work didn't penalise them because of family commitments. They also claimed that their responsibilities and activities outside work rarely affected their work, but they did say it reduced the amount of training they received, job related social events they attended and job transfers they accepted. Caring also had a negative effect on carers social lives. Highest proportion of carers were caring between 4-9 hours a week, males cared for fewer hours. Most carers were caring for one person over the age of 60, and some were caring for 2 people, and 44% said they were the primary carer.</p> <p>Carers talked about practical, work-related help that is now available in their work - but the majority only use a narrow selection of what is on offer, primarily annual leave/holiday time, time off in lieu, carer's leave and counselling. Time off in lieu is only available to certain grades and categories of staff, but it was of key practical help and managers were willing and able to let it happen and it seemed to work well. Many jobs needed to be done on a 24 hour a day, 7 days a week basis and often involved shifts which hindered the working carer's ability to ask for help and support especially if they know that the team is hard pressed. Time pressures and overload did manifest themselves in an individual's concern about their own health. Many carers admitted they did not properly</p>	

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>understand what exactly was meant by carers leave or even whether or not it was available. Those who made use of it were positive about its helpfulness. Many carers were aware of the existence of in-house counselling but despite considerable workload pressures only a few made use of it. Other forms of practical help included being able to work from home, being able to use the telephone at work and the availability of eldercare information.</p> <p>The importance of a supportive manager was critical, and there is a need for managers to be flexible, approachable and sympathetic, to try and match individual staff needs with the hours/shifts/days they want to work. The need for flexibility and understanding is also mirrored in what respondents say about the support of colleagues. There was a need to build a bank of trust between employees and their managers, but this is something that takes time to develop and with which to feel comfortable.</p> <p>They also spoke about being a professional, meaning that they knew about finding their way around the system to get the help they needed. Through their work many had learnt coping strategies which proved helpful in terms of accessing and accepting both practical and emotional help, and ensuring they got some personal space and time.</p> <p>Organisational culture was also discussed as often it did not facilitate an exposure of personal details related to care giving. However, coming to work was important for carers in its own right in terms of their</p>	

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Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			identities as workers and as a way of dealing with the daily juggling act. Work was seen as a buffer, but it was to be remembered that these were people who had chosen to stay in employment rather than leave work to devote time to caring.	

Billett S et al. (2011)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Stephen Billett, Darryl Dymock, Greer Johnson, Greg Martin</p> <p><b>Year of publication:</b> 2011</p> <p><b>Citation:</b> <i>'Last resort employees: older workers' perceptions of workplace discrimination'</i></p> <p>Human Resource Development International Vol. 14, No. 4, September 2011, 375-389</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> To what extent do workers aged 45 years and older feel that they have been discriminated against because of their age?</p> <p>Paying specific attention to access to training, promotion opportunities and job security.</p> <p><b>Research approach:</b> Qualitative interviews and focus groups. Interviews were drawn from a larger study.</p> <p><b>Data collection:</b> <b>Method(s):</b> 48 structured qualitative interviews and 2 focus groups with 6 participants in each.</p> <p><b>Setting(s):</b> Focus groups took place in the workplace. Interviews took place over the phone or face-to-face.</p> <p>Country: Australia</p> <p><b>Dates:</b> Not stated</p>	<p><b>Sample population:</b> Workers aged 45 years or older.</p> <p><b>Sampling approach:</b> Interviewees were identified through personal contacts and referrals. The focus groups used 'convenient samples'.</p> <p><b>Inclusion/exclusion criteria:</b> Excluded unemployed, those under 45.</p> <p><b>Number and characteristics of participants:</b> 60 participants. age ranges: 45-49: 26%, 50-54: 26%, 55-59: 32%, 60-64: 13% and 65-69: 3%.</p> <p>Exact numbers not provided but, occupation groups that took part were nursing, education, state government administration, services sector (eg hospitality and retail) and self-employed workers.</p> <p><b>Response rate (if relevant):</b> Not stated</p>	<p><b>Brief description of method and process of analysis:</b> Interviews were conducted either face to face or by phone. Both focus groups and interviews took between 45 minutes and 1 hour. Direct and indirect questions were used.</p> <p>Data was not differentiated at the analysis stage. Both were recorded and transcribed. Data were then coded in Nvivo using themes relevant to factors and issues to maintaining the competence of older workers.</p> <p>Initial themes were developed through detailed analysis of 10 transcripts then applied to the others.</p> <p><b>Key findings relevant to the review:</b> Accounts varied considerably. 14% cited anecdotal or suspected age discrimination. 10% reported actual discrimination.</p> <p>The respondents' perceptions were that employers tend to see older workers as less capable in terms of physical ability, capacity for learning and adaptability to change, but superior to younger workers in commitment, reliability and corporate knowledge.</p> <p>Subtle instances of discrimination were reported by 7 who felt older workers would be more likely to be</p>	<p><b>Limitations identified by author:</b> Sample skewed towards professional and paraprofessional workers. Does not state how the sample is distributed between the groups mentioned. Greater demographic data could illuminate data presented further.</p> <p><b>Limitations identified by review team:</b> Focus on 'perceptions of discrimination' and not actual instances could be subject to bias.</p> <p><b>Evidence gaps/recommendations for future research:</b> Further exploration into how and how widely stereotypes about older workers are present in older workers themselves. How perceptions alter experience, particularly health and well being at work.</p> <p><b>Source of funding:</b> Australian Research Council</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>made redundant over younger workers.</p> <p>5 reported overt discrimination. 2 reported older workers being made redundant because they did not fit the company's image. Some suggested certain industries, such as, marketing and hospitality were seen as younger industries and so older workers would be more likely to face discrimination in them.</p> <p>Equal access to training and development was constantly reported across industries, although some felt negative perceptions of older workers lead some employers not to support development.</p> <p>Others felt business didn't see the need to train older employees because they were already 'good enough'.</p> <p>Some said they were at a point in their career that they no longer sought or wanted advancement. Some felt younger employees were more likely to advance because the company felt they would be there longer.</p> <p>Some older workers themselves accepted negative stereotypes about age.</p>	

Boreham et al. (2009)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Nick Boreham, Shuna Marr, and Andrea Priestley</p> <p><b>Year of publication:</b> 2009</p> <p><b>Citation:</b> Boreham, N., Marr, S., &amp; Priestley, A. (2009). Working after retirement age in the Scottish hospitality industry: challenges and self-directed learning.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> Aims to elucidate the challenges of working past retirement age in the Scottish hotel industry</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> 16 light touch interviews with workers aged 55-87 working in the hotel industry, supplemented by interviews with HR staff and departmental managers</p> <p><b>Setting(s):</b> Older hotel workers in</p>	<p><b>Sample population:</b> 16 workers in Scottish hotels, aged 55-87</p> <p><b>Sampling approach:</b> Not stated</p> <p><b>Inclusion/exclusion criteria:</b> Age 55+, currently employed</p> <p><b>Number and characteristics of participants:</b> See above</p> <p><b>Response rate (if relevant):</b> Not stated.</p>	<p><b>Brief description of method and process of analysis:</b> Each older worker was interviewed for up to one hour on issues surrounding their job and experiences in the work role. Interviews were audio recorded and transcribed for analysis. Departmental managers and HR staff were interviewed about the hotels' policies for employing older workers and their perceptions of their training needs. A thematic analysis of the older workers' interviews was carried out, and results were cross-validated with the manager and HR interviews.</p> <p><b>Key findings relevant to the review:</b></p> <p><u>Perceived Challenges</u></p> <p><u>Customer Satisfaction</u></p> <p>Most of the participants identified the core challenge as providing a high quality of customer service. Many perceived a link between customer satisfaction and the success of their employer's business. This revealed both a high level of loyalty to the employer and insight into the microeconomics of this industry. The older workers often claimed that it was their extensive life and work experience that had developed and honed customer service skills; whilst most had not worked in hotels before, all had worked in the for-profit sector, and in most cases, their work had involved handling customers. The second key skill the older workers thought underpinned customer service was willingness to accept responsibility for dealing with a guest's problem, even if it was not strictly speaking their official duty. In customer service, interviewees reported four specific challenges: learning their jobs; coping with busy periods; adjusting to flexible work hours, and establishing working relationships with colleagues. These will be discussed in turn.</p> <p><u>Learning the Job</u></p> <p>Four participants commented on the challenge of learning their jobs in the absence of specific training. Whilst all the hotels provided induction programmes and guidance by supervisors, these four were sometimes insufficient. Three of them reported no significant initial training or guidance from supervisors. Their resource for learning was their colleagues, both in their own department and in others, and in one case an instruction manual. One worker was still learning his job by finding things out by experience, and would probably continue to do so, expressing surprise that his employer had not provided training even though they knew his lack of experience in the hotel trade. One reported that while the initial training had been adequate, over the years his job had expanded and changed but retraining had not been provided. Moreover, even though the hotel trade frequently sends employees on IT courses, three older workers in our sample reported challenges with IT in the workplace which had not been met by formal training. Another older worker had, as part of his job specification, IT support for other members of staff including writing programmes for them. He spoke of learning this level of IT skill</p>	<p><b>Limitations identified by author:</b> perceived lack of transferability; specific to hotel sector and relatively small sample size in Scotland</p> <p><b>Limitations identified by review team:</b> Interviews only transcribed and analysed by one researcher</p> <p><b>Evidence gaps/recommendations for future research:</b> Expand to other sectors/areas to improve transferability of findings</p> <p><b>Source of funding:</b> ESRC</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	Scotland <b>Dates:</b> 2009		<p>informally from a colleague. He had received no formal training. In the interviews with managers and HR personnel, there was a widely held view that the core skill in hotel work is customer service and that older workers with extensive experience in this field do not need training in the details of how to provide it. As the above accounts reveal, however, this relaxed attitude to training presented many older workers with the challenge of having to teach themselves crucial skills. Nevertheless, none of them expressed resentment about being let down, and none suggested that having to learn their jobs by their own devices had caused undue stress. All had worked to the best of their ability to tease out the whys and wherefores of their new employment, keen to succeed and confident in their capacity as self-directed learners. Indeed, meeting this challenge enhanced the sense of self-efficacy that lay at the heart of their job satisfaction.</p> <p><u>Pressure of Work</u></p> <p>Five older workers talked about problems of pressure of work; some reported being so busy that they could not perform as they would like. Others reported problems with management's expectation that they work flexible shift patterns. Two had previously held management positions and had chosen to take on a job with less responsibility at this stage in their working career. Four of the five workers had at least 8 years of working for their present employer; one as long as 25 years' service.</p> <p><u>Busy times</u></p> <p>In view of the older workers' claims that staff shortages had put this extra pressure on them, it appears that the problem is failure of management. Nevertheless, the older workers reported that they had conscious strategies for meeting this challenge, several claiming that they had learned these in the course of their previous employment. Some reported that when working in time-pressured jobs, such as restaurant chef, they had learned to carry out a 'tactical review' of the demands on them. This enabled them to choose the most efficient way of responding to them. Essentially, the methods of tactical review were to helicopter over the situation, and prioritise the things that needed to be done first. One older worker described how he devoted time to 'preparation' before he entered the fray of a hectic work situation, saying 'you need to know in advance what's happening and why it's happening and what the guests are expecting.' Another described a cognitive strategy she had developed for overcoming work overload which was a kind of self-timetabling. Pressure of work often caused difficulties with customers. An example is the case of the barman, on duty alone, whose bar was invaded by scores of guests coming to watch a golf final on the flat screen TV. Many had to wait a long time for service and became angry. Several of the older workers, including the barman, said that they could cope with these situations because of the social skills they had acquired over years of customer service work. They had developed conscious strategies of not responding confrontationally, but listening, observing, waiting, backing off and talking through the issue in ways that defused the customer's anger. Sometimes they contrasted this with the tendency of younger employees to get personally involved and become confrontational.</p>	

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p><u>Flexible work patterns</u></p> <p>All the older workers interviewed wanted to work reduced hours and to avoid night work, so that they could maintain a good work-life balance. One full-time employee spoke of how he valued the proximity of his employment compared with previous journeys of thirty plus miles, and how he would have preferred three days a week rather than five. As the hotel trade operates for 24 hours a day, seven days a week, the older workers' preferences brought them up against the needs of the management. It is possible that, in addition to their wish to preserve a good work-life balance, the older workers were experiencing problems with fatigue. Much of the ergonomic literature cites declining physical stamina as a characteristic of old age, and this was acknowledged by some. One older worker suggested that, after his daily cycle to work, his capacity to do some of the physical tasks his job demanded was challenged. Interviews with hotel managers and HR personnel revealed that most employers were flexible with older workers, allowing them to depart from the strict requirements of contracts which called for manual and night shift work. They were happy to do this because they appreciated that slowing down with age is accompanied by a more contemplative life style which has its own benefits to the employer. One older worker, having retired after many years of relentless work in another industry, identified the advantage of slowing down as being more willing to listen. S/he commented that slowing down a bit and taking the time to listen to people enhanced on-the-job learning and collaborative working. The more reflective approach typical of the older worker was also more conducive to health and safety.</p> <p><u>Working with Others</u></p> <p>Older workers frequently asserted that collaboration is central to the core task of providing high quality customer service. In consequence, they perceived one of the challenges of their jobs as building and maintaining effective collaboration between colleagues. Two older workers, both maintenance engineers, emphasised how crucial it was to have a network of close, friendly working relationships, both with staff in other departments in the hotel and with the external maintenance contractors on whose services they had to draw. As with the other social skills which they claimed underpinned their capacity to provide a high quality service, the older workers often attributed their commitment to teamwork as the fruit of their previous work experience.</p> <p><u>Conclusions</u></p> <p>This in-depth study reveals some important dimensions of work after the age of retirement and throws light on how older workers are dealing with the lack of specific training. Despite widespread claims in the research literature that employers are biased against older workers, this study found that a selected sub-group of older people are successfully holding down jobs in the hotel trade in fields as varied as reception, hall portering, maintenance engineering, office work, bar work, shop work, laundry work, and cleaning. Consistent with previous research, the training they have received is minimal and sometimes judged inadequate. Nevertheless, the older workers are performing successfully because they have brought a range of occupational knowledge and skills with them, acquired from previous work experience</p>	

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Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			in customer-service industries in the for-profit sector. This self-assessment was confirmed by interviews with managers and HR staff. The knowledge and skill includes understanding the business process and microeconomics of for-profit customer service; the social skills of organising their emotions, thoughts and behaviours to achieve outcomes that are valued by the organisation (especially the capacity for collaboration, self-control when dealing with difficult customers and a disposition to listen attentively, observe situations sagely and avoid taking precipitous action); strategies for dealing with pressures of work learned from previous experience in high-pressured jobs; and a capacity for self-directed learning. The older workers' experience - the fruits of their life and work experience - are enabling this group of older workers to meet the challenges of the workplace in ways that are both profitable for their employers and a source of job satisfaction for the older workers themselves.	

**Brown et al. (2006)**

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Judith Brown, Harper Gilmour, Ewan Macdonald</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Int Arch Occup Environ Health 79: 433-440</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To assess the process, causes and outcomes of ill health retirement (IHR) in teachers in Scotland. To uncover the perceptions and experience of occupational health services (OHS), access to rehabilitation and redeployment, current health, post retirement experience and predictors of re-employment.</p> <p><b>Research approach:</b> Quantitative</p> <p><b>Data collection:</b></p> <p><b>Method(s):</b> Postal survey</p> <p><b>Setting(s):</b> Not described</p> <p><b>Dates:</b> April 1998 - March 2000</p>	<p><b>Sample population:</b> Retired teachers in Scotland (767 official register)</p> <p><b>Sampling approach:</b> Random selection</p> <p><b>Inclusion/exclusion criteria:</b> Must have been a teacher and retired due to ill health.</p> <p><b>Number and characteristics of participants:</b> n = 282, 107 (38%) male, 175 (62%) female.</p> <p>Median years employed was 26 93% full time before IHR 185 (66%) had supervisory or managerial responsibility Median age of retirement was 53 Median length of illness before retirement was 2 years Cause of IHR: Mental illness 37.5% Musculoskeletal 18.4 Circulatory 14.5 Nervous system 8.2 Neoplasms 6,4 Chronic fatigue syndrome 5.7 Other 9.6</p> <p><b>Response rate (if relevant):</b> 53%</p>	<p><b>Brief description of method and process of analysis:</b> A survey was mailed to 537 teachers who had retired due to ill health. Responses were analysed with chi-square tests using SPSS 10.0. Odds ratios were calculated to give the relative chance of employment post IHR for each predictive variable. These are sex, age, dependants, job group, managerial responsibility, cause of IHR, health improvement and wanting to work again.</p> <p><b>Key findings relevant to the review:</b> 69% had contact with line manager pre-IHR. 54% found this supportive. 11% saw an occupational health (OH) advisor. 84% did not have access to OH service Of those who attended OHS, 27 (84%) found it helpful. 10% had no contact with line manager or anyone else at work prior to retirement. 9% of teachers were offered part time work and 5% were offered alternative work. Of the 9% (23 participants) who were offered part-time work prior to their retirement only 5 (22%) were actually working part-time when they retired. 48% said they would like to work again. 36% found reemployment, 28% in jobs with teaching tasks. 37% were offered rehabilitation. 3 variables were independent predictors of</p>	<p><b>Limitations identified by author:</b> Unable to ascertain whether it was choice to retire / whether participants were happy to retire.</p> <p><b>Limitations identified by review team:</b> Could be some non-response bias due to response rate. Possibility of underreporting due to sensitive nature of information that was asked.</p> <p><b>Evidence gaps/recommendations for future research:</b> Use of occupational health in teaching. Return to work practices.</p> <p><b>Source of funding:</b> Scottish Public Pensions Agency</p>

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Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			re-employment: having dependants (P=0.006), job group (P=0.028) and cause of IHR (P=0.043).	

Buxton et al. (2005)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Buxton, J. W., Singleton, N., &amp; Melzer, D.</p> <p><b>Year of publication:</b> 2005</p> <p><b>Citation:</b> The mental health of early retirees. <i>Social psychiatry and psychiatric epidemiology</i>, 40(2), 99-105.</p> <p><b>Quality rating:</b> +</p>	<p>Research aims: to compare the health status of economically active 50- to 64-year-olds with economically inactive former workers</p> <p>Research approach: Qualitative</p> <p>Data collection: Survey</p> <p>Method(s): ONS Psychiatric Morbidity Survey of Great Britain</p> <p>Setting(s): 50-64 year olds who completed the survey, all living in Great Britain</p> <p>Dates: Survey data collected in 2000</p>	<p>Sample population: 1,875 people living in Great Britain in 2000, aged between 50 and 64</p> <p>Sampling approach: Stratified sampling</p> <p>Inclusion/exclusion criteria: Age was the only inclusion criteria as comparisons between those in and out of the labour market was being assessed.</p> <p>Number and characteristics of participants: 1,875 survey respondents aged 50-64</p> <p>Response rate (if relevant): 67.1%</p>	<p>Brief description of method and process of analysis: STATA used for the analysis. Models estimated using logistic regression, estimating the odds ratios of being early retired to being in work, for common mental disorders and physical complaints. Odds ratios reported for univariate and multivariate associations. Models shown separately for men and women.</p> <p>Key findings relevant to the review:</p> <p>Health status</p> <p>The majority of men in the labour force reported that they were free of physical complaints. Over 70% of early retirees reported at least one complaint and 45% reported their general health to be fair or poor. A third of early retired men reported that long-term sickness or disability was the main reason for not working. Men in the labour force had less difficulty with daily activities than early retirees. Only 13% of men in the labour force had difficulty with any activity of daily living, while 45% of the early retirees had difficulty with at least one activity, and 31% had difficulty with at least two activities. The health of women in the labour force was similar to that of men; 86% said they were in good to excellent health and 52% reported having no long-standing complaints. However, about 30% of early-retired women reported their general health as fair or poor, while only one in seven gave long-term sickness or disability as the main reason for not working. Early retired women also had more difficulty with daily activities. Only 15% of those working had a difficulty with at least one daily activity, but a third of early retired women reported a difficulty. Numerous health problems were all significantly more common in early retired men than in those in the labour force, but only arthritis and rheumatism, heart and circulatory system complaints and digestive system complaints were significantly more common in early retired women.</p> <p>Mental health status</p> <p>Early retired men had a markedly higher prevalence of any neurotic disorder than did those in the labour force (22.2% vs 8.2%, <math>p &lt; 0.001</math>). In contrast, the respective figures for women</p>	<p>Limitations identified by author: N/A</p> <p>Limitations identified by review team: Data somewhat outdated (2000). Some potential confounding factors (physical problems) acknowledged but not controlled for. Controls in place for age and the fact that as only one person per household responded, large households were under-represented.</p> <p>Evidence gaps/recommendations for future research: Update on the study for longitudinal data.</p> <p>Source of funding: NHS Research and Development programme, Wellcome Trust, PPP Medical Trust, and the US National Institute on Aging.</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>were 18.2% in early retirees and 16.9 % for those in work (difference not significant).</p> <p>Regression analysis</p> <p>In a model of sociodemographic variables, tenure was the most significant variable for men and women and was used as a measure of social position. In multivariate analysis, for men, the odds of being early retired were associated with age, tenure, mental health and physical health variables. In fully adjusted regression models for men, having a generalised anxiety disorder was associated with an odds ratio of 3.1 (95% CI 1.2-7.8) for being early retired, and having a depressive disorder was associated with an even higher odds ratio of 4.3 (95 % CI 1.7-11.0). The odds of being early retired were also greater in those with arthritis and rheumatism, back and neck problems, other bone and joint problems and heart and circulatory system complaints. For women, being early retired was associated with age, tenure and some physical complaints. None of the three most prevalent mental disorders had a significant association with being early retired. The odds of being early retired increased with age and were smaller in those who owned a house with a mortgage. Women were also more likely to be early retired if they had back and neck problems and heart and circulatory system problems. In models including a count of physical diseases, rather than individual complaints, having two or more conditions was associated with an odds ratio of 5.7 (95% CI 3.4-9.4) for men and 2.4 (95 % CI 1.5-3.9) for women.</p> <p>Discussion</p> <p>The analyses show that early retiree men and women both reported poorer general health, more complaints and more difficulties with daily activities. However, only a minority considered a health problem to be their main reason for not working. The most important finding, however, was that early retired men were very much more likely to have neurotic disorders than those remaining in the labour force. In women, odds ratios for neurotic disorders did not reach statistical significance, although, association of depression in the early retired is near significance.</p>	

Cameron & Waldegraven (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Cameron, M. P., &amp; Koopman-Boyden P. Year of publication: 2010 <b>Citation:</b> Cameron, M. P., &amp; Waldegrave, C. (2010). Work, Retirement Intentions, and Wellbeing among New Zealanders in Midlife. In Waldegrave C. and Koopman-Boyden P. (eds). <i>Midlife New Zealanders Aged 40-64 in 2008: Enhancing Wellbeing in an Ageing Society</i>, 57-73. Family Centre Social Policy Research Unit, Lower Hutt, Wellington and the Population Studies Centre, University of Waikato, Hamilton</p> <p><b>Quality rating:</b> +</p>	<p><b>Research aims:</b> Summarises the lifetime work experiences of New Zealanders aged 40-64 years, presents analyses of their associations with 'satisfaction with work' and with overall wellbeing, and a range of other factors and compares results with those from an earlier survey of New Zealanders aged 65-84. <b>Research approach:</b> Survey <b>Data collection:</b> New Zealand EWAS project <b>Method(s):</b> A random sample of landline telephone numbers over the whole of New Zealand was provided by Yellow Pages Data Solutions (www.yellowpagesgroup.co.nz) from the electronic white pages, and potential respondents were phoned using Computer Assisted Telephone Interviewing (CATI). Descriptive statistics employed to quantify associations in the data. Also compares data with a second survey (p values of 0.05 and f statistics used for correlations) <b>Setting(s):</b> Older workers in New Zealand (aged 40-64) compared with a separate survey of respondents aged, 64-84. <b>Dates:</b> 2007-2008</p>	<p><b>Sample population:</b> New Zealanders aged 40+ in the workforce <b>Sampling approach:</b> A random sample of landline telephone numbers over the whole of New Zealand was provided by Yellow Pages Data Solutions (www.yellowpagesgroup.co.nz) from the electronic white pages, and potential respondents were phoned using Computer Assisted Telephone Interviewing (CATI). Inclusion/ exclusion criteria: Workers aged 40_ <b>Number and characteristics of participants:</b> 1,958 <b>Response rate</b> (if relevant): 27%</p>	<p><b>Brief description of method and process of analysis:</b> The data used as indicators for work in the EWAS survey were derived from questions about three phases of the working lives of respondents: (i) their first main job; (ii) their most recent main job; and (iii) their retirement intentions. Data were also collected about significant absences from the workforce (of more than six months duration), and retirement savings. A subjective measure of satisfaction with work was the dichotomous response (satisfied/not satisfied) to a question of whether the respondent was satisfied with work. There were no objective measures of work satisfaction included in the survey. Two measurements of overall wellbeing were used: the wellbeing question from The World Values Survey (WVS), and the World Health Organisation's Quality of Life indicator (WHOQOL) The data were re-weighted to make the results more representative of the New Zealand population aged 40-64. <b>Key findings relevant to the review:</b> <u>'Early Retirement' among Midlife New Zealanders</u> As would be expected with a midlife cohort, retirement was less common than among the older group. Among the 40-64 year-old New Zealanders surveyed, 5.9% responded that they were already retired. Women were significantly more likely to be retired (2.1% vs. 3.9%). Rates of early retirement increased markedly with age. From 1.1% of those aged 40 to 44, to 4.3% of those aged 50 to 54, to 19.4% of those aged 60 to 64. Lower education was significantly associated with early retirement, which stands in contrast with the older sample where the age at retirement was not associated with education. The main reasons given for early retirement were many and varied, with notable differences from those reported by those aged 65 to 84. The most cited reasons for retirement among midlife</p>	<p><b>Limitations identified by author:</b> None <b>Limitations identified by review team:</b> One relatively new superannuation scheme (KiwiSave) brought in as this study was being conducted; more people are now on this scheme so it may have changed some of the financial data. <b>Evidence gaps/recommendations for future research:</b> N/A <b>Source of funding:</b> Family Centre Social Policy Research Unit, Lower Hutt, Wellington and the Population Studies Centre, University of Waikato, Hamilton</p>

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			<p>New Zealanders were poor health (35.6%), 'wanted to do other things' (23.8%), and 'don't need to work' (10.4%), family responsibilities (6.2%), and disablement or injury (5.9%). This is quite different from the responses by older New Zealanders, where most retired because they 'wanted to do other things' (27.5%), or they 'reached official retirement age' (26.3%). Of those who were retired, 27.7% indicated that they had undertaken some form of work since their retirement. Age, gender, and education were not significantly associated with the decision to work after retirement; unlike the older sample where work after retirement was significantly more likely to be undertaken by the higher educated. Work after retirement among midlife New Zealanders included a narrower range of activities than did work after retirement for older New Zealanders. Some form of voluntary work was engaged in by 15.3% of the retired midlife New Zealanders, with the older cohorts engaging in more voluntary work than the younger cohorts.</p> <p><u>Retirement Intentions and Financial Preparation for Retirement among Midlife New Zealanders</u></p> <p>The mean age at which the midlife New Zealanders intended to retire was 63.6 years. The intended age of retirement increased significantly with age, from 61.6 years among those aged 40-44 years, to 63.3 years among those aged 45-49, 64.1 years among those aged 50-54, 64.7 years among those aged 55-59, and 66.4 years among those aged 60-64. Intended age of retirement also varied significantly by education level, with those who had only primary school education expecting to retire latest (at a mean 65.1 years), and those with secondary school education expecting to retire the earliest (at 62.6 years). When asked whether they were looking forward to their retirement or not, 39.3% of midlife New Zealanders responded that they were. There were no differences between genders or by education, but older cohorts were significantly more likely to be looking forward to their retirement. Many</p>	

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			<p>midlife New Zealanders were preparing financially for their retirement - of those surveyed, two-thirds had some form of private retirement savings. There were no significant differences in the probability of having some retirement savings by age cohort, and men were slightly more likely to have retirement savings than women. However, the higher educated were significantly more likely to have retirement savings than the lower educated; of those with primary school education only 44.6% reported some retirement savings, compared with 66.3% of those with secondary school education, 67.1% of those with a vocational qualification, and 77.8% of those with a university qualification.<sup>61</sup> This significant difference presumably reflects higher levels of disposable income available for saving among the higher educated..</p> <p><u>Satisfaction with Work</u></p> <p>Overall levels of satisfaction with work were relatively high, with 87.4% of respondents reporting they were satisfied with work (and 12.6% reporting they were dissatisfied with work). However, the level of satisfaction was much lower among midlife New Zealanders than among those aged 65 to 84, where 97.2% were satisfied with work. There was no difference in satisfaction with work by gender or education. Reported satisfaction with work among midlife New Zealanders was significantly associated with their current or most recent type of job, with satisfaction highest among full-time unpaid family/farm business workers (94.9% satisfied) and the fully retired (89.6%), and lowest among part-time unpaid family/farm business workers (80.4%), homemakers (82.8%), and the 'other' category (70.0%). Somewhat surprisingly, there were no significant relationships between retirement intentions and satisfaction with work. Those unsatisfied with work were no more likely to be intending to retire early or to be looking forward to their retirement, than those who were satisfied with work.</p>	

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			<p><u>Conclusions</u></p> <p>Overall the study found a positive relationship (<math>p &lt; 0.001</math>) and between higher levels of wellbeing and:</p> <ul style="list-style-type: none"> <li>• Health: Experiencing good physical and mental health;</li> <li>• Education: More likely to have higher qualifications;</li> <li>• Work: In current or recent employment;</li> <li>• Economic Living Standard: More likely to have a higher personal income, higher asset wealth, not going without essential items and services, and owned their own home.</li> </ul> <p>There was a negative association with those who considered they had inadequate income to afford necessities.</p> <p>There were also positive relationships (<math>p &lt; 0.001</math>) between wellbeing and participating in more leisure and recreational activities; living with a partner; experiencing safety around the home and participating more in community.</p> <p>The study found a negative relationship (<math>p &lt; 0.01</math>) for men between higher levels of wellbeing and more periods outside the workforce.</p> <p>The researchers concluded that educational improvements in the younger cohorts should be continued and further developed. Furthermore, ongoing up-skilling should be encouraged during midlife, ensuring continued employment, and allowing those with little 'first-time' education to pursue more fulfilling career paths. Encouraging education through the midlife years will also allow for a higher level of wellbeing in older age.</p>	

Carmichael et al. (2013)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Carmichael, F., Hulme, C., &amp; Porcellato, L.</p> <p><b>Year of publication:</b> 2013</p> <p><b>Citation:</b> Older age and ill-health: links to work and worklessness. <i>International Journal of Workplace Health Management</i>, 6(1), 54-65.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research aims:</b> The purpose of this paper is to provide insights on the relationship between health and employment in older age.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> Semi Structured Interviews, statistical analysis of British Household Panel Survey, waves 1-17</p> <p><b>Setting(s):</b> Men and women between the ages of 50 and 68 recruited from the North West of England</p> <p><b>Dates:</b> Interviews conducted in 2006/07</p>	<p><b>Sample population:</b> 56</p> <p><b>Sampling approach:</b> Participants recruited by a flyer distributed at venues including sports centres, offices of charities, employment agencies and over 50s groups.</p> <p><b>Inclusion/exclusion criteria:</b> Not Reported</p> <p><b>Number and characteristics of participants:</b> 56, men and women, aged 50-68, recruited from the North West of England</p> <p><b>Response rate (if relevant):</b> N/A (participants all expressed interest in participating)</p>	<p><b>Brief description of method and process of analysis:</b> Semi-structured interviews were carried out, framed by a 'life-event calendar' to drive the lines of inquiry in the interview. Respondents were asked to report their current health status by selecting between health categories of excellent, very good, good, fair and fairly poor to poor. Participants were asked a series of open-ended questions about their experiences in the labour market, the influences on their participation over time and their views on current anti-age discrimination policy.</p> <p><b>Key findings relevant to the review:</b></p> <p>Health was one of the most commonly cited reasons given for a change in employment. Nine interviewees had retired due to health problems, 11 said their employment had been adversely affected by ill-health. These figures can be contextualised with reference to BHPs respondents who reported that they had left a job in the previous year prior. Among those aged 50-64, 8.17% had left a job for health reasons compared with only 3.19% of those aged 19-49. Employment participation rates are significantly lower for all respondents reporting ill-health and lower than average subjective well-being. The negative relationship between ill-health and employment participation is strengthened by age; older respondents with equivalent health are significantly less likely to be employed. Health was pivotal in individuals' decisions to remain in or return to the labour market. Mental health issues disproportionately appeared to affect men. (three females and 12 men spoke about work-related stress). Work was perceived to have an intrinsic value in people's lives, often defining who they were.</p> <p>Overall this evidence shows that the relationship between employment status and health is complex and individualised and may exhibit both positive and negative dimensions. There are also potential feedback effects from health to work. Whether the effect of ill-health on employment is accentuated by age is difficult to discern from the responses of the interviewees since all the sample members were 50 or over. Overall, the findings confirm that ill-health is an important determinant of an older</p>	<p><b>Limitations identified by author:</b> N/A</p> <p><b>Limitations identified by review team:</b> Narrow geographical scope, which may have a knock on effects on professions represented, therefore not particularly representative. Sampling method also participant driven, could be more aleatory.</p> <p><b>Evidence gaps/recommendations for future research:</b> Greater spread of interviews drawn from a wider area, random sampling to ensure range of professions and demographics represented</p> <p><b>Source of funding:</b> Part-funded by the European Social Fund. Data from the British Household Survey made available and produced by the Institute for Social and Economic Research (ISER), sponsored by the Economic and Social Research Council (ESRC).</p>

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			<p>person's labour supply and the type of work they do. Ill-health can induce withdrawals from employment manifested in redundancy, job loss and early retirement. The negative impact of ill-health on employment may also be accentuated by age. For some of the participants, ill-health was a direct consequence of work or lack of work because of disease, accident or mental health issues including stress. In the interviews, the roles of organisational and technological change (lack of), control at work and managerial style were all found to impact on mental health. The effects of worklessness on health and well-being in this study were generally perceived to be negative. For some of the interviewees who suffered health problems because of the inflexibility of the organisation or workplace, the only option was to leave their employment. One implication is that the participation rates of older people could be raised through the introduction of more flexible work practices alongside planned changes to the SPA. The evidence of this paper suggests that the sizeable numbers of older people suffering from health problems will face stark choices in the future.</p>	

Cebulla et al. (2007)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Cebulla, A., Butt, S and Lyon, N</p> <p><b>Year of publication:</b> 2007</p> <p><b>Citation:</b> Cebulla, A., Butt, S and Lyon, N. (2007). Working beyond the state pension age in the United Kingdom: the role of working time flexibility and the effects on the home. <i>Ageing and society</i>, 27, 849-867.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <p>The paper explores the contemporary working and living conditions of individuals who have remained in work after they have reached the state pension age in the UK and questions the conventional focus on the workplace at the expense of exploring relationships in the home.</p> <p>The report study explored the extent to which the current experiences of these ‘oldest workers’ were similar or different to those of workers who were nearing but had not yet reached state pension age.</p> <p>Two pertinent issues were discussed:</p> <p>The extent to which state pension age workers already take advantage of flexible working options, their most common types, and their role in facilitating work in older age</p>	<p><b>Sample population:</b> NA</p> <p><b>Sampling approach:</b></p> <p>The report relied on four national datasets representative of the adult population of England and Great Britain, namely the Labour Force Survey (representative sample survey of UK household members aged 16 or more, primarily concerned with establishing the economic activities and employment status of respondents and collecting detailed information about workplace conditions as well as respondent’s personal characteristics. The survey asks respondents about their take up of flexible work options at the workplace. The analysis used 2005 survey which included 1,200 individuals over state pension age), the Workplace Employee Relations Survey (collects details about the workplace conditions of over 22,000 employees from nearly 1000 businesses in GB, including over 200 individuals aged over SPA. Participating employees are asked about working hours, job satisfaction, influence of their job, training and skills, employee representation and their working arrangements, and are asked about their understanding about the provision of flexible made by their employer. 2004 survey was used) , the British Household Panel Study (annual panel survey of UK household, while looking at changing household compositions and economic, social and political activities and attitudes of UK households, the survey also collects information about the division of labour in multi-person households. The 2004 survey</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>Two comparison groups were made from the cross-sectional data. First group was composed of older workers within five years of SPA (men 60-64, women 55-59). The second group consisted of older workers no older than 5 years more than the SPA (men 65-69 and women 60-64). In some instances in order to increase the number of post SPA workers it was necessary to discard the upper age limits for the post SPA workers.</p> <p>Male and female workers were analysed separately wherever the data allowed. Work was defined as at least 5 hours of paid employment in the previous week</p> <p><b>Key findings relevant to the review:</b></p> <p>In 2005 51% of those aged up to 5 years less than SPA were in employment compared to just 8% of those aged up to 5 years more than the SPA. Sharp decline in employment rates around SPA, but figures hide differential employment rates between men and women. Pre SPA employment rate for women (53%) higher for men (48%). Post SPA identical (8%). Lower marriage rates among post SPA workers (and higher widowhood) and higher proportion of people with long-term illness. Pre-SPA women less likely to be married</p>	<p><b>Limitations identified by author:</b></p> <p>Structured quantitative surveys such as the LFS and WERS are imperfect tools for capturing employers’ flexible working arrangements, they fail to detect the less visible but nonetheless equally meaningful informal ad-hoc and personalised agreements on flexible working between employers and employees.</p> <p><b>Limitations identified by review team:</b></p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>Good reason to explore more closely the reasons for the limited appeal to older workers of some form of flexible working with currently low take-up, in particular of a more effective use of these could be shown to improve older workers employment opportunities.</p> <p><b>Source of funding:</b></p> <p>Nuffield Foundation UK</p>

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	<p>Second, the extent to which working beyond the state pension age affects domestic relationships.</p> <p><b>Research approach:</b> Report presents the analyses of four major national social surveys.</p> <p><b>Data collection:</b> Looking at survey results</p> <p><b>Method(s):</b> Not reported</p> <p><b>Setting(s):</b> Not applicable</p> <p><b>Dates:</b> See sampling approach for years of surveys used.</p>	<p>data was used) and The European Social Survey (holds information about employed and self-employed men and women in 22 countries. Present analysis was restricted to UK data from the 2004 survey, smallest sample with just over 70 men and women working beyond state pension age. It asks respondents specifically about sharing household chores and the extent of agreement and disagreement over such tasks among couples).</p> <p><b>Inclusion/exclusion criteria:</b> NR</p> <p><b>Number and characteristics of participants:</b> See above for survey descriptions</p> <p><b>Response rate (if relevant):</b> NR</p>	<p>or co-habiting than men (79% vs 87%), both see a drop post SPA. Fewer women than men were educated to degree level. Proportionally fewer women reported a long-term illness than men, but for both the proportion that did so was greater among the post-SPA group. Fewer women than men had professional or managerial occupations held skilled trade positions. Markedly fewer women (9%) than men (27%) were self-employed pre-SPA, self-employed women were more prevalent (14%) post SPA the percentage remained lower than men (44%). Part-time increased for both post SPA.</p> <p>A significantly greater proportion of post SPA men and women travel short distances to work than pre-SPA workers, which may indicate the importance of workplace locations to post SPA employment decisions. Job-opportunities many need to be closer to the home considered for post SPA employment, but beyond this and the greater use of part-time working.</p> <p>Widely available forms of flexible work were flexi-time, job-sharing, home working and changed normal work patterns, but they were rarely drawn upon older workers. Among the women the proportion that had flexible work arrangements bar part time working was lower among post-SPA than among pre-SPA workers.</p>	

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			<p>15% post-SPA men and 23% post SPA women reported having agreed a flexible work pattern contractually with their employer. WERS indicated a much higher proportion of workers in establishments with flexible working options than with personally arranged working-time flexibility even in the absence of reduced hours. No evidence of a higher take-up of flexible working post SPA at least in the LFS. Older workers were more likely to work in establishments offering flexible working practices than they were to take up these options themselves. Flexi-time was by far the most frequent option available to about 70% post SPA employees, and the most common one that was taken up. Post SPA employees were significantly more likely to be employed in an establishment than offered in principle any one of the working time flexibilities except for the opportunity to increase hours or to change work pattern. The statistics hint at the importance of employer flexibility as well as employee flexibility for accommodating older workers in the workplace.</p>	

## Clendon J and Walker L (2013)

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<p><b>Authors:</b> Clendon, J., &amp; Walker, L.</p> <p><b>Year of publication:</b> 2013</p> <p><b>Citation:</b> 'Nurses aged over 50 years and their experiences of shift work', <i>Journal of Nursing Management</i>, 21:903-913</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> Aim is to focus on the experiences of nurses born before 1960 who undertake shift work in order to understand more about their perceptions of how shift work affects their health and well-being, and which kinds of shift work are more detrimental to a good health measure.</p> <p><b>Research approach:</b> Anonymous online survey administered to members of New Zealand Nurses Organisation (NZNO).</p> <p><b>Data collection:</b> Online survey</p> <p><b>Method(s):</b> Online survey, quantitative and qualitative analysis of data. Descriptive statistics used for quant. analysis, and STATISTICA 8 software used. Free text responses to survey were codes thematically, using NVIVO 9 software. Some data comparison with NZNO employment survey.</p> <p><b>Setting(s):</b> Not stated if recruited from urban/ rural or mixed setting. Population demographics clearly described: registered nurses - n=2781; enrolled nurses n - 263; midwives - n=23; nurse practitioners - n=19. Even split across five age bands (50-55, 56-60, 61-65,</p>	<p><b>Sample population:</b> 3273 responses from 5683 invites</p> <p><b>Sampling approach:</b> Participants were deemed eligible if member of NZNO, and aged 50+ in February 2012. Invitations sent by email link, requiring participants to hold an active email address, available on NZNO databases at the time.</p> <p><b>Inclusion/exclusion criteria:</b> The data reported only takes into account those nurses within the sample who work shift work in order to address the research question, although the study recognises that increasingly nurses are making use of flexi-time and causal contract options.</p> <p><b>Number and characteristics of participants:</b> Registered nurses - n=2781; enrolled nurses n - 263; midwives - n=23; nurse practitioners - n=19. Even numbers across five age</p>	<p><b>Brief description of method and process of analysis:</b> Respondents asked for perception of physical and mental effects of shift work (able to select more than 1 option). Shift work examined by marital status, by FT or PT work status. EQ5D validated health score used as a measure. Respondents also allowed to give free text responses about impact of shift work on health and social functioning. These responses were coded using NVIVO 9, analysed for common themes and patterns.</p> <p><b>Key findings relevant to the review:</b> Even divide of responses on effects of shift work on mental/ physical health. Some felt shifts worked well for them, others did not. Ability to select multiple options meant that some who thought shifts suited them may have also felt these patterns of work to be detrimental to their health. Those respondents with partners were more likely to cope with shift work. Paper suggests this may be down to single people forming social relationships within wider circles, maintenance of which can be disrupted by shift work. Single respondents found shift work to suit them, but were worried that their tiredness would lead to mistakes. Both single and partnered thought shift work</p>	<p><b>Limitations identified by author:</b> Only those nurses who held valid e-mail addresses were surveyed which potentially biases the sample. Also, the authors note some unrepresentativeness coming from people choosing to/ not to respond to surveys. Those that reported more extreme views also noted to potentially not have been representative of the whole.</p> <p><b>Limitations identified by review team:</b> Agreed with above potential bias due to e-mail invitations. The research team notes the possibility that those nurses who have adapted better to shift work are most likely to make up the sample.</p> <p><b>Evidence gaps/recommendations for future research:</b> Recommended that managers consider scheduling practices to take into account circadian rhythms. They also recommend further research into 'self-</p>

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	<p>66-70, 70+ years). Gender split clearly laid out by age band as well as shift patterns. The data reported only takes into account those nurses within the sample who work shift work in order to address the research question, although the study recognises that increasingly nurses are making use of flexi-time and casual contract options.</p> <p><b>Dates:</b> Feb and March 2012 for web-based survey.</p>	<p>bands. Gender breakdown by age band: 50-55 = 989f, 55m; 56-60 = 1112f, 58m; 61-65 = 705f, 22m; 66-70 = 170f, 7m; 70+ 57f, 1m. Notes low response rate for m given m population of entire nurse workforce. 80% of entire sample had been in health workforce for over 20 years, 47% PT and 45% FT. 46.45%, n=1507 worked shifts/ flexible hours, 63% of these worked 8-hour shifts, 59 worked scheduled and rotating shifts</p> <p><b>Response rate (if relevant):</b> 58%.</p>	<p>had neg. impact on health. PT workers indicated coping better with shift work than FT workers, but would rather not work shifts.</p> <p>In qualitative analysis, most common comments on how shift work impacted social/ family relationships were respondent's ability to socialise with friends, take part in sports activities, or night-classes/ activities involving long-term commitment, also on long-term physical and mental health, fatigue and sleep disruption being majority cited.</p> <p>Self-reported quality of life in relation to shift work was assessed using paired two-tailed t-tests and while there was some evidence of association, there was no statistically significant relationship between those working regular hours and those working scheduled and rotating shifts or permanent night shift in terms of health-related quality of life, levels of pain, anxiety or daily living (P = 0.07).</p> <p>Employer rostering practices - fixed schedule can be easier to cope with than scheduled and rotating rotas which work to ensure maximisation of staff availability. Key finding for the report is that rotating shift patterns met with 'substantial struggles' for those respondents affected by them. This type of schedule is noted to have been more widely implemented in NZ recently. Scheduling practices are</p>	<p>reported health-related quality of life of nurses ages over 50 years who work shift work.'</p> <p><b>Source of funding:</b> New Zealand Nurses Organisation</p>

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			<p>mentioned in the 'NZNO multi-employer collective agreement (MECA)' stating that the employer must do all within her/his power to prevent harm to health of employees, but there is no mention of maintaining scheduling around circadian rhythms.</p> <p>Ability to cope with shift work noted, less ability to cope with age, various coping mechanisms developed with experience to cope with shifts mentioned. Some had been doing shift work for long periods of time, and accepted it as part of their everyday lives, although others resented this.</p> <p>Majority of findings link to existing literature. Mixed evidence surrounding propensity for managing shift work and age. Some reports suggest more experience leads to increased ability to manage. Some say no link between age and recovery time. However this study does show women to experience decreasing intolerance of shift work as they get older.</p>	

**Cobb-Clark D & Stillman S (2009)**

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Cobb-Clark, D.A. and Stillman, S.</p> <p><b>Year:</b> 2009</p> <p><b>Citation:</b> Cobb-Clark, D.A. and Stillman, S. (2009). The retirement expectations of middle-aged Australians. <i>The Economic Record</i>, 85, 146-163.</p> <p><b>Country of study:</b> Australia</p> <p><b>Aim of study:</b> Using HILDA</p>	<p><b>Research aims/objectives</b> The goal was to assess the factors driving individuals' subgroup membership and second to develop a deeper understanding of the retirement plans of individuals in each subgroup.</p> <p>The report examined the determinants of retirement expectations in Australia and compared them to international evidence.</p> <p><b>Research questions/hypotheses</b> Do those who respond to 'do not know' appear to face greater uncertainty? Do those who 'never' intend to retire expect to be working because they want to or because they feel they cannot afford to stop? How do changes in circumstances affect individuals' retirement expectations?</p>	<p><b>Sample characteristics, including population demographics</b> HILDA is a longitudinal survey of Australian households encompassing approximately 13,000 individual respondents living in more than 7000 households.</p> <p><b>Selected population:</b> The authors used the complexity in individuals' responses to divide the sample into 4 subgroups with retirement plans that could be interpreted - representing 92% of the initial sample</p> <p><b>Excluded population/s:</b> The analysis</p>	<p><b>Method of analysis:</b> As many HILDA respondents found it hard to articulate an expected retirement age (reporting that they do not know, or that they never intend to retire), the authors used the complexity in individuals' responses to divide the sample into 4 subgroups with retirement plans that can be interpreted</p> <p>The authors used the variation in responses across waves to classify individuals into four subgroups: (i) those with uncertain plans (ie those reporting 'do not know' in both waves 1 and 3); (ii) those who do not plan to retire at all (ie those reporting 'never' in both waves 1 and 3); (iii) those who have delayed retirement planning (ie those reporting 'do not know' in wave 1 and something else in wave 3); and (iv) those who have reported a numeric expected age in both waves 1 and 3, who are referred to as individuals with 'standard retirement plans'.</p> <p><b>Report results for all relevant outcomes:</b> Approximately 2/3 of men and more than 1/2 of women reported a numeric expected retirement age, referred to as having a standard retirement plan. More than 20% of middle-aged Australians seemed to have delayed their retirement planning and approximately 10% either did not know when they expect to retire or expected to never retire.</p> <p>Uncertainty in retirement planning was associated with more uncertain employment conditions, while those who anticipated working forever appeared to do so out of concerns about the adequacy of their retirement incomes rather than out of increased job satisfaction or a heightened desire to remain employed.</p> <p>Men altered their retirement plans in response to labour market shocks, while women were more sensitive to their own and partners' health changes. These results point to a great deal of uncertainty in women's retirement planning, which is perhaps not surprising given the complexity of women's labour supply decisions more generally.</p> <p>In wave 1 approximately, 55% of men and women were under the age of 45 and consequently are not asked any of the retirement questions. Overall, one in four men (26.2%) was over the age of 45 and not yet retired, while 18.2% of men indicated that</p>	<p><b>Limitations identified by author:</b> HILDA is a representative sample of Australians aged 15 and older, thus the authors observed relatively few individuals retiring during the existing waves of the survey, making it difficult to directly study retirement behaviour.</p> <p>A fuller understanding of the effect of age on retirement planning will require more waves of the HILDA in which the authors can begin to observe the completed</p>

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<p>(survey) data to examine the retirement plans of middle-aged Australians.</p> <p>Quality rating: +</p>	<p><b>Source population/s:</b> <b>Country of study</b></p> <p>Australia</p> <p><b>Setting</b></p> <p>NR</p> <p><b>Location</b> (urban, rural)</p> <p>NR</p>	<p>focussed on men aged 45-55 and women aged 45-50 in the first year of HILDA to avoid the selection bias associated with early retirement. Individuals who either did not respond in both waves 1 and 3, who report that they never worked, or who report being retired in either wave were excluded from the sample. Also excluded were: Aboriginal or Torres Strait Islanders because although retirement planning was likely to differ for these individuals, they were not numerous enough to examine these differences, and individuals with missing retirement expectations or work experience data. These</p>	<p>they had retired from the labour force. Retirement was somewhat more common among women, with 21.2% reporting they were retired, while 2.7% of women report that they had never worked.</p> <p>Among men aged 45-49, 6.1% reported being retired. Similarly, 11.3% of men aged 50-54 reported being retired, while retirement rates reached 19.9% for men aged 55-59. For women at the same ages were 8.8, 17.6 and 41.7%, respectively.</p> <p>The results demonstrated that expected retirement ages were highly clustered at five-year age intervals, that is, at ages 55, 60 and 65. A small proportion of individuals also report expecting to retire at ages 50 and 70 and a few people report expecting to retire at intermediate ages. Some non-retired men (8%) and women (5%) reported that they 'never' expect to retire, while in wave 1 as many as one in five men and one in three women reported that they 'do not know' when they expect to retire. In contrast, the ages at which individuals report having retired are distributed much more continuously. Middle aged men reported wanting to retire at age 57.5, while women would have liked to have retired somewhat earlier at age 55.4. More than one in three middle-aged Australians anticipated retiring when they would like, while approximately 60% expected to retire later than they desire. Less than 5% expected to retire earlier than they would like suggesting that few people saw labour market or health factors as a constraint on their continued employment.</p> <p>Retirement expectations, on the other hand, were strongly related to one's current labour market position. Middle-aged Australians who were either not employed or self-employed were substantially less likely to have formed expectations about the age at which they would leave the labour market. For example, the self-employed were significantly more likely to report uncertainty about their expected retirement age (<math>p &lt; 0.1</math>) and more likely to have failed to plan for retirement or never plan to retire (<math>p &lt; 0.05</math>).</p> <p>Thus, the authors conclude that anticipating the age at which one will leave the labour market may be easier for workers in jobs with well-defined superannuation benefits and standard retirement ages. Retirement expectations were also related to lifelong labour market attachment. Individuals with 10 years of additional work experience were six percentage points more likely to have standard retirement plans (<math>p &lt; 0.05</math>) and five percentage points less likely to have delayed retirement plans (<math>p &lt; 0.1</math>).</p> <p>Retirement planning was not significantly related to one's job satisfaction. Individuals</p>	<p>retirement behaviour of more cohorts of Australians.</p> <p>The analysis here considers broad forms of retirement plans, but does not specifically address the question of whether one's health status is related to an expectation of retiring at a younger or an older age.</p> <p><b>Limitations identified by review team:</b></p> <p>The analysis does not seem to take into account different sectors/type of work</p> <p>The questions about retirement planning are fairly</p>

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		<p>restrictions result in a sample of 840 men and 462 women.</p>	<p>who were uncertain about their retirement plans or who never expected to retire were not significantly happier in their jobs than were the majority of middle aged Australians who are forming standard retirement plans. However, the level of satisfaction with ones finances was lower among these individuals than among those planning to retire at standard ages. Although those expecting to never retire were significantly more satisfied with their health, those who have delayed their retirement planning have significantly lower levels of health satisfaction, as well as lower life satisfaction, more generally.</p> <p>Results indicated that men’s retirement plans were more sensitive to labour market shocks, while women appeared to alter their expectations regarding retirement in response to negative health shocks that they - or their partners - had experienced.</p> <p>Specifically, men who were fired or made redundant in this period responded by increasing their expected retirement age by 1.1 years on average.</p>	<p>subjective.</p> <p><b>Source of funding:</b></p> <p>NR</p>

## Crawford et al. (2010)

Review Details	Review search parameters	Review population and setting	Outcomes and methods of analysis	Results	Notes by review team
<p><b>Authors:</b> Crawford, J. O., Graveling, R. A., Cowie, H. A., &amp; Dixon, K.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> The health safety and health promotion needs of older workers. Occupational Medicine, 60(3), 184-192</p> <p><b>Review Design:</b> Meta-analysis</p> <p><b>Main research questions:</b> What are the health, safety and health promotion</p>	<p><b>Databases and websites searched:</b> ASSIA, Barbour Index, CINAHL, Cochrane Central Register of Controlled Trials Cochrane Database of Systematic Reviews, Database of Abstracts of Reviews of Effectiveness, EMBASE, Environline, Ergonomics Online, MEDLINE, PsycINFO, Scisearch, SIGLE, Sociological Abstracts, Social Science Citation Index, Social Policy and Practice, EBESCO.</p>	<p><b>Included populations:</b> Combination of reviews and data analyses</p> <p><b>Missing information:</b> N/A, succinct evidence tables.</p> <p><b>Inclusion/exclusion criteria:</b> Participants aged 50 years and over, employed, economically active</p> <p><b>Excluded populations:</b> Participants aged less than 50 years, economically inactive</p> <p><b>Screening and data extraction</b> An initial screening process was carried out using title and abstract against the inclusion criteria. A further five papers were identified as possibly relevant from the references</p>	<p><b>Outcomes measures:</b> Changes in physical capacity, strength and endurance, heat exposure, occupational injury, interventions for occupational health, Interventions for health promotion</p> <p><b>Method of analysis:</b> Papers grouped around each outcome measure and study design/research type noted. Each study also given a quality rating based on strength of evidence.</p>	<p><u>Physical change with age</u> Physical and mental changes associated with ageing, include a reduction in aerobic capacity and oxygen uptake, an increase in BMI, and a reduction in muscle strength; do not necessarily have a workplace effect. Some maintenance of aerobic and muscular capacity is possible but no individual, regardless of age, can work to 100% of capacity all the time.</p> <p><u>Physical capacity</u> Where individuals are no longer able to carry out job demands, it is important to establish whether this is because the job itself is too demanding, or whether it is down to the individual. Objective assessment is necessary to tell whether the job demands are too great. Consideration of the whole workforce is important; ergonomic designs need to be developed that allow the majority to continue working. Changes which may alleviate work demands include ensuring recovery time between tasks is adequate, that a risk assessment has been carried out, that risk reduction measures have been taken, and that there is a good reporting route for individuals who have identified problems.</p> <p><u>Shift work</u> Working over 60 hours per week in a physically demanding environment has been found to increase the risk of adverse outcomes in older workers. It is recommended that if shift work is necessary, shifts are designed using good ergonomic criteria, as well as the following recommendations: limitation or cessation of night work for workers aged over 45, give older workers priority to transfer to day work and a choice of preferred shift, reduce workload, shorten working hours and/or increase rest periods, arrange more frequent health checks, give proper counselling and training on coping strategies concerning sleep, diet, stress management and exercise. Noise reduction measures can reduce the likelihood of serious hearing loss, and age-related vision problems associated can be corrected via lighting and the use of glasses</p>	<p><b>Limitations identified by author:</b> The data gaps identified in the review included a lack of longitudinal or good quality interventional research. There is a clear need for more in-depth analysis of accidents, rehabilitation and return to work for older workers. In terms of occupationally related disease, a better understanding is needed of the prevalence and possible intervention strategies for the reduction of current self-reported levels of musculoskeletal problems and stress, anxiety and depression. The research also highlights a widespread failure to use objective, occupationally relevant measures for both physical and mental capacity.</p> <p><b>Limitations identified by review team:</b> Not sure if economically</p>

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<p>needs of older workers? How are those needs being addressed? Do safety initiatives affect health, and vice versa, in this group of workers? Is the research reviewed applicable to the UK situation? What data gaps are there? Quality rating: +</p>	<p>Websites searched included the HSE, EU-OSHA, NIOSH, CIPD and 'others indicated by the steering group'. <b>Other search methods:</b> Not reported <b>Years searched:</b> Not reported <b>Inclusion criteria:</b> Participants aged 50 years and over, employed, economically active. <b>Exclusion criteria:</b> Participants aged less than 50 years, economically inactive <b>Number of studies included:</b> 60 <b>Number of studies excluded:</b> 118</p>	<p>in other documents. On completion of initial screening, abstracts were reviewed and compared with the inclusion and exclusion criteria. Where the abstracts fitted the inclusion criteria, full documents were obtained and reviewed, and data extracted. For the included studies, a quality assessment was made based on the following criteria: *** Strong evidence, provided by consistent findings in multiple, high quality scientific studies ** Moderate evidence, provided by generally consistent findings in fewer, smaller or lower quality scientific studies * Limited or contradictory evidence, produced by one scientific study or inconsistent</p>		<p>or contact lenses. <u>High-risk industries</u> It may be necessary to consider more frequent health assessment of staff to ensure that they are able to continue to do their work safely. These must be objective and relevant to the work involved. <u>Psychological and psychosocial factors</u> Ageing slows reaction times, but increases knowledge and accuracy. Mental impairment is not necessarily a problem over 50s; most show no mental impairment before the age of 65, and one study demonstrated that 95% of those aged over 65 showed no impairment in intellectual functioning. Changes are typically offset by older workers' greater knowledge base and experience. Some evidence suggests long-term maintenance of health involves consideration of diet, physical, and mental activity; continued training and intellectual stimulation is important for all workers. Maintenance and updating of skills is equally important for older workers, but the style of training may need consideration. There is limited evidence that lack of social support is linked to emotional exhaustion. <u>Safety</u> Although younger workers are more at risk of accidents, older workers are more at risk of fatal injury and take longer to recover. Employer engagement is vital in ensuring successful return to work. Accident prevention in this age group and accident analysis are essential tools in reducing accidents, but risk reduction measures must be made accessible to the whole working population. <u>Occupational health interventions</u> Ill health is not an inevitable outcome of ageing. There is an increased likelihood of developing disease with age, but disease can be treated and controlled, workplace adjustments can be made, and health assessments can be carried out if required. The highest prevalence rates for musculoskeletal disorders occur in people aged over 55; this may be associated with cumulative exposure rather than the direct effects of age. Reporting of stress, anxiety, and depression is higher in the 45-54 age group than in the rest of the population. Again, unclear whether this is an age effect or due to cumulative exposure. However,</p>	<p>inactive should have been excluded; may be so due to work safety factors that would be relevant to analysis. <b>Evidence gaps/recommendations for future research:</b> see above <b>Source of funding:</b> Institute of Occupational Safety and Health</p>

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	+ 2 inaccessible <b>Method of synthesis:</b> Meta-analysis	findings in multiple scientific studies - No scientific evidence <b>Setting of included studies:</b> Not Reported		data suggest workplace intervention action should be prioritised for the over-50s. <u>Health promotion opportunities</u> Occupational health is seen as an important factor by older workers, but personnel leadership, professional skills, being appreciated and having a good atmosphere at work are also important. Increasing physical activity to reduce health risks and increase aerobic and muscular capacity is important, as well as improvements in mental health.	

Davey J (2008)

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<p><b>Authors:</b> Davey, J.</p> <p><b>Year of publication:</b> 2008</p> <p><b>Citation:</b> 'What Influences Retirement Decisions?', <i>Social Policy Journal of New Zealand</i>, 33: 110-126</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <ul style="list-style-type: none"> <li>-How do individuals make choices about labour-force participation as they move through their 50s and 60s?</li> <li>- How are attitudes surrounding retirement changing, and what incentives and disincentives are operating?</li> <li>-How do personal circumstances with family/ caring responsibilities affect working lived, productivity and career aspirations, incomes and ability to plan for retirement?</li> </ul> <p><b>Research approach:</b></p> <p>Literature review of existing data (mainly from Health, work and retirement (HWR) study<sup>2</sup> and EEO Trust's work and age survey) on range of factors influencing labour-force participation amongst older workers - drawing upon national (NZ) and international literature. + HWR follow-up qualitative interviews illustrating how these factors interact.</p>	<p><b>Sample population:</b></p> <p>Two main surveys drawn upon.</p> <p>HWR - nationally representative sample of people aged 55-70</p> <p>EEO trust - no information on sample population.</p> <p><b>Sampling approach:</b></p> <p>HWR - large-scale postal survey of nationally representative sample of people aged 55-70. Interview sampling for HWR consisted of respondents being invited to participate in a face to face qualitative follow-up interview. From those who agreed, sub-sample of 60 chosen located across regions for reasons of easy access.</p> <p>Nothing for EEO trust.</p> <p><b>Inclusion/exclusion criteria:</b></p> <p><b>Number and characteristics of participants:</b></p> <p>Secondary data-not mentioned.</p> <p><b>Response rate (if relevant):</b></p> <p>N/A</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>Two surveys - HWR and EEO trust - on health, work and retirement and work and age analysed. Along with analysis of qualitative interviews from HWR survey.</p> <p>Findings from existing literature split into:</p> <ul style="list-style-type: none"> <li>- WHAT INFLUENCES RETIREMENT DECISIONS - health status; financial situation; attachment to work and conditions of work; work-life balance; caring responsibilities; labour market demand; policy influences.</li> <li>- INFORMATION FROM QUALITATIVE INTERVIEWS - organised thematically as follows: health; financial situation; influence of life course factors and gender; interaction of influences.</li> </ul> <p><b>Key findings relevant to the review:</b></p> <p>HWR - little difference between working, retired, partially retired groups in terms of influences on retirement decisions; the most important reasons for majority (across all groups) were personal factors eg health/ wanting to do other things. Gender differences in responses are greater than those between groups based on job/ retirement status and findings are relational and contingent upon circumstance, eg women more likely than men to give consideration to health of family members when their partner is about to retire and more likely to think not being able to find work and employers' policy on older workers to be an influence. Other than these results, no other significant diff's in influence importance by gender.</p> <p>Health status ranked as important influence on</p>	<p><b>Limitations identified by author:</b></p> <p>Evidence from NZ on what effects retirement decisions comes from 'limited range of sources' (p.112).</p> <p><b>Limitations identified by review team:</b></p> <p>None-literature review</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>No critical analysis of the surveys/ literature being cited/ compared; and no awareness of researcher's involvement with the two primary data sets.</p> <p><b>Source of funding:</b></p> <p>The HWR study funded by NZ Health Research Council</p>

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	<p><b>Data collection:</b> Secondary data - analysis of findings from qualitative interviews that followed on from HWR study</p> <p><b>Method(s):</b> Analysis of survey/ interview findings from existing data. HWR study = large-scale postal survey EEO Trust survey - online survey</p> <p><b>Setting(s):</b> New Zealand - nationally representative sample (HWR study); EEO trust survey also from NZ, but unclear if representative sample.</p> <p><b>Dates:</b> EEO - March/April 2006 HWR - 2006 publish date</p>		<p>retirement decision in HWR and EEO trust studies across non-retired and retired groups in concurrence with further literature.</p> <p>Financial influence also of importance in retirement decision-making - greater choice for those with more money whereas for others decisions are more strongly influenced by income requirements. Financial consideration found across the literature to not be the sole influence on retirement decision-making.</p> <p>Takes into account interaction of influences leading to balancing/ trade-off in retirement decision-making.</p>	

Davies et al. (2013)

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<p><b>Authors:</b>  <b>Year of publication:</b>  <b>Citation:</b>                      Davies, E.M.M., Dhingra, K., and Stephenson, J. (2013) The Role of Line Managers in Retirement Management and Their Perceptions of Their Role of the Timing of Employee Retirement. Discussion Paper. Netspar.  <b>Quality rating:</b> +</p>	<p><b>Research questions:</b> to inform practice by describing differences in line managers' perceptions about retirement management and identify potential sources of bias in decision-making surrounding their decision-making.  <b>Research approach:</b> Quantitative  <b>Data collection:</b> Cross Sectional Survey  <b>Method(s):</b> Survey and Vignette study of line managers  <b>Setting(s):</b> Senior managers in university settings  <b>Dates:</b> 2012</p>	<p><b>Sample population:</b> Individuals holding the role of Dean, Head of Department or Subject Leader in 29 universities in the UK  <b>Sampling approach:</b> Not Stated  <b>Inclusion/exclusion criteria:</b> People holding senior management positions in UK/Ireland Universities  <b>Number and characteristics of participants:</b> 129 staff with line management responsibilities  <b>Response rate (if</b></p>	<p><b>Brief description of method and process of analysis:</b> To address the research questions, the research design incorporate two studies: i) a survey of academic line manager's attitudes to retirement management (RM) and ii) a vignette study based on a factorial design. Data for the two studies were collected concurrently between November and December 2012.  <b>Key findings relevant to the review:</b>  <u>Study 1: Survey of retirement management attitudes</u>  <u>Responsibilities</u>                      Issues of retirement management are shared between line managers and centralised human resources department. Line managers perceive themselves as predominantly concerned with resource-related activities such as performance management, workforce planning, and succession planning. On the other hand, information provision relating to extending working life is considered to be the role of HR. For the majority of behaviours, the activities are perceived to be shared between line managers and HR. This supports the view that there may be ambivalence in the boundaries and responsibility of the line manager role. Direct communication with the employee is seen as being the role of the line manager. Cultural issues such as maintenance of equity and fairness, along with the challenge of stereotypes are seen as joint activities.  <u>Discretion and influence</u>                      Line managers were asked about the extent to which they felt they had discretion in RM behaviours. The mean score for discretion was 3.08 (1= not at all, 5 = considerable). Nearly 70% of respondents considered that had a moderate amount or more of discretion about management of employees. Influence over policies and procedures falls within the remit of line managers to a lesser degree, with around 45% of respondents considering that they had a moderate amount or more of influence over retirement policies and procedures.  <u>RM training</u>                      Line managers were asked about the mechanisms through in which they had been informed about their institution's policies regarding retirement or extending working life. The most frequent source of information was communication from Human Resources (78%), followed by management training (38%) and the staff intranet (38%). 16% of respondents had received no information. Line managers were asked about the content training that they had received. Generally, the levels of training of line managers about retirement management were low. Nearly half of line managers had received no training about operating without a fixed retirement age. Nearly 45% of line managers had received no training around the wider implications of retirement.  <u>Support for dealing with requests for flexible working</u></p>	<p><b>Limitations identified by author:</b> None  <b>Limitations identified by review team:</b> Reasonably small sample size, restricted to universities so not fully generalizable. Views of employees not included.  <b>Evidence gaps / recommendations for future research:</b> Expand to broader sections of the population. Methodologically robust so should be transferable  <b>Source of funding:</b> Not stated</p>

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	(survey available for two weeks)	<b>relevant):</b> 21.49%	<p>Line managers were asked about the support provided to them in dealing with potential requests for flexible working. The most frequent response (48.1%) was support from HR department.</p> <p><u>Support for line managers</u></p> <p>The provision of flexible working arrangements is a core aspect of retirement management and line managers were asked about the support they receive from their own line managers in finding flexible solutions for older workers. The findings show that generally line managers do have support from their own managers, with around 83% considered that that they had a moderate of support or more from their own line manager to find flexible working solutions. Likewise, line managers generally feel well supported by their own managers in their decision making. 90% of respondents felt that their own line managers would provide moderate or higher levels of support. This reinforces that line mangers themselves have discretion and are not necessarily constrained by organisational issues.</p> <p><u>Study 2: Vignette study.</u></p> <p>The hypotheses were tested in study 2. The analysis is at the level of vignette - that is each hypothetical scenario and is based on responses to 1012 vignettes. For each vignette, each respondent was asked to rate the extent to which they considered they had a role in the timing of the retirement of the employee on a scale of 1 (no role) to 5 (definitely have a role). The mean score for perceived role was 3.11; however, in 26% of cases respondents gave a rating of 3, indicating that they were uncertain about whether it was their role as line manager to intervene in the timing of retirement The findings suggest that there is variation in the perceptions.</p> <p>No factors or tested interactions associated with the employee are substantively associated with a manager's belief that they have a role to play in the timing of an employee's retirement. Amongst factors associated with the manager, the gender and age of the manager, and whether or not the manager has prior experience of managing employees over the age of 65 are substantively associated with the probability that a manager will consider themselves to have a role to play in the timing of an employee's retirement. The odds of a female manager considering that they have a role in the timing of an employee's retirement are just over double (2.09 times) those of a male manager considering that they have a role in the timing of an employee's retirement, controlling for other manager level factors. The odds of a manager aged 50 years or over considering that they have a role in the timing of an employee's retirement are about two and a half times (2.49 times) those of a manager aged under 50 considering that they have a role in the timing of an employee's retirement, controlling for other manager-level factors. The odds of a manager with experience of managing employees aged over 65 years considering that they have a role in the timing of an employee's retirement are about twice (2.18 times) those of a manager without experience of managing employees aged over 65 years considering that they have a role in the timing of an employee's retirement, controlling for other manager-level factors.</p>	

Dewhurst et al. (forthcoming)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Elaine Dewhurst, Gary Lynch-Wood, Sheena Johnson, David Horton</p> <p><b>Year of publication:</b> Forthcoming</p> <p><b>Citation:</b> Dewhurst et al., Forthcoming, Results of a Pilot Survey: Compulsory Retirement: An Interdisciplinary Perspective</p> <p><b>Quality rating:</b> -</p>	<p>Research questions:</p> <p>(1) How do the existing legal norms relating to compulsory retirement operate in the UK and how are they are being implemented?</p> <p>(2) What organisational responses arise from the operation of these norms and how do organisational responses differ?</p> <p>(3) What are the attitudes of senior management to such norms?</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Document analysis and interviews</p> <p><b>Method(s):</b> Semi-structured interviews and analysis of policy documents</p> <p><b>Setting(s):</b> 8</p>	<p><b>Sample population:</b> 8 senior managers equally distributed between legal and retail firms</p> <p><b>Sampling approach:</b> Not stated</p> <p><b>Inclusion / exclusion criteria:</b> Senior management in legal and retail sectors</p> <p><b>Number and characteristics of participants:</b> 8 senior managers interviewed, four from legal firms, four in retail</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> Doctrinal analysis of legal provisions and academic literature was undertaken in conjunction with 8 semi-structured interviews. These interviews involved a qualitative assessment of the legal rules, and organisational and senior management responses to compulsory retirement in the legal and the retail sector within the Greater Manchester area. The team conducted 4 interviews per sector (ie, 4 legal firms and 4 retail firms).</p> <p><b>Key findings relevant to the review:</b></p> <p><u>Perceptions of Older Workers</u></p> <p>There is a clear perception that older workers do not perform as well as younger workers, and are viewed as a cost. One respondent suggests that, financially, older workers, are costly and what they are paid ‘in comparison to [their] current performance doesn’t match up’. Older workers are also considered to be able to contribute fewer hours to the workplace. This is attributed to a form of burn-out.</p> <p>Older workers are often referred to as lacking in enthusiasm and adaptability. Older workers ‘had not adapted and changed’, whereas younger workers are seen as having more ‘energy’ as well as an up-to-date education. This is also sometimes a problem in relation to more senior worker. Older workers were also considered more inflexible than younger workers: ‘One of the difficulties is that a lot of them are full-time and a lot of them do the hours that don’t suit the shopping patterns of our customers’.</p> <p>Despite these negative perceptions, many suggest older workers are valuable due to level of experience and the ‘great value in having that final opinion’. One respondent noted that ‘with law you can keep going as long as your mind/brain keeps working. It doesn’t matter what the rest of your body is doing’. In retail, older workers were described as ‘some of our best people here, because it’s all generated around service and how they interact with customers, some of our best people will be in the bracket of being 50+. And it fits with the dynamic. You always try and think, as a store manager, what will try and resonate with the people who shop here’.</p> <p><u>Impact of the Abolition of the Default Retirement Age</u></p> <p>Many organisations express concerns that the existing legal framework makes it more difficult to manage retirement processes and to have retirement discussions with staff. One legal respondent said ‘I think the age legislation has made people scared of talking about age, especially if your knowledge of it is a bit woolly’. Secondly, many organisations feel the law is not favourable to the employer and that it makes it difficult</p>	<p><b>Limitations identified by author:</b> There is a lot more work that needs to be done to understand the different pressures and responses that shape how firms deal with retirement issues and how they internalise changes to the law on retirement. Need to consider a greater range of organisations as well as a greater range of industrial and commercial sectors.</p> <p><b>Limitations identified by review team:</b> Reiterate the above; small sample size and lack of information on selection process means results are not representative</p> <p><b>Evidence gaps/recommendations for future research:</b> Expand methodology into other sectors</p> <p><b>Source of funding:</b> Not stated</p>

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	<p>interviews with senior management; four in legal professions, four in retail</p> <p>Dates: Ongoing</p>		<p>for an employer to justify a retirement age. Thirdly, despite these perceptions, none of the interviewees have any direct experience of any age discrimination cases based on the retirement age. Fourthly, it appears that organisations utilise other mechanisms, such as severance pay or redundancy, to get around age discrimination. HR would identify relevant employees and if the organisation was going ‘through some form of rationalisation where redundancies were an issue I think we would look at it and possibly discuss with the older generation category that they’re at risk.’ Performance is also becoming increasingly relevant.</p> <p><u>Workforce Planning</u></p> <p>There is a general feeling that abolishing the default retirement age could lead to an age imbalance. Older workers who choose not to retire are viewed as ‘[clogging] up the system’, are ‘blocking age diversity in the senior roles further down’, and make ‘a business organisation unattractive to younger people’. If there are no opportunities for promotion, then organisations might lose valuable employees. There is also a feeling that it is selfish for older workers to remain in work in order to ‘maximise [their] own pension fund and enjoyment for [their] own working life and [they] don’t care about our current graduate employees’. In addition, having retirement conversations with staff is considered by most organisations as a central part of organisational and workforce planning, ‘so they can plan and the firm can plan and to have a proper discussion about the options’.</p> <p><u>Business Case for/against Compulsory Retirement</u></p> <p>There does not appear to be a standard compulsory retirement age; the existence of a mandatory retirement age can be linked to the type of work the individual is engaged in. For example, there is a retirement age for the partner group of solicitors of 62 years but there is no retirement age for other individuals within the organisation. This is flexible, however, if there happens to be a strong business case for retaining a particular individual.</p> <p>While the legal organisations all feel there is a strong business case for compulsory retirement, the opposite is seen in the retail sector. Most organisations feel their position with regard to retirement is driven mainly by the business case rather than by law or regulation. Practices relating to retirement are ‘business-driven. Not regulation and law.’</p> <p>All legal firms interviewed put forward a strong business case in favour of compulsory retirement, citing lack of potential for flexibility in legal practice which meant that having older workers who require flexibility and an inherent tension between ‘what they [older workers] want and what we want and what the clients want. And that individual</p>	

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			<p>tension is an individual set of circumstances as each one is going to be different depending on the type of work’.</p> <p><u>Performance Appraisal of Older Workers</u></p> <p>In the legal sector, there is reluctance to performance-manage more senior members of staff, which may be linked to the hierarchical and paternalistic nature of legal firms. In many legal firms there is the view that senior members of staff cannot be performance-managed or that it is ‘less effective’. More specifically, the longer the member of staff has served, the more likely it is that performance management would not be imposed as this would have an adverse effect on the dignity of the individual. Therefore, there is an impression in the legal sector that retirement constitutes a more dignified exit than performance appraisal and dismissal for poor performance. However, this appears to be linked to the assumption prevailing in the legal sector that older workers do perform less and are less productive. One legal firm demonstrates that if a worker threatened an age discrimination suit by not accepting retirement then the firm would invoke the age discrimination laws to performance manage that individual out of the organisation.</p> <p><u>Retirement, Organisational Culture and Flexibility</u></p> <p>While flexibility is often hailed as a solution to the retirement dilemma, the legal organisations do not consider flexibility to be an option within their current business models and organisational structure and culture. Firstly, part time work is viewed as unworkable by many organisations as it interfered fundamentally with client expectations. Secondly, where initiatives are in place in legal organisations including ‘phased retirement’ programme which essentially allowed equity partners to become salaried partners at the age of 60 and to reduce their workload incrementally over the next five years, these were rarely utilised. Thirdly, where legal firms consider themselves as innovative and ‘young’, retirement processes do not really exist and flexible working was not considered appropriate. Fourthly, there is evidence that law firms are moving from paternalistic organisations and hierarchies run by ‘families or a family approach’ (Legal D) to more innovative commercial models.</p> <p>By contrast, flexibility is central to the operation of organisations in retail. Firstly, flexibility is considered a positive addition to the organisation in making the workforce more productive. Secondly, the large range of tasks available in the organisation appears to play a role in the ability to be flexible in terms of retirement, with one interviewee noting that ‘[i]f people are able and fit to do the job then we would apply no pressure to retire’.</p> <p><u>Attitude of Older Workers to Retirement</u></p> <p>There is a general feeling that individuals are considering retirement issues less</p>	

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			<p>frequently than in the past. The most significant change is that people do not have to plan to leave at a specified age and therefore, that led to less forward planning. There is also a sense that people feel compelled by their financial position to work for longer in both the legal and retail sector. One legal firm feels that there is a distinction to be made between the secretarial and support staff who 'will expect to retire at 60/65 because they just fall into that general population of workers of who 'that's the way it is''. However, it was felt that this would not be the same for lawyers and particularly those lawyers at a more senior level. In this context, it was felt that 'lawyers are very, very different. They are much more able to say 'I can continue doing this job. I can't be stopped from continuing to do this job'. And they are likely to have much greater financial responsibilities and so their financial planning around their future life will factor in. A partner of this firm or a lawyer in this firm is more likely from the age of 32 is going to obtain regular financial advice from their independent financial advisor saying 'when do you want to retire? Is it here, you'll need this, is it there, you'll need that''. This indicates that there is a level of personal preference involved in retirement with some workers wanting to remain in the workforce. This seems to be something that is not just the preference of lawyers but is also indicated in the retail sector.</p> <p><u>Support for Retirement</u></p> <p>The organisations interviewed do not appear to have any specific resources in place to deal with retirement. In some cases, this is due to the fact that it is not an issue which arises very often, particularly in the legal sector due to high attrition at a younger age. There are some indications of certain initiatives in place but these appear to be ad hoc rather than systematic in the legal sector. There is a sense that people already have some plans in place to help them deal with retirement and that it was not really the responsibility of the firm to put these types of systems in place despite a recognition that a lack of support could lead to unhappiness in the workforce.</p> <p>Retirement planning in retail was, by contrast, much more common; interviewees normally had discussions with employees approaching 65 and the policies on retirement and staff options were readily available to staff. The difference in approach in retail may have something to do with collectivism and union activity in these areas.</p> <p>Most organisations do not feel that they should handle retirement any differently. The most appropriate solution is to handle retirement by way of fairness and reasonableness as this is what employment tribunals require; if the worker does not like their approach then it was 'hard lines'. Alternative career paths were also considered as a possible route out of a law firm, and one retailer has a helpline in place which is available to the</p>	

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			<p>employee after retirement.</p> <p><u>Logistical Issues</u></p> <p>Overall, there did not appear to be any systematic approach to training HR professionals or persons dealing with retirement issues for the difficulties inherent in dealing with workers facing retirement. One legal firm had a fully equipped HR office, regularly trained on dealing with HR issues. Another organisation did not feel that training was essential as retirement was such a rare occurrence in their organisation. Another issue was the impact of the new auto-enrolment pension policy. There appeared to be broad support for this initiative from both sectors. It was seen as a sound way of ‘getting people to financially prepare for retirement, gently encouraging people to have pensions and if they put certain amounts in we’ll put quite a lot extra in’. It has ‘caught a few more people that we couldn’t gently encourage to make plans for their retirement in that respect’.</p>	

## De Vaus et al. (2007)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> De Vaus, D., Wells, Y., Kendig, H. &amp; Quine, S</p> <p><b>Year of publication:</b> 2007</p> <p><b>Citation:</b> 'Does gradual retirement have better outcomes than abrupt retirement? Results from an Australian Panel Study', <i>Ageing and Society</i>, 27(5)</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> Do workers who transition to retirement gradually have better outcomes than those who make an abrupt transition? + An exploration of the extent to which decision-making process and employee control are linked to outcomes of both retirement pathways.</p> <p><b>Research approach:</b> Secondary analysis of survey data</p> <p><b>Data collection:</b> Panel Study (<i>Healthy Retirement Project</i>) Measures were taken at four time points: pre-retirement, baseline (with a median of seven days prior to the last working day), and after 12 months, 24 months and 36 months post-retirement. Questionnaires were used pre-retirement and telephone interviews were used for most participants post-retirement.</p> <p><b>Method(s):</b> Hierarchical ordinary least-squares (OLS) multivariate regression models.</p> <p><b>Setting(s):</b> Australia, <i>Healthy Retirement Project</i>.</p>	<p><b>Sample population:</b> 358 retirees out of initial 601 individuals recruited to <i>Healthy Retirement Project</i>.</p> <p><b>Sampling approach:</b> 601 individuals approached from <i>Healthy Retirement Project</i>.</p> <p><b>Inclusion/exclusion criteria:</b> all in paid work when approached to participate, all left job either in 2<sup>nd</sup> half 1998/ 1<sup>st</sup> half 1999.</p> <p><b>Number and characteristics of participants:</b> n=358 by end of study. All pre=retirement, were (median) 7 days from last working day.</p> <p><b>Response rate (if relevant):</b> 358/601 (59.6%)</p>	<p><b>Outcomes</b></p> <p>The outcomes measured in the analyses were: positive and negative affect (10-item short form, Lawton et al. 1992); self-image, comprising four items from the Rosenberg (1965) self-esteem scale, three items from Adelman's (1994) self-efficacy scale, and four items from Scheier and Carver's (1985) optimism scale 1985; life satisfaction (Campbell, Converse and Rodgers 1976); and marital cohesion (Spanier 1976). The seventh outcome, retirement adjustment, was adapted from a study of retired clerics (Schultz and Schultz 1997).</p> <p><b>Brief description of method and process of analysis:</b></p> <p>Hierarchical ordinary least-squares (OLS) multivariate regression models.</p> <p>Response (dependent - measured) variable was retirement pathway/ mode: 220 abrupt; 138 gradual and high/ low level of control.</p> <p>Explanatory (independent - changed), binary variables were gender; marital status; white/blue collar worker; tertiary education y/n; worked, 30hours p/w; excellent/poor health.</p> <p><b>Key findings relevant to the review:</b></p> <p>After controlling for sex, age, marital status, job status, financial status, health and scores at baseline gradual retirement was positively associated with improved health 12 months into retirement (<math>\beta = 0.14</math>, <math>p &lt; 0.01</math>) but those who retired gradually were less satisfied with their</p>	<p><b>Limitations identified by author:</b> none identified</p> <p><b>Limitations identified by review team:</b> comparatively few interaction variables are statistically significant. Relatively limited sample size only drawn from one panel study, narrow in target and low numbers.</p> <p><b>Evidence gaps/recommendations for future research:</b> International transferability.</p> <p><b>Source of funding:</b> Two grants from the Victorian Health Promotion Foundation.</p>

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	<p><b>Dates:</b>1998 - 2001</p>		<p>retirement after a year than those who had retired abruptly (<math>\beta = -0.12, p &lt; 0.05</math>). Small effects CHECK Whether or not a person retired gradually or abruptly made no difference to the level of positive or negative affect, life satisfaction, self-image, or marital cohesion.</p> <p>Overall, the degree to which retirees had control over the timing of retirement and the way in which they retired had relatively strong effects on life in retirement compared with whether they retired gradually or abruptly.</p> <p>Positive coefficients indicate that those who exercised high choice and control had better retirement outcomes than those with little choice. Twelve months after retiring, those with greater control displayed significant increases in positive affect (<math>\beta = -0.12, p &lt; 0.001</math>), decreases in negative affect (<math>\beta = -0.15, p &lt; 0.001</math>), and increases in life satisfaction (<math>\beta = -0.15, p &lt; 0.001</math>). They were also more likely to say that they had adjusted well to retirement (<math>\beta = -0.39, p &lt; 0.0001</math>).</p>	

## Dymock et al. (2012)

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<p><b>Authors:</b> Dymock, D., Billett, S., Klieve, H., Johnson, G. C., &amp; Martin, G.</p> <p><b>Year of publication:</b> 2012</p> <p><b>Citation:</b> Dymock, D., Billett, S., Klieve, H., Johnson, G. C., &amp; Martin, G. (2012). Mature age 'white collar' workers' training and employability. <i>International Journal of Lifelong Education</i>, 31(2), 171-186.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> Aims to understand further how older workers view training opportunities and engage in them.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Survey</p> <p><b>Method(s):</b> Semi-structured interviews guided survey questions. Responses anonymised and analysed using SPSS.</p>	<p><b>Sample population:</b> White collar Australian workers aged 45+</p> <p><b>Sampling approach:</b> Survey invitations sent out to government and professional organisations</p> <p><b>Inclusion /exclusion criteria:</b> Aged 45+, currently employed</p> <p><b>Number and characteristics of participants:</b> 268 responses; 66% women, 75% aged 50+</p> <p><b>Response rate (if</b></p>	<p><b>Brief description of method and process of analysis:</b> Anonymous online survey used to gather data about perceptions of capacities as workers, contributions to workplaces, and how employability is sustained by ongoing learning. The survey was developed on the basis of semi-structured interviews conducted earlier with mature age workers and managers. Responses mostly in the form of multiple choices. Questionnaire distributed to the government. To support the analysis, the responses were imported into SPSS (version 18), with initial descriptive analyses undertaken using the frequencies and cross tabulation options.</p> <p><b>Key findings relevant to the review:</b> <u>Attitudes towards older workers' development opportunities</u> While there was extremely strong agreement (almost 90%, with also a very low level of uncertainty) that significant changes had occurred, responses to other items were less definitive. 14.6% of respondents felt pressured to retire for age reasons. Almost two-thirds of respondents reported having the same opportunities to train and learn as their younger colleagues and being as adaptable as younger workers. However, only about half reported equality in promotion opportunities between younger and older workers; similar opportunities for men and women; and generally equitable treatment between younger and older workers. Around a quarter were uncertain whether having older workers helped an organisation's image; that they would have the same promotion opportunities; or that they were in fact recognised as 'key assets' in their organisations. 31% agreed they disliked taking orders from younger staff and 22% that younger staff disliked taking orders from older staff. While responses were relatively consistent across different groups, a few clear differences were noted when cross tabulations of the data were enacted. The oldest workers, for example, showed a significantly less positive perspective on promotional opportunities and on being treated well. Hence, while 61.2% of those 45-49 years agreed that older workers had the same promotional opportunities, only 29.4% of those 60 and above felt this way. While different age groups did not appear to have an issue with 'taking orders' from younger colleagues, there were significant differences in responses across different levels of qualifications; 70.0% of those with no post-school qualifications expressed no concern compared to 35.9% of those with university qualifications. Position was also an area of difference, with 82.7% of staff with management roles feeling they were a key asset compared to only 38.9% of administration staff and 53.3% of professionals. Managers also indicated they saw greater opportunities for promotion, with 75.0% of those in managerial positions feeling an equal chance of promotion.</p> <p><u>Personal work experiences</u> There was a strong level of agreement (89%) that there had been major changes in the workplace over the past five years. Given this level concurrence, it is noteworthy that almost as many (84%) reported being capable of undertaking further learning for work purposes, but more than one-third claimed they did not</p>	<p><b>Limitations identified by author:</b> Not stated</p> <p><b>Limitations identified by review team:</b> Limited to white collar workers, other sectors not considered. Gender imbalance (2:1 Women to men).</p> <p><b>Evidence gaps/recommendations for future research:</b> Other sectors/countries; Survey data so easily replicable</p> <p><b>Source of funding:</b> Australian Research Council.</p>

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	<p><b>Setting(s):</b> White collar Australian workers aged 45+</p> <p><b>Dates:</b> 2012</p>	<p><b>relevant):</b> Not stated</p>	<p>need any more training for their current job—with less than 1% uncommitted about their capability. With regard to other personal preferences, around 40% indicated they were either not interested or were interested, respectively, in retraining in their current workplace or in reducing their working hours. 76% of respondents reported being valued in their workplace by peers and 69% by their employers or supervisors, with almost 20% claiming they lacked their employer’s or manager’s full support. Females indicated significantly greater agreement that they were ‘not too old to learn’ with 87.5% agreeing, compared to 76.1% of males. Those in managerial roles were significantly more confident that their experience was valued by the boss, with 86.5% or managers agreeing, compared to only 51.9% of those in administration.</p> <p><u>Personal attributes</u></p> <p>More than 85% of respondents reported their skills, experience, age and capabilities as assets for their workplaces. Most claimed to be as adaptable to change as younger workers, and almost as many claimed to be more knowledgeable and more skilled, and to a slightly lesser extent had a better work attitude than younger workers. 80% reported having had opportunities to pass their knowledge and experience onto others. The majority reported that they are not too old to learn and, in general, are demonstrably able to cope with significant changes in their workplace and to their work through their ability to learn to adapt to these new circumstances. For many, access to training and security of tenure are held to be equitably distributed across their workplaces, although about half reported believing that advancement is not as available to older, as for younger workers, and there is ambivalence about gender differences.</p> <p><u>Willingness to retrain</u></p> <p>Three-quarters reported not being anxious about learning new tasks, but there were some concerns, with 13% indicating some anxiety and 10% were unsure. 88% regarded themselves as competent with technology. A little over 30% reported needing additional training for their current work. Almost a quarter reported an interest to train for a different job with the same workplace, with this most likely to be those in administration (35.2%) rather than managers (9.6%). Just over 30% said they would like to train for a different job elsewhere, and 19%-26% reported being unsure about their future. Close to two thirds of respondents nominated conferences and professional association activities respectively as sources of ongoing development for work purposes, apart from accredited training, in maintaining currency with the sorts of workforce development typical in such occupations. Just under half reportedly used the Internet to supplement their vocational learning. 60% of respondents had undertaken accredited training since the age of 45, the large majority for professional development purposes, but also just over half claiming their reason for undertaking these courses was also to assist continuity of employment until retirement. More than half of those with accredited training had completed vocational education and training (VET) qualifications, with 37% undertaking certificate-level courses and 17% qualifications at VET diploma or advanced diploma level. Almost 30% had undertaken or were undertaking university-level studies, and two-thirds at postgraduate level. Moreover, around 80% of these older workers reported being supported by their workplace for job-related learning. However, the majority claimed not to need more training in their current role.</p>	

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			Furthermore, a finding of possible concern to employers is that almost one-third of respondents would like to train for another job elsewhere. As might be expected with this cohort, conferences and networking are important sources of learning, as to a lesser extent are short courses and the Internet. However, noteworthy here is that more than half of those who had undertaken accredited training since turning 45 had acquired VET qualifications, perhaps indicating the need for more practical and immediate relevant training.	

Employers Forum on Age (2006)

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<p><b>Authors:</b> Employers Forum on Age  <b>Year of publication:</b> 2006  <b>Citation:</b> Flexible Retirement: A Snapshot of Employer Practices 2006, commissioned by the Department for Work and Pensions  <b>Quality rating:</b> -</p>	<p><b>Research aim:</b> to investigate the perceived barriers (and potential solutions) to developing and implementing a flexible retirement policy  <b>Research approach:</b> Qualitative  <b>Data collection:</b> Interviews and Workshops  <b>Method(s):</b> Interviews with 2 HR professionals in each selected company, and a half day workshop with a variety of participants from government, employers, and pensions experts  <b>Setting(s):</b> Seven large employers who have introduced or are considering introducing flexible retirement policies  <b>Dates:</b> Not reported</p>	<p><b>Sample population:</b> Large employers who have introduced or are considering introducing flexible retirement policies  <b>Sampling approach:</b> N/A  <b>Inclusion/exclusion criteria:</b> N/A  <b>Number and characteristics of participants:</b> 7 large employers  <b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> Employers were drawn from membership of the Employers Forum on Age (EFA); others were DWP Age Positive Champions. The case studies were selected to cover different industries and sectors, those with flexible retirement policies and those who were still at the development stage. Two interviews with each organisation were conducted with a key representative from the HR/pensions department, and a half-day workshop was conducted to explore retirement policy.  <b>Key findings relevant to the review: Flexible Retirement Options</b>  The majority of employers selected had well established flexible retirement policies. One was considering introducing a flexible retirement policy, and one was implementing planned changes.  In terms of options available to employees, almost all offered flexibility over the date of retirement. Those that had a fixed retirement date were likely to accept applications to work beyond this.  For many, flexible retirement policies were developed as an extension to work/life balance policies; some stated there were no options available solely to those approaching retirement, but flexible working options available to all. Some felt developing options specifically for those approaching retirement was not compatible with age discrimination legislation. The majority offered flexible working, most typically the option of part-time working.  Several had introduced policies offering downshifting, but had little take-up due to employees not wishing to reduce responsibility, perhaps due to the impact on income.  Other options include sabbaticals, community/voluntary work, or 'annualised hours' contract. However, each of these was offered by only a minority of firms.  <b>Barriers, issues and solutions</b>  <b>Overcoming managers' concerns about managing the</b></p>	<p><b>Limitations identified by author:</b> N/A  <b>Limitations identified by review team:</b> A small number of employers were interviewed, all of which had an interest in the issue of older workers, so the findings cannot necessarily be generalised. In addition no data on older worker participation in the schemes or any relevant attitudinal, behavioural or organisational outcomes was collected. This makes it difficult to assess the relative weight of each barrier or enabling factor in contributing to employer perceptions of the relative success of the flexible retirement policies.  <b>Evidence gaps/recommendations for future research:</b> expansion of the interview/workshop format to other employers  <b>Source of funding:</b> Department for Work and Pensions</p>

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			<p><b>performance of older employees</b></p> <p>Several found the solution involved educating managers that older employee's performance and capability should be assessed equally to a younger employee's. Increasing awareness of flexible retirement and providing training in performance reviews was seen to be a valuable part of developing flexible working options. Some employers stated concerns were allayed once policies were in practice; they felt employees 'know' when they are ready to retire and found instances of an employee requesting to stay on when there were no capability issues. However, participants recognised this was somewhat untested, as most working beyond retirement are still relatively young. Most employers were confident that existing performance management systems would be effective. Managers' concerns were seen as part and parcel of negative assumptions. Solutions include disseminating research done by the EFA, DWP, or others to disprove assumptions, or to wait until policies were in place whereby managers would observe benefits of a mixed workforce for themselves. Long term, it was seen to be necessary to foster organisational inclusivity to normalise flexible retirement. Having transparent policies and investing in diversity education helps realise this over time.</p> <p><b>Successfully communicating available options to staff</b></p> <p>Almost all participants experienced difficulty in communicating policy changes, including ensuring awareness of opportunities available. For some, difficulties arose in ensuring staff understood available options, with many noting employees had difficulty understanding the distinction between retirement age and pension age. Employers felt flexible working (and pension simplification) made decision-making more complex. With more options, employers had to ensure employees made the right decision for them. Some had concerns over liability issues, and many noted take-up of flexible retirement options had been lower than expected, which some attributed to poor communication resulting in low awareness or understanding. Employers found the following methods of communication</p>	

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			<p>successful:</p> <ul style="list-style-type: none"> <li>• Talking to the pension and communications teams to thrash out options that were easily understood by employees and free of jargon.</li> <li>• Disseminating information regarding flexible working.</li> <li>• Ensuring that key groups were fully informed and trained to deal with any changes, ensuring that queries can be confidently dealt with.</li> <li>• Suggesting independent financial advice when approaching retirement.</li> <li>• Appointing ‘champions’ to inform employees via presentations or workshops.</li> <li>• Most noted the implications that communicating the changes would entail. However, employers felt educating staff and effective communication was part of being a responsible employer. This burden includes a requirement to communicate available options, deal with queries, respond to requests, and provide information for decision making. Some highlighted that up-to-date records minimise costs, although additional costs could still be incurred. Most participants felt these costs were not excessive and compensated for by the benefits that flexible retirement options brought.</li> </ul> <p><b>Overcoming individuals’, or union concerns that employees will be ‘forced’ to stay in work</b></p> <p>Employers overcame these concerns through discussion and by using examples of individuals who had chosen to continue working, outlining why these individuals had opted to stay in work. In one case, this was supported by other evidence, demonstrating that the policies were there to benefit employees.</p> <p><b>Communication between HR and pensions funds</b></p> <p>Some participants found that poor communication was a stumbling block. Some found pension fund managers reluctant to make changes to meet HR requirements. The issues are obviously complex and it was felt necessary for HR to understand the implications of policies before they could adequately</p>	

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Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>communicate them. The solution was more frequent contact between HR and pension fund managers to foster a greater understanding of each other's needs. Those that had not encountered these barriers tended to involve pension representatives at the earliest stages of discussion.</p> <p><b>Managing employee expectations</b></p> <p>Some expressed concerns about the inability to offer flexible working options, and the need to manage employee expectations. These employers felt it necessary to make explicit communications that not all options were available to all and that individual negotiation would be required.</p>	

Enright & Scobie (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Enright, J., &amp; Scobie, G. M.  <b>Year of publication:</b> 2010  <b>Citation:</b> Enright, J., &amp; Scobie, G. M. (2010). Healthy, wealthy and working: Retirement decisions of older New Zealanders. MONTH, 10, 02.  <b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The primary objective of this paper is to assess the importance of a person's health status on their participation in the labour market and on the related decision as to retirement.  <b>Research approach:</b> Mixed; quantitative analysis of qualitative methods  <b>Data collection:</b> Survey  <b>Method(s):</b> Postal questionnaire.  <b>Setting(s):</b> New Zealanders on the electoral roll.  <b>Dates:</b> 2006</p>	<p><b>Sample population:</b> New Zealanders on the electoral roll (disaggregated by numerous aspects, including age). All aged 55-70 and in the workforce.  <b>Sampling approach:</b> Not stated  <b>Inclusion /exclusion criteria:</b> N/A  <b>Number and characteristics of participants:</b> 6,662 (Maori deliberately over-sampled, 52.9% of respondents of Maori descent)  <b>Response rate</b> (if relevant): 62%</p>	<p>Key findings relevant to the review:  Higher values of the Economic Living Standards Index (ELSI) were associated with higher income, wealthier, better educated people with better health. The results confirm that those working had a lower living standard than those retired. Those who were Maori, those working and those on NZ Superannuation (NZS) had lower scores on this measure. Likewise, Maori, those working, on a benefit or NZS and in poorer health were forced to reduce costs on essential items more frequently. Among both working and retired, better health measures are associated with greater satisfaction with current material living standards. Similarly, better health is associated with the expectation of higher living standards in retirement. Furthermore, relative to working Europeans, working Maori expect to have higher living standards in retirement.  In all the estimated models, health status is significantly associated with the decision to work. This result holds regardless of which measure of health was used. In contrast, wealth was not identified as having a significant effect, although this may reflect the limitations of the data more than the true underlying effect of net wealth. A 10% decline in health below the mean score is associated with a fall in labour force participation of 3 to 4 percentage points. A decline of this magnitude is clinically significant. At 20% below the mean score, participation falls by 10 points for males and 6 for females. A 40% fall in the health scores</p>	<p>Key findings relevant to the review:  Higher values of the Economic Living Standards Index (ELSI) were associated with higher income, wealthier, better educated people with better health. The results confirm that those working had a lower living standard than those retired. Those who were Maori, those working and those on NZ Superannuation (NZS) had lower scores on this measure. Likewise, Maori, those working, on a benefit or NZS and in poorer health were forced to reduce costs on essential items more frequently. Among both working and retired, better health measures are associated with greater satisfaction with current material living standards. Similarly, better health is associated with the expectation of higher living standards in retirement. Furthermore, relative to working Europeans, working Maori expect to have higher living standards in retirement.  In all the estimated models, health status is significantly associated with the decision to work. This result holds regardless of which measure of health was used. In contrast, wealth was not identified as having a significant effect, although this may reflect the limitations of the data more than the true underlying effect of net wealth. A 10% decline in health below the mean score is associated with a fall in labour force participation of 3 to 4 percentage points. A decline of this magnitude is clinically significant. At 20%</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>would correspond approximately to a self-reported assessment of poor health. At this level, male participation falls 26 percentage points and females by 13 percentage points. The drop in participation is more than proportional for males, but less for females; in other words, while male participation rates are higher, they decline more rapidly as health deteriorates. In addition to the effect of health, substantial absolute effects on the probability of working stem from a respondent's marital status.</p> <p>The probability that a person in the workforce would chose full-time over part-time employment was not significantly related to either the physical or mental health scores. While physical health status has a significant effect on whether to join the workforce, the evidence is that, given a person is employed, their choice about full- or part-time work is not a function of their health status. Both males and females have a lower probability of working full-time as they age, receive a benefit or have income from superannuation. In contrast they are more likely to be in full-time employment if they are widowed or have dependants. There is a marked reduction in labour force participation when respondents receive NZS, typically at age 65. The results suggest that there is a significant 'deterrence effect' on labour force participation of NZS, once the effect of a wide range of other influences has been controlled for. For males, both surveys confirm that poorer physical and mental health reduces the probability of labour force participation. Notably, mental health conditions do not appear to influence</p>	<p>below the mean score, participation falls by 10 points for males and 6 for females. A 40% fall in the health scores would correspond approximately to a self-reported assessment of poor health. At this level, male participation falls 26 percentage points and females by 13 percentage points. The drop in participation is more than proportional for males, but less for females; in other words, while male participation rates are higher, they decline more rapidly as health deteriorates. In addition to the effect of health, substantial absolute effects on the probability of working stem from a respondent's marital status.</p> <p>The probability that a person in the workforce would chose full-time over part-time employment was not significantly related to either the physical or mental health scores. While physical health status has a significant effect on whether to join the workforce, the evidence is that, given a person is employed, their choice about full- or part-time work is not a function of their health status. Both males and females have a lower probability of working full-time as they age, receive a benefit or have income from superannuation. In contrast they are more likely to be in full-time employment if they are widowed or have dependants. There is a marked reduction in labour force participation when respondents receive NZS, typically at age 65. The results suggest that there is a significant 'deterrence effect' on labour force participation of NZS, once the effect</p>

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			<p>the labour force participation decisions of females. The results indicated that for both males and females, those reporting lower standards of health were less likely to remain in the workforce. The odds of a person working if they report fair or poor health status are very much lower than those reporting excellent health. This finding was repeated using two different measures of the key economic variable: the respondent's wage rate and the income of other family members.</p> <p>A further way to measure the effect of health is to ask whether a respondent expects to be in full-time employment once they reach a certain age. Two ages were specified: 62 and 65. Key factors that were associated with a significantly greater probability of expecting to be in the labour force at these ages were: being male; separated or widowed, Māori and the health of family members.</p>	<p>of a wide range of other influences has been controlled for. For males, both surveys confirm that poorer physical and mental health reduces the probability of labour force participation. Notably, mental health conditions do not appear to influence the labour force participation decisions of females. The results indicated that for both males and females, those reporting lower standards of health were less likely to remain in the workforce. The odds of a person working if they report fair or poor health status are very much lower than those reporting excellent health. This finding was repeated using two different measures of the key economic variable: the respondent's wage rate and the income of other family members.</p> <p>A further way to measure the effect of health is to ask whether a respondent expects to be in full-time employment once they reach a certain age. Two ages were specified: 62 and 65. Key factors that were associated with a significantly greater probability of expecting to be in the labour force at these ages were: being male; separated or widowed, Māori and the health of family members.</p>

## Gringart et al. (2005)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Gringart, E., Helmes, E., &amp; Speelman, C. P.</p> <p><b>Year of publication:</b> 2005</p> <p><b>Citation:</b> Exploring attitudes toward older workers among Australian employers: An empirical study. <i>Journal of aging &amp; social policy</i>, 17(3), 85-103.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research aims:</b> To gain knowledge of stereotyping of older workers in Australia</p> <p><b>Research approach:</b> Quantitative</p> <p><b>Data collection:</b> Survey data</p> <p><b>Method(s):</b> Analysis of survey sent to employees responsible for hiring in medium-sized companies in Australia</p> <p><b>Setting(s):</b> 128 hiring decision makers in companies with between 10 and 50 employees in Australia</p> <p><b>Dates:</b> Not Reported</p>	<p><b>Sample population:</b> 300</p> <p><b>Sampling approach:</b> random sampling of hiring decision-makers found on the Kompas business directory</p> <p><b>Inclusion/exclusion criteria:</b> Company had to employ between 10 and 50 workers</p> <p><b>Number and characteristics of participants:</b> 128 Hiring decision makers; 89 male, 39 female</p> <p><b>Response rate (if relevant):</b> 24 questionnaires returned 'address unknown', giving a sample of 276. Initially 169 responses (61.2%), 41 discarded because either incomplete or an outlier. Final response rate of 128/276 (46.3%).</p>	<p><b>Brief description of method and process of analysis:</b> One-way between subjects design with questionnaire version (male and female) as the independent variables. Three dependent variables: 'sum of scale' (the sum of the stereotypes scale of the questionnaire), 'age relevance' (how relevant was age in making hiring decisions), 'likely to hire' (how likely were respondents to hire older workers). Respondents randomly allocated a group according to questionnaire, and data collected analysed and tested for significance.</p> <p><b>Key findings relevant to the review:</b></p> <p>Employers reported negative views of older workers on 12 out of 28 items in the survey. Older workers were viewed as being less adaptable to new technology, less interested in technological change and less trainable, as well as being less ambitious, less energetic, less healthy, less creative and not as physically strong. They were thought to have impaired memory, to be less mentally alert, and less flexible and were less likely to be promoted.</p> <p>There were no significant differences in hiring decision makers' attitudes toward older male versus female workers. A significant positive relationship was found between 'sum of scale' and 'likely to hire,' <math>r(126) = .53, p &lt; 0.01</math>. This suggests that employers holding positive attitudes towards older workers were more likely to hire them. In contrast, holding the view that age is of</p>	<p><b>Limitations identified by author:</b> Relatively small sample size. Poor generalizability of results; limited to companies with up to 50 employees listed with Kompas.</p> <p><b>Limitations identified by review team:</b> Could be analysed by specific attribute (ambition, energy, work ethic etc.) although this is noted in recommendations for future research. The survey is transparent in revealing its subject matter and intentions. Undertaking research into beliefs that may lead to practice which is prohibited by employment law may need a more subtle approach to elicit employer behaviours.</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>Future research could assess the relative importance of specific workers' attributes in hiring. This would shed light on areas where older workers are most vulnerable due to stereotyping and could direct efforts at both improving older workers' skills and correcting employers' misconceptions. Future investigations could also assess industry-specific and job-specific attitudes toward older workers in order to enhance accuracy of relevant interventions.</p> <p><b>Source of funding:</b> N/R</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>greater relevance in making hiring decisions decreases likelihood of hiring older staff (<math>r(126) = -0.38, p &lt; .01</math>). The effects of respondents' sex, age, and educational level on the three dependent variables were each analysed; none showed significant effects on the combined variables.</p> <p>There were about twice as many positive attributes related to older workers compared to negative in the free text responses. No significant differences between questionnaires were apparent in the responses to this section of the questionnaire. While some attributes were specific to one group, some were repeated across both genders. Both groups indicated older workers had a better work ethic than younger, that they had more appreciation of their jobs, and that they took fewer sick days. Older workers were viewed as more presentable than younger workers, more punctual, more responsible, and wiser. Of the negative attributes, both groups stated that older workers had difficulties with new technology and that they are set in their ways.</p>	

## Gringart et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Gringart, Eyal, Edward Helmes and Craig Speelman</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> Gringart, E. et al. (2010) <i>The Role Stereotypes in Age Discrimination in Hiring: Evaluation and Intervention</i> Saarbrücken. Lambert Academic Publishing</p> <p>Ch. 6: 'Testing interventions to reducing hiring discrimination in older adults'</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <p>The study tested interventions for employers and undergraduates to promote attitudinal changes towards older workers and increase the likelihood of hiring older adult job seekers. Older job seekers defined as aged between 55 and 70.</p> <p>Findings on undergraduate participants are out of scope of this review and have not been included here.</p> <p><b>Research approach:</b> RCT</p> <p><b>Data collection:</b> Survey</p> <p><b>Method(s):</b></p> <p>The study has two stages: an intervention and then follow up test, with the test being sent to all those who responded to the intervention plus a control group.</p> <p>Three intervention conditions: (1) A <u>fact sheet</u> intervention (FS), a one page sheet comprising findings generated from a previous study. Twelve commonly and extremely expressed stereotypes about older workers were contrasted against empirically based counter evidence, and presented in a similar format to Australian governmental information sheets. For example, 'older workers are less adaptable' would be countered with 'older workers adapt well to new working environment and</p>	<p><b>Sample population:</b></p> <p>Companies from the Kompass Australia database in the five selected Australian states with between 10 and 50 employees.</p> <p><b>Sampling approach:</b></p> <p>1,200 Companies sampled through the Kompass Australia database of APN Business Information group, across industries. Any companies which had been involved in the authors' preceding research were excluded.</p> <p>Random sampling using tables of random numbers with Excel, and 300 companies were assigned to each group. Only participants from whom intervention reply cards were received were addressed in the following testing stage (556).</p> <p><b>Inclusion/exclusion criteria:</b></p> <p>Companies with fewer than 10 and more than</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>Questionnaires screened for missing data prior to entry and frequency tables were used afterwards. Normality was assessed through visual examinations of plots and calculation of skewness and kurtosis. Outliers accounted for. SPSS v.10 used for analysis (ANOVA/MANOVA).</p> <p>Manipulation groups were too small to be analysed by demographic variables so gender, age, educational attainment and state analysed through MANOVA. Age was divided into three groups: <math>\leq 40</math>, 45-55 and <math>\geq 50</math>.</p> <p><b>Key findings relevant to the review:</b></p> <p>'<u>Age preference</u>': respondents' general age preference in hiring</p> <p>'<u>Sum of scale</u>': the sum of the stereotype scale of the questionnaire</p> <p>'<u>Age relevant</u>': how relevant age was in making hiring decisions</p> <p>'<u>Likely to hire</u>': How likely respondents were to hire older workers.</p> <p><u>2 by 2 (CD yes/not) x FS (yes/no) between subjects ANOVA for employers:</u></p> <p><u>Age preference:</u> Both CD and FS main effects were significant but no significant interaction was detected: CD <math>F(1,263) = 6.95, p &lt; .05</math>; FS <math>F(1,263) = 4.28, p &lt; .05</math>. Mean of CDFS group higher than that of the other three groups - Tukey's HSD test showed that employers who received the combined CDFS interventions showed a significantly greater preference for hiring older workers than did employers who received CD or FS or the control.</p>	<p><b>Limitations identified by author:</b></p> <p>Generalizability is limited to companies contained within the Kompass Australia population of companies with between 10 and 50 employees.</p> <p>Kompass industry criteria found to be idiosyncratic with some sections overly inclusive and some too specific.</p> <p>Using postal delivery made it difficult to be sure of respondents' identity.</p> <p>No measure of actual hiring behaviour following interventions.</p> <p>Differing levels of emotional involvement and personal commitment required in the CD and CDFS interventions as compared to the FS or control may produce different response rates.</p> <p><b>Limitations identified by review team:</b></p> <p>Companies with 10-50 employees can still have more than one hiring</p>

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	<p>circumstances'. Respondents were requested to tick a box on the report card acknowledging having read the sheet and post back the card.</p> <p>(2) The <u>cognitive dissonance</u> intervention (CD) drew on two previous studies, explaining past discriminatory behaviour in hiring older adults is against the principle of giving people fair go, '<i>held so dear in Australia</i>'. Respondents were told that a booklet was being published which would contain a list of names that morally disagreed with age discrimination in hiring. It was made clear this would be published and that this would show hiring decision makes that those on the list supported and believed in giving older workers a fair go.</p> <p>(3) A <u>combination</u> intervention combining the cognitive dissonance and fact sheet interventions (CDFS).</p> <p>To minimise bias, materials for the intervention and testing stages were on different coloured cards, in different fonts and posted from different researchers at different universities to appear as two separate studies. Follow up cards were used in all conditions, explaining respondents were part of a small random sample and their response was uniquely important.</p> <p>Following the intervention was the <u>testing stage</u>:</p> <p>Cover letters introduced the concept of an ageing population and noted that input would support a fuller understanding of the work environment. Respondents were first asked to rank their preference of hiring older or younger workers - regardless of job</p>	<p>50 employees were excluded. This minimised the possibility of addressing companies with more than one hiring decision maker, addressed those who would be more likely to hire than family oriented companies and reflected that companies with up to 50 employees make up more than half of the Australian workforce.</p> <p>Incomplete and contradictory questionnaires were discarded.</p> <p><b>Number and characteristics of participants:</b></p> <p>Unclear whether there were 282 or 283 usable and complete employer responses. Demographic data is present for 267 company respondents, of which 203 were male and 64 were female. They had a mean age of between 45 and 50.</p> <p>Twenty-three respondents (8.6%) had a formal education level of up to year 10, 46 (17.2%) had formal education up to year 12, 183 (68.5%)</p>	<p><u>Sum of scale</u>: Both main effects and the interaction was found to be significant: CD <math>F(1,263) = 4.71, p &lt; .05</math>; FS <math>F(1,263) = 7.75, p &lt; .05</math>; CDFS <math>F(1,263) = 4.26, p &lt; .05</math>. Tukey's HSD test showed that employers who received the combined CDFS interventions had a significantly higher score than the other three groups.</p> <p><u>Likely to hire</u>: The only significant effect was CDFS <math>F(1,263) = 4.69, p &lt; .05</math>. Tukey's HSD test revealed no significant pairwise differences.</p> <p><u>MANOVA</u>:</p> <p>No significant differences were found between the five States.</p> <p><u>Gender</u>: All four combined DVs were significantly affected by respondents' gender <math>F(4,113) = 2.65, p = .037</math>. Univariate analysis - <u>age relevant</u> was significantly affected by gender <math>F(1,116) = 5.74, p = .018</math>. Male employer respondents had significantly higher age relevant scores compared to their female counterparts, so viewed age to be significantly more important in hiring decisions.</p> <p><u>Age</u>: The four combined DVs were significantly affected by age of respondent, <math>F(8,226) = 2.58, p = .01</math>. Univariate analysis found age of respondent significantly affected <u>age preference</u> (<math>F(2,115) = 4.79, p = .01</math>) and <u>sum of scale</u> (<math>F(2,115) = 5.43, p &lt; .01</math>). Tukey HSD test showed that the <math>\geq 55</math> group had a significantly higher <u>age preference</u> than either of the other two groups, and had a significantly more positive view of older workers overall compared to the younger groups.</p> <p><u>Section C of questionnaire</u>: Open-ended question concerning what differentiates older workers' performance from that of younger workers</p> <p><u>Positive</u>: CD, FS and control had around three times as many positive attributes related to older workers compared to negative ones. CDFS had eight times</p>	<p>decision maker.</p> <p>Mistake in text: states that there were 282 completed and usable questionnaires in the employer sample but the numbers in each of the employer intervention and control groups sums to 283.</p> <p>Asking respondents to indicate their age preference of workers regardless of job description could obscure some important role- and sector-related context.</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>Future research could use larger and more representative samples and personally address questionnaires in order to get a specific person to respond. Sampling companies with advertised vacant positions could provide post-intervention measures of actual hiring.</p> <p>Using sampling sources that allow analyses as a function of type of industry would deepen analysis and provide</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>description - on a non-numerical scale. The questionnaire that followed had four sections:</p> <p>Section A: 28 items addressing stereotypical views and the extent to which they were held (Cronbach's <math>\alpha</math> between .81 to .92)</p> <p>Section B: Assessing the likelihood that respondents would employ older adults and their perceived relevance of age in hiring decisions.</p> <p>Section C: One open ended question - what other characteristics of older workers differentiate their performance from that of younger workers?</p> <p>Section D: Demographic data</p> <p><b>Setting(s):</b> Five states in Australia: Queensland, New South Wales, Victoria, South Australia and Western Australia.</p> <p><b>Dates:</b> Not reported</p>	<p>had tertiary education and 15 (5.6%) were postgraduates.</p> <p>Fifty-five responses (20.6%) were from Queensland, 43 (16.1%) from New South Wales, 51 (19.1%) were from Victoria, 63 (23.6%) were from South Australia and 55 (20.6%) were received from Western Australia.</p> <p><b>Response rate (if relevant):</b> <u>Intervention stage:</u> 556/1200 = 46.3% RR</p> <p><u>Testing stage:</u> Out of the 556 companies, 30 questionnaires were returned to sender as address unknown, leaving 526 potential responses. 306/526 = 58.2% RR</p>	<p>more positive attributes than negative ones, the most positive attributes and the fewest negative ones.</p> <p>All four groups indicated older workers had better work ethics, more appreciation of their job, more common sense and were more reliable. Three of the four suggested older workers were more experienced, more proud of their job, more willing to do all kinds of jobs, more responsible, more loyal and more honest. CDFS and FS cited that older workers were more knowledgeable, better understood the company, were better mentors, were more likely to stay in work, more stable and were wiser. CDFS and CD noted older workers were more dependable and mature. CD and FS described older workers as having more life experience.</p> <p>CD and control responded that older workers were more hardworking, better under pressure and were friendlier. FS and control found them to be more focused on their job, better at following instructions, better problem solvers, more punctual, more accurate, more patient and intrinsically motivated.</p> <p><u>Negative:</u> All four groups described older workers as set in their ways. FS and control commented that older workers were slower and had difficulties with technology. CD and FS noted older workers were resistant to change and. CD and control thought older workers were weaker and CDFS and CD thought they were less good with ICT.</p>	<p>cross-industrial differences.</p> <p>Assessing prejudice levels first and then measure the effectiveness of employing a value that is common to high and low prejudiced people in threatening their self-concept.</p> <p><b>Source of funding:</b> Not reported.</p>

Gringart et al. (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p>Authors: Eyal Gringart, Bronwyn Jones, Edward Helmes, Janis Jansz, Mary Edwards</p> <p>Year of publication: 2012</p> <p>Citation: Negative Stereotyping of Older Nurses Despite Contact and Mere Exposure: The Case of Nursing Recruiters in Western Australia Journal of Aging &amp; Social Policy, 24:400-416</p> <p>Quality rating: +</p>	<p>Research questions: What attitudes are held about older nurses by nursing recruiters?</p> <p>Research approach: Quantitative</p> <p>Data collection: Method(s): Self-report survey</p> <p>Setting(s): Western Australia. Hospitals, aged care facilities, and nursing agencies.</p> <p>23.3% rural, 76.7% urban</p> <p>Dates: Not reported</p>	<p>Sample population: Nursing recruiters in Australia</p> <p>Sampling approach: Not reported</p> <p>Inclusion/exclusion criteria: Not reported</p> <p>Number and characteristics of participants: 143 women and 19 men</p> <p>Age range 25 - 67</p> <p>Mean age 47.5</p> <p>Response rate (if relevant): Ninety-seven organisations (19.7% of agencies contacted) agreed to participate. These included 45 hospitals, 39 aged care facilities, 11 nursing agencies, and 2 medical centres.</p> <p>66.3% of questionnaires mailed were returned.</p>	<p>Brief description of method and process of analysis: Three dependent variables: the sum of a 28 item stereotype scale (higher scores equal more favourable attitudes); an age relevance question with possible range of 1 - 7, and a question on likeliness of hiring older nurses. Survey also included open ended questions asking respondents what other characteristics of older nurses differentiated their performance from younger nurses.</p> <p>Older nurses were defined as 55 - 70 years old.</p> <p>Cronbach's alpha was used to assess internal consistency.</p> <p>Principal component analysis (PCA) was used to test the relationship between the 28 item scales. This created 7 'subscales', means of which were presented.</p> <p>Linear regressions tested which subscale best predicted importance of age and likelihood to hire.</p> <p>Key findings relevant to the review: 12% of respondents reported that they were not at all likely or remotely likely to hire an older nurse. 80% of respondents rating older nurses more favourably on productivity. On the 28 item scale these older nurses were generally viewed as more efficient, competent, dependable, skilled, motivated, creative, reliable, and harder working than younger nurses. 77% of respondents rated younger nurses more favourably see them as more mentally alert, possessing good memory, being physically healthy and strong, and being energetic. 79% of respondents rated younger nurses more favourably. Higher scores indicated that older nurses were viewed as less adaptable to new</p>	<p>Limitations identified by author: Open ended question could be considered leading. Does not report inclusion exclusion criteria or sampling approach. Conclusions assume recruiters have high contact with older workers without including a measure for this.</p> <p>Limitations identified by review team: A robust PCA would have required a minimum of 280 participants, meaning study was under powered. Sampled from one Australian state only limits generalizability of findings. No measure of exposure to older workers was included. There was also no verification of actual employer behaviours in hiring of nurses of different ages. Evidence gaps/recommendations for future research: Future research could investigate how increased exposure to older workers is affecting attitudes and perceptions. How attitudes affect older workers well-being and interact with new age discrimination legislation.</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>technology, interested in technological change, trainable, productive, and more ambitious than younger nurses.</p> <p>56% indicated that older nurses were seen as more cooperative, able to fit in, flexible, and cost-effective and 53% rated older nurses more willing to work. 89% rated older nurses as more stable workers.</p> <p>50% saw all nurses as equally likely to be promoted while 36%, indicated that younger nurses are more likely to be promoted.</p> <p>A significant positive relationship was found between holding favourable attitudes towards the skills and personal qualities of older workers and reported likelihood of hiring older nurses (<math>r(163) = .32, p &lt; .01</math>).</p> <p>A significant negative correlation was found between holding negative attitudes towards older nurses and perceived age relevance in hiring decision (<math>r(163) = -.22, p &lt; .01</math>).</p> <p>These significant relationships suggest that positive attitudes toward older workers increase the likelihood of their hiring.</p>	<p>Source of funding: Not stated</p>

Harper et al. (2006)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Harper, S., Khan, H. T., Saxena, A., &amp; Leeson, G.</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Attitudes and practices of employers towards ageing workers: evidence from a global survey on the future of retirement. <i>Ageing horizons</i>, 5, 31-41.</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> How widespread are negative attitudes and stereotypes among employers, and do these attitudes influence behaviour towards older employees?</p> <p><b>Research approach:</b> Quantitative</p> <p><b>Data collection:</b> Survey</p> <p><b>Method(s):</b> Survey analysis</p> <p><b>Setting(s):</b> Companies of varying size in OECD countries, with questions asked about workers aged 50 and over</p> <p><b>Dates:</b> Initial data collected in 2004, follow-up in 2005, analysis here conducted in 2006</p>	<p><b>Sample population:</b> Second wave (relevant here) - 6,320. First wave - 10,000</p> <p><b>Sampling approach:</b> Not reported; secondary data</p> <p><b>Inclusion/exclusion criteria:</b> Not reported; secondary data</p> <p><b>Number and characteristics of participants:</b> Company type was determined by the number of employees: small (10-99 employees), medium (100-499 employees), and large (over 500 employees) The sample comprised of 2202 small, 1733 medium and 2385 large companies.</p> <p><b>Response rate (if relevant):</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>Analysis undertaken on survey results and compared across countries. Survey results generally nominal data responses, and shows country comparisons on perspectives on older workers</p> <p><b>Key findings relevant to the review:</b></p> <p>The United Kingdom (along with the US) had the highest proportion of employers holding positive stereotypes of older workers as more loyal and more reliable, and fewest negative stereotypes of older workers being less motivated, less flexible, less productive, less technologically orientated, and slower learners. Fewer than 10% of UK employers attributed four of these characteristics (unspecified) to older workers. More than 50% of UK employers attributed no negative characteristics to older workers. The UK had:</p> <p>the highest proportion of employers (70%, along with the USA) stating that they offer older workers the opportunity to pursue 'new kinds of work' (not defined in the paper);</p> <p>the highest proportion of employers (71%) which stated they offered older workers the opportunity to work fewer hours and, the largest proportion of employers who reported that they were trying to recruit older workers (44%).</p>	<p><b>Limitations identified by author:</b></p> <p>Relatively small sample, lack of control variables (discrimination is likely to be influenced by several factors including educational and organisational backgrounds and personal experience), lack of personal information about the respondents (employers), such as their age and gender.</p> <p><b>Limitations identified by review team:</b> Some elements of data not reported, ie representative population and lack of control variables. Timing predates financial crisis so employer attitudes towards older workers may have changed as a result.</p> <p><b>Evidence gaps/recommendations for future research:</b> Similar survey could be conducted exclusively in the UK with greater demographic information of respondents given.</p> <p><b>Source of funding:</b> HSBC for the Oxford Institute of Ageing</p>

## Hill et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Hill, K. B., Burke, F. J. T., Brown, J., Macdonald, E. B., Morris, A. J., White, D. A., &amp; Murray, K.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> Dental practitioners and ill health retirement: a qualitative investigation into the causes and effects. British dental journal, 209(5), E8-E8.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To determine the factors that contributed to IHR in dental practitioners, and the effects of IHR on their lives.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> Semi-structured interviews carried out with a topic list for guidance. Purposive sampling used to recruit a diverse range of respondents. Framework approach to data analysis utilised.</p> <p><b>Setting(s):</b> Dentists who retired due to ill health.</p> <p><b>Dates:</b> Interviews carried out in 2007.</p>	<p><b>Sample population:</b> 23</p> <p><b>Sampling approach:</b> Purposive sampling used to ensure representation of relevant aspects to the study.</p> <p><b>Inclusion/exclusion criteria:</b> Interview request sent to 387 individuals, of whom 210 expressed interest. 29 followed-up, of whom four were uncontactable and two withdrew.</p> <p><b>Number and characteristics of participants:</b> 23 ex-dentists, 19 Male and 4 Female, aged between 39-59 years who retired due to ill health</p> <p><b>Response rate (if relevant):</b> Initially</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>Semi-structured interviews with a topic guide used. Topics included the causes of early retirement, the effect of ill health retirement (IHR) upon health and quality of life, preventing IHR, and support. Interviews were conducted by telephone and face to face, recorded, and transcribed. A database of retirees at Wesleyan Medical Sickness (WMS) showed 594 potential interviewees; 207 were suffering from serious illness and not approached for ethical reasons. A letter requesting participation was distributed in September 2006 to 387 retired dentists; 210 provided contact details; further information was sent to them. 29 consenting respondents were purposively chosen to give diverse views and retirement reasons. For analysis, a framework based on the research questions was developed and expanded after transcripts were read to reflect emerging themes. Data were indexed and refined, and underwent independent analysis to avoid bias.</p> <p><b>Key findings relevant to the review:</b></p> <p>The main causes for IHR were depression, musculoskeletal disease and specific skin conditions. Respondents expressed concern regarding the level of support available to dentists in distress, but these are only the</p>	<p><b>Limitations identified by author:</b> N/A</p> <p><b>Limitations identified by review team:</b> Relatively small but acceptable sample size, not representative gender balance (82.6% male), potentially not generalisable due to individualised nature of the data.</p> <p><b>Evidence gaps/recommendations for future research:</b> A mixed method approach could have been more illuminating, supplementing the interviews with statistical analysis of the factors identified here; the WMS has 594 cases that this could be carried out upon.</p> <p><b>Source of funding:</b> Wesleyan Medical Sickness and the Committee of Postgraduate Dental Deaneries (COPDEND)</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
		<p>210/387 (54.3%) expressed an interest, after sampling 23/29 (79.3%) successfully interviewed.</p>	<p>views of a few practitioners and not necessarily the views of the profession. Retired dentists also recommend better training for younger graduates in respect of the causes of stress and business problems. More career advice is needed to help ill dentists continue to work in the dental profession. Post retirement counselling may also be needed to help dentists obtain alternative employment. Respondents to this study found that continuing to work had a positive impact on their health.</p>	

## Hollywood E &amp; McQuaid RW (2007)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Hollywood, E., &amp; McQuaid, R. W.</p> <p><b>Year of publication:</b> 2007</p> <p><b>Citation:</b> Employers' responses to demographic changes in rural labour markets: the case of Dumfries and Galloway. Local Economy, 22(2), 148-162.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> How are employers adjusting to demographic changes in Dumfries and Galloway?</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> Semi-structured interviews with fifty local employers about an ageing workforce.</p> <p><b>Setting(s):</b> Employers in various sectors in Dumfries and Galloway</p> <p><b>Dates:</b> Interviews conducted in 2005</p>	<p><b>Sample population:</b> 50</p> <p><b>Sampling approach:</b> Not reported besides mentioning the sectors being recruited from</p> <p><b>Inclusion/exclusion criteria:</b> Employers had to operate within the sectors of Health and Social Work, Hotels and Catering, Manufacturing, Wholesale and Retail, or Agriculture and Forestry</p> <p><b>Number and characteristics of participants:</b> 50 employers in above sectors, varying in size from 0-10 employees to 200+</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> 50 interviews carried out with employers in Dumfries and Galloway, selected from five sectors. Each sector represents a major industry in the area, except agriculture, which accounts for a small percentage of employees, but high compared to Scotland as a whole. Surveys included closed and open ended questions relating to workforce structure, recruitment problems, awareness of population ageing and age discrimination legislation, and experiences and perceptions of employing older workers. Interviews were carried out primarily by telephone, in most cases with the manager or owner. Business details were gathered from the internet and randomly sampled, although some larger employers were targeted directly. Interviews were carried out during summer 2005.</p> <p><b>Key findings relevant to the review:</b> Employers tended to attribute labour shortages to the lack of young people in the area, the reluctance of local people to take up certain kinds of job, and geographical isolation rather than the ageing workforce. The working population of Dumfries and Galloway is ageing, but responses of employers to this process are unclear. Common perceptions about older workers are that they are less adaptable to change, slower to acquire new skills and less able to cope with work pressures. However, there is also strong evidence to suggest that many employers hold very positive views of older workers, in particular that they are loyal, reliable and confident. These stereotypes play a strong role in relation to recruitment decisions of employers. Employer responses about employing older tended to be very positive; characteristics included reliability, confidence, a strong work ethic, and experience. As one hotel manager stated: 'Older workers are more reliable. They don't tend to let you down as much, they are more conscientious. Younger workers have no work ethos; they will try to get away with the bare minimum.' Most employers stated they would be willing to employ older workers but had difficulty attracting them</p>	<p><b>Limitations identified by author:</b> Face-to-face interviews may have been better but problematic travel around rural Scotland made this difficult. The research here has focused only on employers responses to workforce ageing and it is clear from the research that other aspects of the impact of population ageing need to be investigated. For example, more information is required on the actions of older workers themselves and their experiences of work and retirement in the context of rural labour markets. Comparative work from other rural and non-rural areas is also required to understand fully the nature and extent of the impact population ageing is having on the labour market.</p> <p><b>Limitations identified by review team:</b> It is necessary to assess how workplace policies on recruiting and managing older staff are implemented in practice to understand how employer perceptions and beliefs influence actual behaviours.</p> <p><b>Evidence gaps/recommendations for future research:</b> Could be replicated</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>(although few specifically made any efforts to target older people) due to pay and conditions offered. For many older workers in rural areas, low wages and poor conditions offered may be a major disincentive for labour market participation. The majority of interviewees were keen to emphasise that they did not discriminate against older people and most stated the ability to do the job was the most important factor in recruitment. Few employers admitted to directly discriminating against older workers, but there were areas in which employers were more reluctant to consider them. Poor physical health was seen as a negative aspect of employing older workers. Many of these judgements made by employers were based on perceptions of older people's ability to carry out physical jobs rather than direct experience. Training and development was less likely to be considered for older workers and in turn older workers were seen as being reluctant to participate in such activities. The response of many employers was to use migrant workers. As migrant labour is unlikely to provide the sole solution to labour shortages, employers need to be made aware of the potential of the resident labour force.</p>	<p>in a wider area</p> <p><b>Source of funding:</b> Scottish Enterprise Dumfries and Galloway</p>

## Jenkins A (2008)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Andrew Jenkins</p> <p><b>Year of publication:</b> 2008</p> <p><b>Citation:</b> Jenkins, Andrew Kevin (2008) Age discrimination in hotel workplaces: HRM practices and their effects on the employment of "older" workers. In: Conference Proceedings of the 17th Annual CHME Research Conference. University of Strathclyde, pp. 239-254. ISBN 0954803914</p> <p><a href="http://eprints.hud.ac.uk/3528/">http://eprints.hud.ac.uk/3528/</a></p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> The aim of the article is to assess the role of Human Resource practices in perpetuating age discrimination in hotel workplaces. This aim is supported by four objectives, namely</p> <ol style="list-style-type: none"> <li>1. To define an 'older' worker, ageism and age discrimination</li> <li>2. To establish the link between ageism and discrimination</li> <li>3. To ascertain the effects of Human Resource management practices in hotel workplaces on the employment of 'older' workers</li> <li>4. To suggest ways in which hotel workplaces can minimise age discrimination against 'older' employees in relation to recruitment, selection, training, development, equal opportunities and managing diversity.</li> </ol>	<p><b>Sample population:</b> Ten HR managers in Ireland (N=5) and the UK (N=5)</p> <p><b>Sampling approach:</b> The hotel chain was purposefully selected as it was considered to be 'typical' of hotel chains in the UK and Ireland. The hotels where interviews took place were purposefully selected to reflect the geographical coverage of hotels and, furthermore, represent the hotel chain's major brands.</p> <p><b>Inclusion/exclusion criteria:</b> NR</p> <p><b>Number and characteristics of participants:</b> All were female and white. Nove were aged 50 or above. All worked full-time.</p> <p><b>Response rate (if relevant):</b> NA</p>	<p><b>Brief description of method and process of analysis:</b> In developing a structure to the interview process, Kvale's (1996) seven stages of an interview investigation was used. This consisted of the following stages: thematising, designing, interviewing, transcribing, analysing, verifying and reporting. Furthermore, different types of interview questions were used, namely introducing questions, follow-up questions, probing questions, specifying questions, direct questions, indirect questions and interpreting questions. In terms of the interview strategy, flexibility is required in responding to the interviewee's interpretation of the social world. Therefore, semi-structured interviews were undertaken. The semi-structured interview is 'composed of parts which are structured while other parts are relatively unstructured'.</p> <p><b>Key findings relevant to the review:</b> The study uncovered little evidence to suggest that older workers are experiencing direct discrimination. However, evidence of indirect discrimination included the widespread use of internet recruitment, a focus on local colleges when recruiting, a focus on work flexibility, a desire to recruit Eastern European workers and few special initiatives to attract older employees.</p>	<p><b>Limitations identified by author:</b> NR</p> <p><b>Limitations identified by review team:</b> The sample could have been substantially larger. All the participants were women and it would have been important to include men. No validation of data given in interviews by other methods of data collection and experience of older workers themselves not included.</p> <p><b>Source of funding:</b> NR</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p><b>Research approach:</b> Qualitative Semi-structured interviews</p> <p><b>Data collection:</b> Face-to-face interviews</p> <p><b>Method(s):</b> Semi-structured interviews with thematic analysis</p> <p><b>Setting(s):</b> Well-known hotel chain operating in Dublin (3), Cork, Limerick, Glasgow, Newcastle, Birmingham, Bristol and London.</p> <p><b>Dates:</b> The interviews took place at summer of 2005</p>			

## Jenkins A (2009)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Andrew Jenkins</p> <p><b>Year of publication:</b> 2009</p> <p><b>Citation:</b> Jenkins, Andrew Kevin (2009) 'Older' hotel employees' perceptions of workplace equality in the UK and Ireland. In: 18th CHME Annual Hospitality Research Conference, 13-15, May 2009, University of Brighton. (Unpublished) <a href="http://eprints.hud.ac.uk/8745/">http://eprints.hud.ac.uk/8745/</a></p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> Aim of the paper was to explore the attitudes, experiences and aspirations of older workers and developing a theory.</p> <p><b>Research approach:</b> Qualitative Semi-structured interviews</p> <p><b>Data collection:</b> Face-to-face interviews</p> <p><b>Method(s):</b> Interpretivist methodology</p> <p><b>Setting(s):</b> Well-known hotel chain operating in Dublin (3), Cork, Limerick, Glasgow, Newcastle, Birmingham, Bristol and London.</p> <p><b>Dates:</b> NR</p>	<p><b>Sample population:</b> Older workers in hospitality industry</p> <p><b>Sampling approach:</b> The hotel chain was purposefully selected as it was considered to be 'typical' of hotel chains in the UK and Ireland. The hotels where interviews took place were purposefully selected to reflect the geographical coverage of hotels and, furthermore, represent the hotel chain's major brands.</p> <p><b>Inclusion/exclusion criteria:</b> NR</p> <p><b>Number and characteristics of participants:</b> 23 older workers (aged 50 or above) in 10 hotels within a hotel chain, 12 in the UK and 11 in Ireland. The 'older' workers comprised 11 females and 12 males and included workers from housekeeping, front office, food and beverage, concierge, maintenance, finance and conferencing.</p> <p><b>Response rate (if relevant):</b> NA</p>	<p><b>Brief description of method and process of analysis:</b> Questions were asked regarding previous work experience, perceptions regarding their work, status as 'older' worker, recruitment, selection, training, development, retirement, skills and knowledge. The interview method was selected to investigate older hotel workers' views on workplace equality as the method is a very good for investigating a person's beliefs, perceptions and views of reality. Moreover, the choice of an interpretivist methodology to research older hotel workers is consistent with the need to understand the reality, actions, motives and intentions of the research participants.</p> <p><b>Key findings relevant to the review:</b> - In general, It would appear that age and older age are relative concepts and the age at which a person becomes 'old' will differ according to a range of factors such as health, income, gender, social class and education. - Housekeeping was mentioned by nine older workers as being not suitable for older employees as work in this area was considered physically demanding. - Only a few had experienced ageism, but there was indication at the interviews that people may be victims of a variety of forms of age discrimination without being aware of it. - Participants had undertaken a range of training and development courses in such areas as health and safety, customer care and information technology.</p>	<p><b>Limitations identified by author:</b> NR</p> <p><b>Limitations identified by review team:</b> No description of how participants were selected which makes it difficult to estimate selection bias, ie workers who enjoy working at hospitality sector may have been more likely to participate.</p> <p><b>Evidence gaps/recommendations for future research:</b> Given recent moves in the UK to legislate against age discrimination in the workplace, a fruitful avenue of research could focus on how these regulations have affected organisational employment policies and practices.</p> <p><b>Source of funding:</b> NR</p>

Jenkins et al. (2014)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Jenkins, A.K., Poulston, J and Davies, E.M.M.</p> <p><b>Year of publication:</b> 2014</p> <p><b>Citation:</b> Jenkins, A.K., Poulston, J and Davies, E.M.M. (2014). The working lives of older hotel workers: is there evidence of psychological disengagement in the work-to-retirement transition zone? In: Council for Hospitality Management Education Annual Research Conference, 28<sup>th</sup>-30<sup>th</sup> May 2014, Buxton, Derby, UK. (unpublished).</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> This exploratory study examines the working lives of older hotel workers aged fifty and above to examine if there is evidence to suggest that these workers experience disengagement as they approach retirement.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Semi-structured interviews</p> <p><b>Method(s):</b> Interview with 19 older hotel workers</p> <p><b>Setting(s):</b> Hotel workers in 5 UK hotels, located in the UK (Belfast, Bristol, Cambridge and Bournemouth).</p> <p><b>Dates:</b> Not reported</p>	<p><b>Sample population:</b> 19 participants interviewed. Of the nineteen people 3 held a management position in the hotel. No other description of the population given.</p> <p><b>Sampling approach:</b> Non-probability sampling method adopted whereby individuals were selected based on the willingness of the human resources manager to cooperate with the researcher to interview older worker.</p> <p><b>Inclusion/exclusion criteria:</b> Not reported</p> <p><b>Number and characteristics of participants:</b> 19 hotel workers</p> <p><b>Response rate (if relevant):</b></p>	<p><b>Brief description of method and process of analysis:</b> Semi-structured interviews with hotel employees were held in 5 hotels in the UK. Where possible interviews were recorded and transcripts produced. In a small number of cases where the employee did not want to be recorded detailed notes were taken. Interviewees were asked a range of questions relating to their work, including their job, their views on being an older worker, training, promotion, retirement and ageism.</p> <p>Transcripts were analysed using a three stage matrix approach: Stage 1 - using the data matrix to structure the rich transcript source data. Stage 2 - matrices were used to condense the data around the key analytic themes. Stage 3 - analysis was conducted on a between-case basis to explore the range and diversity of meanings of engagement and disengagement according to different criteria such as gender and complexity of job role.</p> <p><b>Key findings relevant to the review:</b> None of the interviews mentioned either instability or insecurity.</p>	<p><b>Limitations identified by author:</b> A more complete study would be achieved by interviewing a greater number of older hotel workers, not just in the UK but elsewhere or applying a quantitative research methodology.</p> <p><b>Limitations identified by review team:</b> Nothing about other factors that could affect their employment (eg family, health, finances). Possibly of selection bias due to management involvement in gaining access to interviewees.</p> <p><b>Evidence gaps/recommendations for future research:</b> Not reported</p> <p><b>Source of funding:</b> Not reported.</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>There was little to suggest that work was not meaningful. Social contact in the work setting was seen as important. Little evidence of older workers not feeling valued or trusted, or treated inequitably because of their age.</p> <p>Majority of older workers reported no evidence of workers feeling undue stress or anxiety, but there was evidence that older hotel workers may reduce their working hours.</p> <p>Majority of older workers seem content with their job and place of work. Managers continued to engage with older staff recognising their skills, experience and knowledge.</p> <p>No older workers mentioned poor working conditions, poor management or leadership, poor resourcing, acceptance and tolerance of low outputs or work being too complex.</p> <p>Retirement for some is a release from work, however for many retirement was viewed negatively.</p>	

Lancaster et al. (2011)

Review Details	Review search parameters	Review population and setting	Outcomes and methods of analysis	Results	Notes by review team
<p><b>Authors:</b> Rebecca Lancaster, Yvonne Lawson and Adele Pilkington</p> <p><b>Year of publication:</b> 2011</p> <p><b>Citation:</b> Mental Health in Later Life: A review of effective interventions to support mentally healthy retirement</p> <p><b>Review Design:</b> Meta-Analysis</p> <p><b>Main research questions:</b> How can retirement impact mental health and</p>	<p><b>Databases and websites searched:</b> The knowledge network, Medline, Psychinfo, Cochrane Library and Google</p> <p><b>Other search methods:</b> Browsing and searching key websites, contact with 'experts in the field'</p> <p><b>Years searched:</b> 2000-2011</p> <p><b>Inclusion criteria:</b> The aim of the study was to concentrate on review level literature. However, very few review level studies were identified. Therefore, particularly relevant individual studies were included. Large, nationally</p>	<p><b>Included populations:</b> Studies containing Mental health OR Wellbeing OR Well-being AND Retirement</p> <p><b>Missing information:</b> Whether demographic or geographical criteria were applied</p> <p><b>Inclusion/exclusion criteria:</b> See above</p> <p><b>Excluded populations:</b> Studies were excluded that looked at retirement communities, social care, ill health retirement, and specific mental health conditions solely.</p> <p><b>Setting of</b></p>	<p><b>Outcomes measures:</b> Impact of retirement on mental health and wellbeing, impact of working beyond the usual retirement age on mental health and wellbeing, effective interventions to promote the mental health and wellbeing of those approaching retirement, and available pre-retirement support</p> <p><b>Method of analysis:</b> Literature grouped</p>	<p><b>Relevant outcomes:</b></p> <p>There is mixed evidence for the impact of retirement on mental health and wellbeing. A range of individual, social, retirement, job/organisational variables, and post retirement factors are likely to explain these contradictory findings. Multiple retirement trajectories have been proposed, suggesting that, whilst the impact is not uniform, it can be predicted by these individual and environmental characteristics. Studies of job and organisational variables provide increasing evidence for the role of 'quality of work' in retaining employees and protecting mental health of those aged 50+.</p> <p>Evidence would suggest that 'choice' and 'conditions of exit' play a clear role in determining the impact on mental health and this is a more important determinant than the 'type' of retirement.</p> <p>Working beyond the 'retirement' age supports improvements or at least maintenance of mental health, this is however dependent on the 'quality of work'. For example, work characteristics that are known to support mental health and wellbeing, are those such as autonomy, fulfilment, effort-reward balance, job satisfaction.</p> <p>There is some evidence for the positive impact of retirement planning on retirement adaptation, though more recent studies conclude that this alone is not sufficient to secure wellbeing in retirement. There is some evidence for socio economic differences in access/take up of retirement planning activities and it would be useful to verify this for the Scottish population as this may be a focus of targeted interventions to reduce social inequalities.</p> <p><u>Key findings from the support mapping</u></p> <p>Although a prerequisite for inclusion in this mapping was coverage of 'health' in the support provided this varied greatly in scope and content from one provider to the next.</p> <p>All providers deliver support to those in pre-retirement/retirement transition. The support is generally not sector specific or provided to certain sizes of workplace. It is also not aimed at any specific populations ie sectors, demographics etc. However, some do provide separate 'executive training' for those in senior roles. There appears to be a lack of formal evaluation of services.</p>	<p><b>Limitations identified by author:</b> Lack of data on interventions</p> <p><b>Limitations identified by review team:</b> Methodology not made particularly explicit</p> <p><b>Evidence gaps/recommendations for future research:</b> Research into interventions would fill a gap. Further research is required to inform guidance for employers on what is most effective in terms of how they can retain employees aged 50+, ensure a positive impact of working beyond retirement age and support employees through the retirement</p>

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<p>wellbeing? What is the impact of working beyond the usual retirement age on mental health and wellbeing? Are there effective interventions to promote the mental health and wellbeing of those approaching retirement? What pre-retirement support is currently available UK wide? <b>Quality rating:</b> +</p>	<p>representative sample studies were given priority (particularly for identifying impact of retirement). Due to the lack of literature on interventions, all intervention studies identified were included. <b>Exclusion criteria:</b> Duplicate articles, Small sample size, Poor study design, Non-transferable population, Insufficient data presented. <b>Number of studies included:</b> 42 <b>Number of studies excluded:</b> 135 <b>Method of synthesis:</b> meta-analysis</p>	<p><b>included studies:</b> Not reported</p>	<p>around each separate research question and key findings extracted. An additional survey was sent to employers to supplement data and findings from the literature review, and providers of support were also mapped.</p>	<p>This echoes the findings from the literature review, which also found little evaluation of interventions. <u>The employer survey</u> This survey did not aim to establish a representative picture of employers across Scotland but rather an indication of the types of activity and differences between different sizes of workplace and types of workplace obtained through a 'snapshot' survey of a small database of employers in Scotland. One hundred and forty one responses were received from employers across Scotland. From this snapshot survey, medium and large workplaces were more likely to review their policies and large and public sector workplaces were more likely to provide training for those administering retirement processes compared with smaller and private sector or voluntary workplaces. A similar proportion of medium and large workplaces that responded offered phased retirement (around 50%). The proportion is less for small (38%) and micro workplaces (17%). A large proportion of micro workplaces that responded offered flexible working after Default Retirement Age (DRA) (67%), as did large workplaces (65%) and medium workplaces (77%). The proportion for small workplaces was less (44%). Three quarters of large workplaces that responded provided pre-retirement training, 45% with a health element. Pre-retirement training and counselling was provided by a greater proportion of public sector workplaces compared with private and voluntary sector. Pre-retirement counselling was less common than training in all workplaces. Annual medicals, regular reviews, time off to attend courses, time off for adjustment (paid and unpaid) were among the other types of support reported by workplaces that responded to the survey. Some of the reported benefits of retirement support were: maintaining skills; a more diverse workforce; transfer of skills and experience; being a caring employer; staff feel valued; enhanced staff motivation; succession planning; maintaining mental and physical health of staff. Some of the challenges reported by respondents were: covering staff to take time off to attend courses; meeting expectations; cost of providing services; poor take up; low staff turnover.</p>	<p>transition into a mentally healthy retirement. <b>Source of funding:</b> NHS health Scotland</p>

Loretto W & White P (2006)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Loretto, W., &amp; White, P.  <b>Year of publication:</b> 2006  <b>Citation:</b> Employers' attitudes, practices and policies towards older workers. Human resource management journal, 16(3), 313-330.  <b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To investigate further the relationships between employers' policies, practices and attitudes towards older workers  <b>Research approach:</b> Qualitative  <b>Data collection:</b> Focus groups  <b>Method(s):</b> Focussed interviews in a group context with employers in four regions of Scotland  <b>Setting(s):</b> Employers of varying sizes and sectors around Scotland</p>	<p><b>Sample population:</b> Employers in Scotland  <b>Sampling approach:</b> Not reported  <b>Inclusion/exclusion criteria:</b> Not reported  <b>Number and characteristics of participants:</b> 40 employers across numerous sectors in four areas of Scotland. Businesses ranged in workforce size from 2 to 18,000 employees.  <b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> Focus groups were conducted in four areas of Scotland: Dumfries and Galloway, Edinburgh, Lanarkshire, and Tayside. All employers on a range of employment databases were invited to participate in the groups, discussing 'older workers in the Scottish labour market'. Of 47 positive responses, 40 participated. Semi-structured discussions recorded and fully transcribed. A combination of thematic and inductive approaches to analysis was adopted, both authors scanning accounts to identify key attitudes and experiences as articulated by individuals and examining interactions and associations between participants. The latter approach allowed for fuller exploration of the ways in which attitudes are constructed. In addition, prior to commencement of the group discussions, each participant completed a brief questionnaire which allowed for systematic capture of information relating to organisational characteristics (such as size, sector, etc., outlined above) and existence of employment policies.  <b>Key findings relevant to the review:</b>            1. Recruitment and selection            Some employers emphasised neutrality regarding age, others were forthright in stating preference for older workers. The advantages of older workers were based on positive experience rather than generalised stereotypes. The benefits mainly centred on experience; several firms in the finance sector had employed experienced recruits with experience and valuable contacts. There was consensus that older workers possess better interpersonal skill: one employer wanted an older person as 'they are better in handling complaints from customers'. Another, in a caring capacity, had found that 'older people have a better temperament and more patience, especially in the care of the elderly', which in turn was felt to impact favourably on the clients. Whether or not older workers were perceived to have job-specific skills that were valued varied. Amongst certain manufacturers, there was a consensus that, due to a decline in apprenticeships for younger people, some skills were in scarce supply, placing skilled older workers at an advantage. A feeling prevailed that older employees are more committed, taking pride in getting a job done well, and are motivated, with more 'staying power' than younger counterparts. The reasons for this greater willingness to work were extensively discussed. Some felt that as older employees were free from family commitments they could work more</p>	<p><b>Limitations identified by author:</b> Acknowledge possible response bias in asking for volunteer participants. Sought to minimise this through describing the research context in as neutral terms as possible - the title of our research was 'older workers in the Scottish labour market'. Second, although focus groups constitute a more naturalistic environment than individual interviews, there are limits to the extent to which these conversations could be regarded as natural. These included some factors specific to our approach: our respondents did not know each other and the numbers of participants in each group may have inhibited natural conversational flows, as well as more generic factors such as the interventions of the facilitator and the possibility that the groups would display opinions for the facilitator. Nevertheless, we maintain that other key aspects of a natural setting, such as agreement, disagreement, interruptions, humour, silence, etc. were realised.  <b>Limitations identified by review team:</b> Analysis could have been more rigorous and better explained; perhaps a coding software such as nVivo would help in presentation of findings? research was undertaken before the abolition of the default retirement age, so employer policies</p>

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	Dates: N/A		<p>hours and be more flexible, while others mentioned personal drivers such as financial motivation. This could be age or generational; there was mention of the 'old school' and a different work ethic. However, other employers expressed concern that these unfavourable comparisons can be taken too far. Several organisations, adopted an accommodating approach to older workers; one employed a sales director aged 65, the normal retirement age, and the individual was still there four years later. Another described a man who had worked for 20 years on nightshift; post-retirement, he returned to the company to work a day shift on a casual basis. She also spoke positively about employing older workers with health problems. Finally, personal preference was offered as a reason in support of older workers; one employer admitted that he had chosen an older secretary deliberately 'because I am older than the average, and I can relate to somebody mid-40s probably better than somebody aged 20'. However, it became apparent that many of the positive approaches to employing older workers did not arise from positive attitudes, but rather arose because of commercial exigencies or local labour market shortages. Even where employers were extolling the benefits of hiring older workers, there was evidence that older workers had not been the first choice. This carried the corollary that older workers might come to be regarded as peripheral workers, not valued in their own right. Moreover, although employers expressed enthusiasm for an 'age-diverse' workforce in abstract terms, there was extensive evidence that younger 'prime-age' workers were the preferred workforce. Stereotypes were also influential in creating a gap between policy and practice; In several cases, attitudes based on stereotypes were used to justify departures from policy. One director of a small manufacturing company, who had asserted his organisation's commitment to age equality at the outset of the discussion, later admitted that most of his organisation's recruits were aged between 30 and 45 and that there is a preference for younger people in manufacturing jobs because of the physical work which is involved. Furthermore, he stated that he did not think that older workers display higher commitment than younger.</p> <p>II. Managing performance</p> <p>Over half of the employers felt that performance decreased from age 50 onwards, particularly for those doing manual work. Concern was expressed that older workers in manual occupations are less able to cope with physically demanding jobs. Accounts revealed some flexibility towards older workers, with 10 employers saying that they offered revised work patterns, seven of whom</p>	<p>and practices in managing older workers may have changed. Most fundamentally, employer policies may not translate into practice and more detailed investigation of how policies are applied including older and younger workers' perceptions of them is required.</p> <p><b>Evidence gaps/recommendations for future research:</b> 'We are left with the sense of little progress in the intervening 10 years since Taylor and Walker conducted their research. One of their findings was that, although most employers perceived older workers favourably, this did not often translate into positive action. We still do not fully understand why this enactment gap exists, and how it might be closed. More research into the theoretical and conceptual links between attitudes, practices and policies is called for. Using this study - and its limitations - as a starting point, we advocate a longitudinal approach incorporating multiple research methods. This would allow for triangulation, by independently assessing policy and practice, as well as monitoring how attitudes are formed and may shift over time as contexts change.</p> <p><b>Source of funding:</b> Scottish Enterprise</p>

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			<p>were prepared to switch older employees to lighter duties if required. Although job-related stress (or burn-out) was mentioned by several employers as affecting white-collar, managerial and professional workers, there was less evidence of employer intervention. While a couple of employers mentioned 'job redeployment' in vague terms, they could not provide any details or examples. Instead the more common response was to 'allow' the employee to take early retirement. It was clear that attention to cost was a significant driver of concerns about productivity of older workers. Employers expressed unease about absence and general health of older workers and the effects on individual and business productivity.</p> <p>III. Training and promotion</p> <p>All employers apart from one claimed that they had no upper age bar on opportunities for training or promotion. Several reasons were put forward for equal training opportunities: these were mainly external drivers such as industry requirements or Investors in People Standard. The one employer who did admit to an age threshold - 60 years old - said that 'older people don't take to training very well', subsequently supported by other comments based on experiences where older workers were less keen and willing to learn. Another employer specifically mentioned problems in getting older workers to train in IT, but this was countered by the opinion that 'older workers aren't any more difficult to train, but they may lack confidence about putting themselves forward'. Such reticence may also arise from ageist assumptions, perhaps encouraged by previous experience of ageism either by themselves or by colleagues or friends. Only one employer said that they offered age-sensitive re-training to help older workers. There were several indications that older workers are more likely to resist development plans, which may have implications for their opportunities to be promoted.</p> <p>IV. Ending Employment: Retirement</p> <p>There was evidence in other cases of a more flexible approach to retirement, with a quarter of employers saying they offered phased or flexible retirement or revised work patterns. Almost a half said that they offered the option for older employees to work part-time. Even those employers who operated fixed retirement age(s) showed some flexibility in practice. Another employer, in the public sector, said that their terms of employment state that people can ask to stay on after NRA. It appeared that more flexible approaches to retirement - in terms of either policy or exceptions to policy - were directly related to positive experience of older workers. Overall, it was the larger employers who operated</p>	

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			<p>retirement ages, with smaller organisations being more open. The role of occupational pensions in encouraging retirement was also mentioned in this respect. The employers who did not operate a pension scheme felt that this was a key factor in keeping employees for longer. Where, as is likely to be the case in smaller organisations, only the minimum statutory redundancy payment could be afforded and given, then that would not constitute an attractive incentive. Cost issues were also germane to the future of retirement policies in larger organisations. One large manufacturer whose company operated an early retirement scheme that people can 'buy into' at age 45 expressed concerns about the extensive HR implications of no longer being able to afford the scheme. He was aware that having to retain older workers would imply more attention to job design to overcome declining physical capability, and felt daunted by the prospect of trying to alter employees' expectations away from retiring early.</p>	

Lundberg and Marshallsay (2007)

Study Details	Research parameters	Population and sample selection	Methods of analysis and results	Notes by review team
<p><b>Authors:</b> Lundberg, David and Zaniah Marshallsay</p> <p><b>Year of publication:</b> 2007</p> <p><b>Citation:</b> Lundberg, D. and Z. Marshallsay (2007) <i>Older workers' perspectives on training and retention of older workers</i> NCVER</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The attitudes of older workers about continuing on in the workforce past retirement age. How changes to superannuation, work cover and insurance requirements assisted employment past retirement age</p> <p><b>Research approach:</b> Survey</p> <p><b>Data collection:</b> Focus groups, surveys</p> <p><b>Method(s):</b> A survey of Australian older workers (45+) in three sectors represented by four unions, and union membership lists used for recruitment of respondents: 1) Finance/Finance Sector Union/National; 2) Aged care/Health Services Union of Australia/Victoria; 3) Aged care/Liquor, Hospitality and Miscellaneous Union/ South Australia; and 4) Construction, Forestry, Mining and Energy Union/South Australia. <u>Stage 1: Focus groups</u> Made up of small sample of</p>	<p><b>Sample population:</b> Aged care: Skilled and predominantly middle-aged female demographic.. Represented by both the Health Services Union of Australia (Eastern Australian) and the Liquor, Hospitality and Miscellaneous Union (South and Western Australian). More than 40% of workers in the sector were aged 45 and older and 78% were female (ABS 2003). Construction: The Construction, Forestry, Mining and Energy Union covered a cluster of construction industry occupations. Predominantly male demographic with a varied skill profile, and of significant and growing importance to the Australian economy. More than 29% of construction industry employees were aged 45 and over and 13% female (ABS 2003). Finance: More balanced gender mix and diverse skill profile subject to rapid technological change. Represented by the Finance Sector Union. More than 25% of employed persons in the finance an insurance sector were aged 45 or older and 56% female (ABS 2003)..</p> <p><b>Inclusion/exclusion criteria:</b> Workers aged under 45 were excluded</p> <p><b>Number and characteristics of participants:</b> <u>Focus groups:</u> Construction: 17 male retired union members.</p>	<p><b>Brief description of method and process of analysis:</b> Systematic sampling with a random start apart from construction where the questionnaire was all inclusive. National finance sample: every sixth name after the random start. Victorian aged care: every fifth name after the random start. South Australian aged care: every third name after the random start. Analysis method not reported</p> <p><b>Key findings relevant to the review:</b> <u>Survey:</u> Most respondents in the four samples believed they will need to work. Less than one in 10 of the aged care sample (9.9% and 8.5%), one in eight of the construction sample (12.7%) and one in five of the finance sample (22%) believe they would <b>not</b> need to work beyond their retirement age. For around two-fifths of respondents, there was ambivalence about the attitudes of their colleagues to older workers remaining beyond retirement (between 31.1 and 43.1%). However, only about one in five of the aged care (18 and 22.8%) and finance (17.3%) samples and one in three of the construction (31.2%) samples saw their colleagues' attitudes as negative or very negative. More than half of the respondents in the four union samples (between 53.9 and 56.2%) were uncertain of the attitudes of their employers to supporting training for older workers continuing in work beyond retirement, although one in five or less of the four samples saw their employer's attitude as negative (between 9.1 and 15.5%) or very negative (between 1.6 and 7.3%). Over half of respondents (56.1 - 68.1%) indicated that they did not require training to continue working beyond retirement age, while less than one in three did (24.0 - 30.3%). More than half of those who indicated that they</p>	<p><b>Limitations identified by author:</b> A national household survey seeking responses from older workers could avoid any potential bias introduced by these lists, but it would be absurdly inefficient and expensive. The response rate to the two South Australian questionnaires was less satisfactory. The South Australian aged care study response and the construction industry response rates were too small for these samples to be generalised.</p> <p><b>Limitations identified by review team:</b> Detail provided on focus groups is not comparable. Rates of response to qualitative questions provide limited insight. No method of analysis reported. Response rates are variable limiting</p>

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	<p>older workers from each participating industrial partner. Respondents were directed to consider the retirement age for people of their gender in their sector.</p> <p><u>Stage 2: Surveys</u></p> <p>The formulation of the survey was guided by the focus groups, and questions suggested by union secretaries were incorporated. The questionnaire was then administered to four samples from each of the unions, and interpretations of findings were validated by the focus groups.</p> <p>Ethical clearance obtained from the University of South Australia's Human Research Ethics Committee.</p> <p><b>Setting(s):</b> Australia (varying regions)</p> <p><b>Dates:</b> Not reported</p>	<p>Finance FG: Four male and nine female union representatives from five different institutions including banks, credit unions and insurance.</p> <p>Aged care FGs (two separate meetings): Not reported</p> <p><u>Surveys:</u></p> <p>Authors state that age and gender distributions were comparable with ABS data, however this does not match with the ABS data previously stated.</p> <p>N Finance (FSU) = 1070 N Aged care (HSU) = 520 N Aged care (LHMU) = 194 N Construction (CFMEU) = 242</p> <p><u>Gender</u></p> <p>Finance (FSU) 63.2% female Aged care (HSU) 91.7% female Aged care (LHMU) 93.3% female Construction (CFMEU) 2.1% female</p> <p><u>Age</u></p> <p>Finance (FSU) 45-59 (31.3%), 50-45 (35.5%), 55-59 (21.3%), 60-64 (8.6%) and 65 and over (3.2%) Aged care (HSU) 45-59 (20.6%), 50-45 (32.2%), 55-59 (30.8%), 60-64 (14.5%) and 65 and over (1.9%) Aged care (LHMU) 45-59 (17.1%), 50-45 (41.5%), 55-59 (29.5%), 60-64 (10.4%) and 65 and over (1.6%) Construction (CFMEU) 45-59 (26.9%), 50-45 (26.1%), 55-59 (23.5%), 60-64 (11.8%) and 65 and over (11.8%)</p> <p><b>Response rate (if relevant):</b></p>	<p>would need training to obtain different work after they retire reported that this was available to them (between 50.0 and 56.3%), and less than one in five (between 15.4 and 17.7%) reported that it was not.</p> <p>Of those who indicated they saw value in training to enhance the productivity and effectiveness of older workers who continue to work beyond retirement age, around half felt this was available to them (45.6 - 47.5%). Less than one in five felt this was not the case (12.2 - 15.3%), except in the construction sample, where about two-fifths reported training was available (36.1%) and one in five reported that such training was not (19.6%).</p> <p>Around two-fifths of respondents thought there were gender differences in access to training and employment opportunities for older workers (strongly agree 11.4 - 14.1%; agree 28.2 - 38.3%). One in five did not (disagree 17.3 - 18.8%; strongly disagree 1.6 - 3.1) aside from construction where this was one in 10 (disagree 8.9%; strongly disagree 2.1%). Responses concerning gender discrimination were similar from male and female respondents.</p> <p>Around seven in 10 saw a need for training supervisors and younger workers about age-biased stereotypes (strongly agree 15.1 - 23.3%; agree 45.8 - 53.1%), and one in 10 did not (strongly disagree 0.4 - 2.0%; disagree 6.7 - 10.4%). The authors feel this is diminished by other findings.</p> <p><u>Qualitative responses:</u></p> <p>Most respondents considered training in or updating computer skills as the most useful training which would enable them to continue working effectively past retirement age.</p> <p><u>Finance FG:</u></p> <p>Respondents thought there was no real encouragement for remaining in the workplace, which is characterised by subtle discrimination and harassment. Concern that workers would be made redundant through the</p>	<p>generalizability.</p> <p><b>Evidence gaps/recommendations for future research:</b> None reported.</p> <p><b>Source of funding:</b> The Department of Education, Science and Training on behalf of the Australian Government and state and territory governments.</p>

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		Adjusted response rates: Finance (FSU): 44.1% Aged care (HSU): 34.9% Aged care (LHMU): 23.0% Construction (CFMEU): 13.6%	introduction of technology. Increasing workloads in a short period of time, the complexity of jobs and length of service not being taken into account were further pressure points.	

## Macleod et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Macleod A., Worman D., Wilton P., Woodman P., and Hutchings P.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> Managing an ageing workforce: How employers are adapting to an older labour market, Chartered Management Institute &amp; Chartered Institute of Personnel and Development</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> An overview of the changing nature of employment practices and develops recommendations to maximise the contribution and retention of older workers</p> <p><b>Research approach:</b> Mixed Methods</p> <p><b>Data collection:</b> Survey data, supplemented with case studies of 10 employers</p> <p><b>Method(s):</b> CMI/CIPD survey (mode unreported), with 10 case study interviews</p> <p><b>Setting(s):</b> CIPD/CMI members surveyed. Case studies based in 10 employers with</p>	<p><b>Sample population:</b> CIPD and CMI members</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> Individuals and organisations with CIPD/CMI membership</p> <p><b>Number and characteristics of participants:</b> 1,033 respondents. The study states that: 'The personal characteristics of respondents are therefore reflective of the institutes' professional members - respondents had an average age of 52 and were more likely to come from a large than a small organisation.' 37% of respondents came from the public sector (15% from education and 11% from health and</p>	<p><b>Brief description of method and process of analysis:</b> Survey method and analysis approach unreported</p> <p><b>Key findings relevant to the review:</b> <u>Attitudes to older workers</u> <b>Positive attitudes towards older workers</b> - 93% of respondents agreed that knowledge and skills of older workers were highly valuable. 69% disagreed that older workers are more expensive. <b>Benefits of employing older workers</b> -knowledge retention was the principle driver of retention, well ahead of legal compliance or cost control issues (90 compared to 36 and 19% respectively). <b>Reasons for working later in life</b> - motivations were principally financial, as people looked to maintain income or top up pensions. Maintaining social connections and being personally fulfilled were also important. <b>Experiences of age discrimination</b> - 40% felt disadvantaged by age, with these experiences mostly relating to job applications and promotions. <u>Impact of General HR Practices</u> <b>Recruiting older workers</b> - 64% of organisations had removed age from application forms, up from 44% in 2005. <b>Training and skills development</b> - 91% said their organisation offered training regardless of age, and 77% saw training as very important in keeping skills up-to-date. <b>Flexible working</b> - around 60% of respondents reported that their organisations offered part-time and flexible working to all employees, in line with a general pattern of providing employment benefits in an age-free way. These were considered important strategies for retention <b>Redundancy</b> - age was not regarded as a key factor in redundancy selections. Job performance and skills were the primary factors, with cost issues and length of service regarded as less important. <u>The Challenge of Retaining Older Workers</u> <b>Policies and preparedness</b> - 14% of managers and HR managers considered their organisation very well prepared to cope with issues of an ageing workforce. Only a third reported board-level recognition of the need for an effective strategy on employing older workers.</p>	<p><b>Limitations identified by author:</b> N/A</p> <p><b>Limitations identified by review team:</b></p> <p>Very little information about the survey approach (eg survey mode, response rate etc.).</p> <p>Lack of significance testing or analysis on longitudinal survey data meant the data could have been used much more convincingly</p> <p><b>Evidence gaps/recommendations for future research:</b> Data analysed statistically, a greater number of case studies undertaken and qualitative analysis undergone.</p> <p><b>Source of funding:</b> Not Reported</p>

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	<p>policies aimed at older workers</p> <p><b>Dates:</b> April 2010</p>	<p>social care).</p> <p><b>Response rate (if relevant):</b> Not reported</p>	<p><b>Driving change</b> - HR departments were seen as very influential in terms of managing older workers. They played a key role in driving through the necessary changes organisations need to adapt to an ageing workforce.</p> <p><b>Resistance to change</b> - line managers were regarded as highly influential in the implementation of organisational policies, yet also somewhat resistant to change.</p> <p><b>Managing older workers</b> - 7% offered training to line managers on managing older workers, yet 47% thought such training was needed. 59% thought young managers found it hard to manage older workers.</p> <p><b><u>Retirement Policies</u></b></p> <p><b>Default Retirement Age (DRA)</b> - Just over 1/3 of those using the DRA felt more employees stayed on past 65, but nearly half thought retirement patterns had not changed since its 2006 introduction.</p> <p><b>Retirement policy</b> - 57% reported that their organisation used the DRA of 65. 19% had no fixed retirement age or retirement above 65. Many managers were not well informed about their organisation's policies, especially middle/junior managers in large organisations.</p> <p><b>Benefits of flexible retirement</b> - those without a fixed retirement age tended to state that processes met organisational and individual needs.</p> <p><b>Reforming retirement law</b> - 42% favoured the removal of the DRA. Around 1/3 wished to retain it, 18% were in favour of raising it. The case study interviews showed organisations recognised the need to increase retirement ages in line with employees' desires to work for longer.</p>	

## Manfredi et al. (2009)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Simonetta Manfredi and Lucy Vickers</p> <p><b>Year of publication:</b> 2009</p> <p><b>Citation:</b> <i>Retirement and Age Discrimination: Managing Retirement in Higher Education</i> Industrial Law Journal, Vol. 38, No. 4,</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> What are higher education (HE) employee's preferences and expectations about retirement, and perceptions of age discrimination across all different occupational groups?</p> <p><b>Research approach:</b></p> <p><b>Data collection:</b> Quantitative and qualitative.</p> <p><b>Method(s):</b> Online questionnaire Focus groups</p> <p><b>Setting(s):</b> UK HE providers</p> <p><b>Dates:</b> Not reported</p>	<p><b>Sample population:</b> People employed in HE</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> Not reported</p> <p><b>Number and characteristics of participants:</b> Staff survey of 12 institutions; 6 pre 1992; 6 post 1992. 7,218 responses were received out of a total sample of 39,403 staff 94 people took part in focus groups. There were with individuals from with senior academics and managers of professional and support staff and of manual staff.</p> <p><b>Response rate (if relevant):</b> 18.3%</p>	<p><b>Brief description of method and process of analysis:</b> The online questionnaire was emailed to all staff at the participating HE institutions. The questionnaire asked respondents to rate their agreement to statements on a five point scale. Focus groups were conducted with senior academics and managers of professional and support staff and of manual staff.</p> <p><b>Key findings relevant to the review:</b></p> <p><b>Focus group findings:</b> 60% of females saw shortfall in pension income. Less than 40% of males said the same. Academics and manual staff were more likely to intend to work beyond retirement compared to other groups of staff. Staff reported fears that senior staff not retiring could put pressure on finances if organisations continue to promote people and hire new staff. General consensus was academic staff should be retained only if it would be of strategic importance. Half-time working was a popular idea, although some expressed trepidation over loss of full earnings. Flexible retirement was seen as a solution by some. 56% of staff members were interested in considering taking flexible retirement.</p>	<p><b>Limitations identified by author:</b> None reported</p> <p><b>Limitations identified by review team:</b> Does not present detailed findings on when staff would like to retire or how this differs with age. Survey sample distribution not presented or discussed.</p> <p><b>Evidence gaps/recommendations for future research:</b> How people are planning for retirement. What can be done to overcome barriers to working longer? How HE HR policy affects the well-being of older workers.</p> <p><b>Source of funding:</b> Not reported</p>

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			<p>50% of these who were between 50 and 60 did not know if they were able to do this. Knowledge was poor on what types of flexible retirement individuals pension schemes offered.</p> <p>Support staff had little experience with right to request working beyond retirement.</p> <p>The main reason for expecting to retire beyond 65 was lack of pension provision.</p> <p>Manual staff felt it difficult to prove strategic importance to the organisation and so was discouraged from requesting to work beyond 65.</p> <p>Idea of flexible retirement was more popular in 41-55 age groups.</p> <p>Requesting to extend employment 3 months prior to retirement was seen as too little time by managers who need to plan further ahead, eg in terms of new staff, promotions, and resources.</p> <p>Right to request had resulted in HE institutions adopted a default no position, inhibiting flexibility for people who wish to work beyond retirement age, because of the perceived complexities.</p>	

## Martin et al. (2014)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Gregory Martin, Darryl Dymock, Stephen Billett, Greer Johnson</p> <p><b>Year of publication:</b> 2014</p> <p><b>Citation:</b> In the name of meritocracy: managers' perceptions of policies and practices for training older workers Ageing &amp; Society 34, 992-1018</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> How do ideologies shape managers' perceptions about the ongoing employability of workers labelled as older? To understand the base perceptions upon which managers make decisions surrounding older workers.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b></p> <p><b>Method(s):</b> Semi structured Interviews plus self-reported questionnaire</p> <p><b>Setting(s):</b> Urban</p> <p><b>Dates:</b> April to September 2009</p>	<p><b>Sample population:</b> Senior managers</p> <p><b>Sampling approach:</b> Snowball sampling</p> <p><b>Inclusion/exclusion criteria:</b> Must have a significant supervisory element to their role and be aged 45 or over.</p> <p><b>Number and characteristics of participants:</b> 12 experienced senior managers. 6 men 6 women 3 from a welfare organisation 2 from banking sector 2 from the universities sector 1 each from a fashion store, secondary school, accounting practice, a training manager at an aged-care organisation, a cattle company</p> <p><b>Response rate (if relevant):</b> Not relevant</p>	<p><b>Brief description of method and process of analysis:</b> Respondents were asked questions categorised in 3 main areas: about industry and other changes that affected their workplace; about perceptions of 'older workers'; and their attitudes about education and training and workplace initiatives aimed at older workers. Managers were asked to retrieve critical events that expressed their perceptions. Responses were recorded and transcribed. The data was analysed using an iterative process to identify key attitudes, policies and practices. 2 team members acted as inter-rater reliability agents.</p> <p><b>Key findings relevant to the review:</b> Macro-level developments such as new technology led managers to implement training, not micro requirements (ie older workers skill requirements/desires). No training was aimed at older workers in particular. 2 respondents stated explicitly that older workers were not treated differently and employees were treated on the basis of 'merit'. Positive views on older workers work ethic was evident in some. 1 individual stated younger workers get preferential treatment in terms of training and promotions. No others reported overt discrimination.</p>	<p><b>Limitations identified by author:</b> Often difficult to ascertain why such perceptions exist and how this affects workers and the organisation.</p> <p><b>Limitations identified by review team:</b> Participant reactivity bias, where interviewees provide the 'correct' answers and are rewarded by the interviewer through verbal or non-verbal ques. Possibility for social desirability bias. Lacks an employee perspective.</p> <p><b>Evidence gaps/recommendations for future research:</b> Employee perspective of age discrimination. Employee attitudes and perceptions of older workers. Longitudinal studies of different workplace cultures. Research into different managerial practices, including performance evaluation and appraisal. How these are influenced by age.</p> <p><b>Source of funding:</b> Australian Research Council</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>Younger workers seen were seen by 4 respondents as more willing to learn.</p> <p>Most respondents expected to be proactive in identifying learning needs.</p> <p>The welfare agency worker stated they were 'overly patient' when helping older workers to learn. One stated learning needs to be 'shorter and sharper' for older workers.</p> <p>Only 1 had training in how to support older workers.</p> <p>No evidence was found that anything was being done to improve knowledge or awareness about best practice.</p> <p>A common view was that by the time someone was 45 they should know what support they need.</p> <p>Older workers with lower education were thought to need more support in development and learning.</p> <p>One said older workers sometimes choose not to move positions and so find it difficult to reposition themselves when forced to. Some suggested older worker 'coast along'.</p> <p>Evidence suggests a lumping together of older workers ie a failure to see the heterogeneity in their experiences.</p> <p>Meritocratic ideas mask age discrimination in practice. This means no policy is enacted that is directed at older workers only - despite their different needs.</p> <p>Lack of knowledge on how to implement specific HR practices for older workers.</p>	

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**McCartney and Worman (2014)**

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Claire McCartney and Dianah Worman</p> <p><b>Year of publication:</b> 2014</p> <p><b>Citation:</b> Age Diversity in SMEs -Reaping the benefits. Survey Report, August 2014</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> The purpose of the study is to explore small and medium enterprises' (SMEs) experiences of and attitudes towards age diversity in the workplace.</p> <p><b>Research approach:</b> Survey with qualitative analysis</p> <p><b>Data collection:</b> Telephone</p> <p><b>Method(s):</b> Descriptive statistical analysis and qualitative approach</p> <p><b>Setting(s):</b> SMEs across the UK</p> <p><b>Dates:</b> 15-24<sup>th</sup> of April 2014</p>	<p><b>Sample population:</b> Senior decision makers from SMEs.</p> <p><b>Sampling approach:</b> Purposive sampling allowing coverage across individual size bands and at least 50 respondents</p> <p><b>Inclusion/exclusion criteria:</b> Senior managers in organisations between 2-249 employees.</p> <p><b>Number and characteristics of participants:</b> N=578, 85% were between 25-64 years of age</p> <p><b>Response rate (if relevant):</b> NR</p>	<p><b>Brief description of method and process of analysis:</b>  NR in detail; descriptive statistics with thematic analysis approach</p> <p><b>Key findings relevant to the review:</b> With the majority (61%) of SMEs surveyed focusing their attention on recruiting a mixture of ages. The key benefit to SMEs of an age-diverse workforce seems to be that of knowledge-sharing (56%). Following this, other benefits highlighted include improved problem-solving (34%) and enhanced customer service (21%).  Almost nine in 10 (86%) SMEs surveyed agree that the knowledge and skills of mature employees is highly valuable. Despite this, four in 10 (44%) believe that younger managers find it difficult to manage mature employees.  There are indications that SMEs are trying to support the extension of working life of their employees. A third (34%) carry this out through flexible working options, a quarter (25%) have a flexible retirement policy and one in five (22%) offer homeworking.  Almost half (46%) of SMEs surveyed report that their organisation has no activities in place to ensure it has access to enough skilled and diverse people of all ages.  Among those SMEs surveyed who do have</p>	<p><b>Limitations identified by author:</b> NR</p> <p><b>Limitations identified by review team:</b> No proper statistical analysis conducted and no description of the data collection (including response rates) nor analysis which makes it impossible to assess the potential risk of bias.</p> <p><b>Evidence gaps/recommendations for future research:</b>  NR</p> <p><b>Source of funding:</b> CIPD internal funding</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>activities in place to ensure they have access to enough skilled and diverse people of all ages, the most common is 'clear, accurate and accessible information about jobs and career opportunities' (17%) followed by work experience for all ages (14%) and building close relationships with schools and colleges (12%). One in 10 SMEs surveyed monitors the age distribution of the workforce.</p>	

## McDermott S &amp; Edwards R (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> McDermott, S., &amp; Edwards, R.</p> <p><b>Year of publication:</b> 2012</p> <p><b>Citation:</b> Enabling Self-determination for Older Workers with Intellectual Disabilities in Supported Employment in Australia. <i>Journal of Applied Research in Intellectual Disabilities</i>, 25(5), 423-432.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To explore the views of older people with disability and service providers to understand the elements that impact on people's decision to retire.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> Seventy-six people participated in semi-structured interviews, including 33 older people with intellectual disability working in supported employment, 10 people who had retired and 30 service providers</p> <p><b>Setting(s):</b> Older Workers with disabilities and their service providers in Australia</p> <p><b>Dates:</b> Not Reported</p>	<p><b>Sample population:</b> 76</p> <p><b>Sampling approach:</b> Not stated</p> <p><b>Inclusion/exclusion criteria:</b> N/A</p> <p><b>Number and characteristics of participants:</b> 33 older workers with intellectual disabilities, 10 retirees, 30 service providers.</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> 76 stakeholders and people with disability interviewed. Interview schedules developed aimed to elicit information about duties at work, attitudes towards employers and co-workers, living skills, leisure-time, family and friends, finances, and perceptions of retirement. Schedule developed in conjunction with university advisors with expertise in qualitative research with people with intellectual disability. Instrument piloted on first two participants, with questions revised appropriately. Interviews with stakeholders focused on identifying issues affecting older workers and employers due to ageing workforce. Interviews transcribed and imported into a qualitative data analysis programme, NVivo. Coding tested on two interviews, then revised and reclassified.</p> <p><b>Key findings relevant to the review:</b> Older people with intellectual disability in supported employment have limited opportunity to act in a self-determined manner regarding the transition out of the workforce. Most participants with disability who were still working believed that retirement will hold few opportunities besides sitting in front of the television all day, and this opinion was common even though participants had other interests outside of work. Almost all interviewees who were working expressed the hope that they can continue to work into the foreseeable future and stated that they will stop work only when their physical health deteriorates to the point that they are no longer physically capable of going to work. This decision to continue working had implications for both service providers and people with disability. Supporting older</p>	<p><b>Limitations identified by author:</b> Some participants had limited communication skills, which may have impacted on their comprehension of the interview questions. The only retirees interviewed were those who were being supported by pilot retirement support services, whereas most people who retire from supported employment have limited access to such services; removes representation and diversity of perspective. Small number of interviews with carers (only 2).</p> <p><b>Limitations identified by review team:</b> Sampling method not defined, nor is the role of the researcher</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p><b>Source of funding:</b> Department of Families, Housing, Community Services and Indigenous Affairs</p>

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			<p>workers made it more challenging for service providers to run their organisations as the skills and abilities of older workers decreased. Service providers respected supported employees' decision to keep working and did not force people out of the workforce simply due to a decrease in productivity. Many employers had implemented strategies to keep older people engaged with the supported employment workforce. While age-appropriate work kept people engaged, it often meant involving older people with disability in the menial tasks. This suggests that many older people in supported employment are not effectively enabled to make intentional choices and that continuing to work well into older age does not provide the meaning that people with disability both seek and deserve. Enabling people in supported employment to make active and intentional choices about the transition to retirement requires flexibility and understanding that all people with disability are able to make active choices about their lives. Service providers expressed a moral obligation to support older people, but providing increasingly limited options limits self-determination. Another challenge is for providers to take responsibility for enabling their</p>	

## McKeown T (NR)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Tui McKeown</p> <p><b>Year of publication:</b> NR</p> <p><b>Citation:</b> LOTS TO SAY BUT LITTLE TO SEE: MANAGING THE AGEING WORKFORCE</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <p>three research questions (RQ1-3) identify specific variables which investigate the management strategies in detail. These are:</p> <p>RQ1 - the level and type of workforce planning initiatives being undertaken;</p> <p>RQ2 - current initiatives on the recruitment, retention and maintenance of the ageing workforce;</p> <p>RQ3 - planned initiatives for recruitment, retention and maintenance of the ageing workforce.</p> <p><b>Research approach:</b> Mixed method study</p> <p><b>Data collection:</b> Use of existing data and face-to-face interviews</p> <p><b>Method(s):</b> Focus groups, face-to-face interviews and content analysis of existing data</p> <p><b>Setting(s):</b> Five councils in Victoria (Australia) ranking from</p>	<p><b>Sample population:</b> HR managers in the local government sector and senior local government officials (2<sup>nd</sup> Focus group)</p> <p><b>Sampling approach:</b> A stratified sampling design was applied to both the selection of Annual reports and the subsequent interviews with half the organisations supplying these to ensure data provided a comprehensive spread of the industry within Victoria.</p> <p><b>Inclusion/exclusion criteria:</b> NR</p> <p><b>Number and characteristics of participants:</b></p> <p>Interviews consisted 5 HR managers, of which 2 were women, 3 men, 3 were over 50 years and 2 between 35-39. They experience in the sector varied from 17 years to 3 years.</p> <p><b>Response rate (if relevant):</b> NA</p>	<p><b>Brief description of method and process of analysis:</b> Three central themes formed the basis of analysis tasks: an examination of current workforce planning initiatives, current management initiatives specifically focussed on the ageing workforce and thirdly, any planned future management initiatives. The five HR managers interviewed were responsible for the development of organisational HR-related policies and procedures as well as the provision of regular reports on HR matters to senior management. The two focus groups were conducted to provide a broader picture. The first utilised an existing grouping of seven HR managers from Local government who meet regularly to discuss a variety of issues. The second was an invited group of five senior local government officials, participants from MAV and the Victorian division of Local government.</p> <p><b>Key findings relevant to the review:</b> In summary, the interviews revealed that the greatest concern appeared to be with the 'risk' associated with employing older employees rather than the knowledge, skills and abilities they have to offer and that may be lost on their exiting the organisation. While skill shortages were seen as a</p>	<p><b>Limitations identified by author:</b> NR</p> <p><b>Limitations identified by review team:</b> No recruitment process described which makes it difficult to assess the possibility for selection bias. The small sample size makes it difficult to generalise the results to other sectors.</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>There are four key challenges which emerged for human resource management in local government. The first is in terms of recruitment and selection where there is a clear need to broaden in scope to ensure a focus on merit and the skills and abilities a job requires rather than what appear to be age inherent biases. Second is the need to use existing systems such as performance management in a way that incorporates aspects such as career planning and link to this to the third challenge; lifelong learning and development. This area needs to combine business and individual needs and differences to bring in options such as mentoring, sabbaticals. The</p>

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	<p>metropolitan areas to rural.</p> <p><b>Dates:</b> The study was carried out in early 2005</p>		<p>key problem the solutions identified were explicitly linked HR practice focused on the recruitment of younger workers. Limited workforce planning was taking place as analysis of workforce statistics by age was not systematically undertaken. Similarly, mentoring was aimed at career development of younger employees rather than knowledge transfer and development of older workers. The high levels of awareness and rhetoric were further evidenced in the lack of control over retirement and the fact that voluntary redundancies were still operating in some councils. Added to this was the general view that staff turnover is seen as something to reduce but not necessarily to understand. Overall, there was little evidence of actions being taken to recognise skills of older workers and to actively retain, maintain and sustain them in the workforce.</p>	<p>fourth key challenge to emerge is dealing with redundancy and retirement. While there were clear barriers imposed by superannuation scheme requirements, there is a need to rethink early exit and voluntary redundancy options as well as consider a range of transition to retirement options such as part time work, job sharing and phased retirement and access to high quality pre-retirement or pre-redundancy counselling.</p> <p><b>Source of funding:</b> NR</p>

## McNair S (2006)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Stephen McNair</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> How Different is the Older Labour Market? Attitudes to Work and Retirement among Older People in Britain Social Policy &amp; Society 5:4, 485-494</p> <p><b>Quality rating:</b> ++</p>	<p><b>Research questions:</b></p> <p>To increase the understanding of older workers opinions on work and ascertain any groups which could be distinguished in terms of attitude, experience of work or aspirations for the future.</p> <p>What aspects of work older workers like, what would they change, how they would like to work, and have they experienced discrimination.</p> <p><b>Research approach:</b> Quantitative / observational</p> <p><b>Data collection:</b></p> <p><b>Method(s):</b> Postal Surveys</p> <p><b>Setting(s):</b> UK</p> <p><b>Dates:</b> 2003 and 2004</p>	<p><b>Sample population:</b> UK Households</p> <p><b>Sampling approach:</b> Use of ONS omnibus data (Survey 1) to ensure representativeness. Those aged 50 and over in original survey followed up with another survey (Survey 2).</p> <p><b>Inclusion/exclusion criteria:</b> People over 50</p> <p><b>Number and characteristics of participants:</b> Survey 1: 5021 over 20 (1136 of these over 50) Survey 2: 401, aged between 51 - 70</p> <p><b>Response rate (if relevant):</b> Survey 1: unknown Survey 2: 41%</p>	<p><b>Brief description of method and process of analysis:</b> Five questions added to monthly ONS omnibus survey. All respondents who were over 50 were sent a second, more extensive survey that asked 44 questions.</p> <p><b>Key findings relevant to the review:</b> Survey 1: Those who felt more in control of job changes were more likely to stay in work. Those who experienced imposed job change were less likely to stay in work after 50. Those over 50 were less likely to receive any support when changing job compared to those under 50 (37%/47%). Only 5% who had retired received any form of pre-retirement training. For those who were economically active, 80% would consider paid or unpaid work after retirement. The reverse was true for economically inactive. Attitudes were most strongly influenced by level of qualifications, income, occupational grade and gender. Highly qualified workers were most likely to continue working after retirement age and to take early retirement as a positive choice. This polarisation</p>	<p><b>Limitations identified by author:</b> More detailed or sophisticated analysis, eg correlations could have been conducted. Measures used could have been discussed in greater detail.</p> <p><b>Limitations identified by review team:</b> None</p> <p><b>Evidence gaps/recommendations for future research:</b> To what extent do opinions about what makes a 'good job' change with age? Research to uncover the training needs of older workers and how participation in training relates to job satisfaction.</p> <p><b>Source of funding:</b> Not disclosed</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>increased with age, especially after the mid-fifties.</p> <p>People were most likely to change jobs for career-related rather than work-life balance, personal or lifestyle reasons until workers reached 60, with some variation by gender, size of employer and age. A substantial group of women aged over 50 made job changes and retired to meet caring responsibilities. Workers in small firms were less likely to change jobs but more likely to do so for personal reasons and were less likely to continue to develop their skills over the age of 50. Job mobility was higher for higher qualified workers. People in their fifties were less likely to increase their skills and responsibility as a result of a job move than younger workers but more of these 'changers' increased rather than decreased their responsibilities in moving roles. People aged over 50 were less likely to receive training or support when moving roles than younger colleagues.</p> <p>In the second survey 39% were employed even though they could afford to retire. All of those still employed said they enjoyed working with colleagues and that their job is well suited to their skill.</p> <p>Part-time older workers had a more positive attitude to work compared to full time older workers.</p>	

## Morrell G &amp; Tennant R (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Morrell, G., &amp; Tennant, R.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> <i>Pathways to retirement: The influence of employer policy and practice on retirement decisions.</i> Published for the Department for Work and Pensions under licence from the Controller of Her Majesty's Stationery Office.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research aim:</b> to explore the impact of employer policy on a range of retirement experiences and to describe the implications of retirement pathways for how people feel about this key transition and for other aspects of their lives.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Literature review and interviews</p> <p><b>Method(s):</b> depth interviews with individuals from across the UK aged 61-72, who had taken a range of different routes to retirement or continuing to work.</p> <p><b>Setting(s):</b> UK based individuals aged 61-72</p> <p><b>Dates:</b> Interviews conducted from November 2009-January 2010</p>	<p><b>Sample population:</b> Respondents to the Family Resources Survey (FRS) - 40,000 respondents per year</p> <p><b>Sampling approach:</b> Respondents aged 60-75 based in one of six region (Greater Manchester, Yorkshire, West Midlands, Glasgow and Ayrshire, London, and the Southeast) were sent approach letters, those that did not opt out were random sampled within certain quotas to acquire a breadth of retirement pathways</p> <p><b>Inclusion/exclusion criteria:</b> Age and location as set out above, to hit quotas pertaining to employment sector, employer size, retirement pathway, and a gender balance</p> <p><b>Number and characteristics of participants:</b> 51 (25 male, 26 female) aged 61-72, fairly evenly split over the following retirement pathways; Retired before 65, Offered right to request, no request made, Offered right to request, request accepted, Offered right to request, request declined, Not offered right to request, retired at 65, Not offered right to request, worked past 65</p> <p><b>Response rate (if relevant):</b> Not Reported</p>	<p><b>Brief description of method and process of analysis:</b> Brief literature review undertaken to inform sampling and fieldwork, and to provide policy and research context. 51 depth interviews conducted with individuals from across the UK aged 61-72, who had taken a range of different routes to retirement or continuing to work.</p> <p><b>Key findings relevant to the review:</b></p> <ol style="list-style-type: none"> <li>I. <b>Ownership of the decision</b> Employer policies and approaches to retirement that engage individuals and involve them in decision-making have a bearing on experiences of the retirement process and attitudes towards outcomes. Involving individuals in decision-making enables employers to meet their needs or temper the negative impacts on the individual of an undesirable outcome.</li> <li>II. <b>Information and guidance</b> Providing clear information on retirement procedures, options, and pathways enables individuals to make informed retirement choices, helps individuals feel part of the decision-making process, and adjusts retirement expectations if needed. Participants felt employers do not always provide this, and that individuals would be better equipped to make decisions and deal with the consequences of the retirement process if they knew at the outset what they knew as a result of going through the process. Information and guidance plays an important role in giving individuals a sense of ownership over retirement decisions but also minimising the gap between expectations and actual outcomes.</li> </ol>	<p><b>Limitations identified by author:</b> Much of the data was reliant on recollection, meaning the results are richly descriptive but not a detailed account of all the ways employers are facilitating retirement transitions</p> <p><b>Limitations identified by review team:</b> Only 6 (12%) of respondents worked for a company with fewer than 25 employees; this is an area that could therefore be expanded</p> <p><b>Evidence gaps/recommendations for future research:</b> Perhaps repeating the study now the default retirement age has been phased out would provide useful longitudinal data.</p> <p><b>Source of funding:</b> Department for Work and Pensions</p>

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			<p><b>III. Structure of employer policy</b></p> <p>A clear and standardised approach to retirement supports individuals to own their retirement decision and facilitates the provision of suitable and relevant information and support. Individuals welcomed accessible employer approaches as well as those seen to be applied consistently to all employees. Specific aspects of implementation of the right to request were important, particularly the schedule used by employers according to legislative guidelines. This was considered to provide time for individuals to consider whether to make a request or to adapt to a decision they were not expecting.</p> <p><b>IV. Nature and type of communication</b></p> <p>The nature of the employer’s communication to raise the issue of retirement or to outline retirement procedure can influence individual experiences and attitudes towards the entire process. Communications that encouraged continuing to work or articulated that the employer would work with the individual to reach a mutually acceptable outcome were welcomed. Right to request processes that involved some face-to-face discussion helped individuals feel engaged, and that their needs were being considered.</p>	

## Mountford H (2013)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Hélène Mountford</p> <p><b>Year of publication:</b> 2013</p> <p><b>Citation:</b> I'll take care of you: the use of supportive work practices to retain older workers Asia Pacific Journal of Human Resources (2013) 51, 272-291</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To investigate the application of HR strategies aimed at the retention of direct care workers in aged care facilities (ACFs).</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> <b>Method(s):</b> Semi-structured Interviews</p> <p><b>Setting(s):</b> North Sydney Australia, Urban area, Workplace (ACFs)</p> <p><b>Dates:</b> July and August 2010</p>	<p><b>Sample population:</b> ACF Facility managers (FMs) and Personal Carers (PCs)</p> <p><b>Sampling approach:</b> ACFs were selected at random with no prior knowledge to size of organisation. No research was done on ACFs - eg into size, facilities, official reports - this was to ensure interviews were undertaken with no prior knowledge of the industry or HR practices.</p> <p>FMs were selected at random. PCs were nominated by FMs.</p> <p><b>Inclusion/exclusion criteria:</b> N/A</p> <p><b>Number and characteristics of participants:</b> 20 ACFs chosen. 10 for profit, 10 not-for-profit 20 FMs (18 female, 2 male) 20 PCs (18 female, 2 male) Of the PCs, half worked full time (FT), 9 part times (PT), 1 Casual. 11 had a non-English speaking background.</p> <p><b>Response rate (if relevant):</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b> Interviews were semi-structures and took between 30 minutes and 1.5 hours. Recordings were transcribed, and analysed using Nvivo based on human resource management retention themes.</p> <p><b>Key findings relevant to the review:</b> The research found evidence of supportive environments: Worker satisfaction was seen to be determined by how work is organised by FMs. Personal relationships built by FMs and other staff translated into trust and loyalty. FMs encourage staff to express views openly. Care workers work in teams of two allowing strong relationships to develop. FMs value older workers for their experience. If age affects their work they may be offered fewer shifts, shorter shifts, an alternative shift with a lighter load, or a different role. PCs who want to lighten workload were considering upskilling to qualify to give medications. To reduce risks to health and safety, staff use lifting equipment to lift patients. Medication trolleys have been made smaller lighter and motorised. Linen bags have been made smaller to reduce weight.</p>	<p><b>Limitations identified by author:</b> No clear evidence on successful retention practices / outcomes drawn out of literature. Evidence given primarily comes from FMs and so maybe subject to bias as they are the people that run the organisation ie more likely to talk positive about practices.</p> <p><b>Limitations identified by review team:</b> Sample cannot be considered represented or a true reflection of population. Data on retention would help triangulate the interview evidence.</p> <p><b>Evidence gaps/recommendations for future research:</b> A more cross sectional look at worker outcomes in terms of the supportive practices mentioned.</p> <p><b>Source of funding:</b> Not disclosed</p>

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			<p>‘Soft’ informal rewards were seen to aid retention, eg movie tickets, pizza nights, thank you notes, vouchers.</p> <p>Most ACFs pay a flat rate regardless of maturity or experience which was thought to be detrimental to retention.</p> <p>The availability of training boosted moral of PCs and was seen as a key retention factor.</p> <p>The qualities of older and younger workers were seen as complimentary and used by FMs to maximise the benefits from both eg teaming younger and older workers.</p>	

## National Seniors Australia (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> National Seniors Australia</p> <p><b>Year of publication:</b> 2012</p> <p><b>Citation:</b> National Seniors Australia and Insuranceline (2012) <i>What Next? Workforce Transitions and Retirement Planning Among Australian Pre-Retirees</i> National Seniors Australia Limited</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <p>What are the pathways between full-time work, part-time work and retirement?</p> <p>What are the retirement planning strategies of different population subgroups with respect to financial, lifestyle and health planning?</p> <p><b>Research approach:</b> Cohort study</p> <p><b>Data collection:</b> Administrative data</p> <p><b>Method(s):</b> Study used data from the Multi-Purpose Household Survey (MPHS), conducted by the Australian Bureau of Statistics (ABS) as a supplement to their Labour Force Survey (LFS). The ABS-LFS uses a multi-stage stratified sample of dwellings. The 2008-09 MPHS collected data on retirement and retirement intentions, barriers and incentives to labour force participation, crime victimisation, use of ICT and socioeconomic and demographic data.</p> <p><b>Outcome variables:</b> (1) Intended age at retirement; (2) Main reason influencing when participants intend to retire (categorised as eligibility for the age pension, financial security, health and other (including access to superannuation and retirement of partner)); (3) Retirement transition plans (those currently working full-time were asked about their intentions to change the way they work before retiring. The responses were categorised as continue with full-time work and change to part-time work); (4) Main expected source of income in retirement (with regards to financial security, physical activity, mental activity, unpaid voluntary work, social activity)</p>	<p><b>Sample population:</b> Respondents to the Multi-Purpose Household Survey</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> Only respondents aged over 50 with the intention of retiring from the labour force some time in the future were included.</p> <p><b>Number and characteristics of participants:</b> 1,820 respondents</p> <p><b>Response rate (if relevant):</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b> Person level weights were applied. Descriptives and regression analyses. Multivariate regression was undertaken on each outcome variable except intended retirement age. Multinomial logistic regression was conducted for the main reason influencing when to retire and the main expected source of income in retirement. Logistic regression was used to analyse the transition to retirement. Ordinal logistic regression was conducted for each of the retirement planning variables and for the analysis of retirement planning across all domains.</p> <p><b>Key findings relevant to the review:</b> <u>Retirement transition plans:</u> Thirty-seven% of full-time workers stated they intend to change to part-time work before they retire. An addition 30% reported they intend to stay in full-time work without changing conditions such as working from home. Six% would like to continue working full-time with changed conditions. The remainder do not know their intentions over changing work before retirement. Multivariate analysis (excluding those who state they do not know what their transition plan would be) found those</p>	<p><b>Limitations identified by author:</b> Survey data excludes mature age people living in very remote areas and non-private dwellings. A drawback of the retirement planning questions considered in this study is that they are quite general; providing very broad measures of planning for finances, being physically and mentally active, volunteering, and being socially active in retirement. These topics could be interpreted in different ways by different respondents, and so may affect the quality of data they produce.</p> <p><b>Limitations identified by review team:</b> The review team could not access the detailed statistical result and also noted that the population and sample demographics were not reported.</p>

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	<p>(5) Plans for retirement for:</p> <ul style="list-style-type: none"> <li>- being financially secure</li> <li>- being physically active</li> <li>- being mentally active</li> <li>- doing unpaid voluntary work</li> <li>- being socially active</li> </ul> <p>Each retirement plan variable was categorised by whether the respondent had thought about the plan at all, had thought about the plan only or whether they would continue with their current behaviour and had made plans.</p> <p>Respondents were asked: <i>'Have you thought about [being financially secure] after you permanently give up work? Have you made any plans to [be financially secure] after you permanently give up work?'</i></p> <p>The study sought to identify the extent to which older Australians had made plans across all of these domains and differences amongst sub groups.</p> <p>A variable was created which aggregated how many of the five domains a respondent had made plans for, resulting in a scale from zero to five.</p> <p>The transition and planning variables were analysed by demographic and socioeconomic characteristics, including:</p> <ol style="list-style-type: none"> <li>(1) Age in five-year groups;</li> <li>(2) Place of residence;</li> <li>(3) Relative socio-economic disadvantage</li> <li>(4) Education (completed Year 12 (or equivalent) or not);</li> <li>(5) Self-rated health: Excellent, very good, good or fair/poor;</li> <li>(6) Employment status (full-time, part-time or unemployed);</li> <li>(7) Marital status (married or not married);</li> <li>(8) Marital status and partner's labour force status (married with partner employed, married with partner unemployed or not in the labour force, and not married)</li> </ol> <p><b>Setting(s):</b> Australia</p> <p><b>Dates:</b> 2008-09</p>		<p>in the highest household income quintile are more likely than those in the lowest two to intend to change to part-time work pre-retirement. Those least likely to intend to move to part-time work are in the oldest age group and live in the second-lowest socioeconomic quintile. Education status is weakly related with intention to continue in part-time work (<math>p &lt; .10</math>). Those who have not finished high school are less likely to intend to change to part-time work compared to those who have finished. Gender, health marital status, partner's employment status and place of residence are not significantly associated with the stated transition plan.</p> <p><u>Intended retirement transition of planners</u></p> <p>The intended transition to retirement of workers who have made at least four plans is significantly different from those who have made fewer plans. Those who have made the most are more likely to intend to work part-time before retiring (54 versus 35%). They are less likely to intend to continue working full-time with unchanged conditions (22 versus 32%).</p>	<p>Unclear whether appropriate measures were taken to avoid selection bias.</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>Authors are conducting an additional survey of older Australians exploring the specific types of financial and health preparations that pre-retirees have made or considered making, when they began making these preparations, and the reasons for making these preparations.</p> <p><b>Source of funding:</b></p> <p>National Seniors Australia</p>

## Newton B (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Newton, B.</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Newton, B. (2006). Training an age-diverse workforce. <i>Industrial and Commercial Training</i>, 38, 93-97.</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> Research aims to address the myths and age-related barriers that currently deter employers from training workers of different ages.</p> <p><b>Research approach:</b> Qualitative approach, using primary and secondary data</p> <p><b>Data collection:</b> Qualitative interviews with a range of national experts to inform the context for research and the issues to be explored. Review of the current policy and academic literatures. Secondary data analysis of the Labour Force Survey 2004, and National Adult Learning Survey, 2002. LSC data from the Employer Training Pilots and Modern Apprenticeships. Case studies of 5 organisations that demonstrate good practice in training in mixed-age workforce.</p> <p><b>Method(s):</b> Not reported <b>Setting(s):</b> Not reported</p>	<p><b>Sample population:</b> Older workers refer to those over 50. Sample not described</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> Not reported</p> <p><b>Number and characteristics of participants:</b> Not reported</p> <p><b>Response rate (if relevant):</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b> Not reported</p> <p><b>Key findings relevant to the review:</b> There is a clear association between age and amount of training offered to and received by workers. Employers aged over 55 were less likely than other workers to participate in training or to have been offered it. Older employees were also less likely than younger or mid-life workers to take up any opportunities for training that were made available. Older workers were more likely only to have received on-the-job training. For older workers there is a greater likelihood of training being offered by employers but then not delivered. Where there is engagement in training the evidence suggests that there is little difference in the performance of older and younger workers. Older workers likely to remain in the workforce for longer and thus it is more worthwhile to train anyone who is likely to stay with the company. Evidence that older workers can limit their own horizons, eg lack of confidence to train. Can also be difficult to motivate older workers to engage in training unless they are convinced that they have real value. Older workers are less likely to identify their own training needs. Need to implement a training policy to facilitate access, making sure all managers understand and implement the policy - line managers are key in</p>	<p><b>Limitations identified by author:</b> Not reported</p> <p><b>Limitations identified by review team:</b> No reporting of methods used, sample, how 'experts' were chosen, why case studies were chosen, how many interviews were conducted. Detail of methodology is sparse.</p> <p><b>Evidence gaps/recommendations for future research:</b> Not reported</p> <p><b>Source of funding:</b> Not reported</p>

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	<p><b>Dates:</b> Not reported</p>		<p>this. Need to monitor training take-up, relate training to career pathways so employees can make informed decisions about the training particularly important for older workers whose career aspirations may be different, discuss training as part of staff appraisal, and training delivery and learning preferences (as evidence suggests that older workers may prefer training that allows for group learning opportunities, work-based, delivered in bite-size chunks, draws on their knowledge and experience and offers opportunities to apply newly gained knowledge and skills.</p> <p>Training and development needs a high profile within the organisation and be integral to operation, understanding the organisations training needs, tailor training programmes to job roles within the organisation, find out what employers hope to achieve through training and if the needs were met. Make sure people can use their new skills, use the resources that you have in house and use HR.</p>	

## Noone et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Noone, J., Alpass, F., &amp; Stephens, C.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> 'Do Men and Women Differ in Their Retirement Planning? Testing a Theoretical Model of Gendered Pathways to Retirement Preparation.', <i>Research on Aging</i>, 32: 715-738</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> Aim is to use a relational structural equation model to test for gender differences in retirement planning, perceptions of retirement, workforce involvement, and socioeconomic status (SES).</p> <p>'Does the current cohort of female pre-retirees undertake less planning than men? Are they still disadvantaged in terms of their SES? Are contemporary female employees less personally involved in paid employment than men? Do they have the same perceptions of retirement as men? How do women without partners compare to partnered women with respect to their retirement planning, SES, and perceptions of retirement?</p> <p><b>Research approach:</b> Subsample of 2,277 working men and women from the New Zealand Health, Work and Retirement Survey used as basis for structural equation model examining effects of</p>	<p><b>Sample population:</b> HWR survey uses sample of 55-70 year olds as progress from work to retirement.</p> <p><b>Sampling approach:</b> 12,567 participants randomly selected from electoral role. 6,662 postal questionnaires returned.</p> <p><b>Inclusion/exclusion criteria:</b> Excluded from subset sample used in this research if retired (N=1,456); those born before 1946 (N=1,988); self-identified homemakers (N=526) - leaving 2,692 cases for analysis. Then those with missing data on all indicators which compromised study were removed (n=112) and on demographic variables (N=303) leaving 2,277 for final analysis. Subsample of 1,126 used for comparisons between women with (N=796) and without partners (N=330). Also oversampled from those of Maori ethnicity to</p>	<p><b>Brief description of method and process of analysis:</b> Subsample taken from NZ HWR longitudinal study and analysed using two structural equation models. SEM 1 - tested relationships: expected time to retirement, workforce involvement, perceptions of retirement, informal planning, and financial preparedness. SEM 2 - tested same relationship for subsample containing only women (N=1,126).</p> <p><b>Key findings relevant to the review:</b> The survey found that higher levels of financial preparedness for retirement was associated with more positive perceptions of retirement, higher levels of informal planning and greater economic living standards (<math>p &lt; .001</math> no coefficients reported). Women were less financially prepared for retirement (<math>r = -.10</math>, <math>SE = .05</math>, <math>p = .05</math>); women without partners were more disadvantaged than women with in terms of living standards (<math>r = -.29</math>, <math>SE = .05</math>, <math>p &lt; .001</math>) and financial preparations (<math>r = -.13</math>, <math>SE = .06</math>, <math>p = .02</math>). Involvement with work was only weakly associated with retirement planning, and there was a weak indirect effect via retirement perceptions. Men and women perceived future finances in same way and expected to adjust equally as well to retirement. Retirement perceptions however did not influence financial preparations and the long-term well-being of women approaching retirement. Men and women reported similar levels of informal planning. Informal planning had an impact on financial preparedness after controlling for living standards, anticipated finances and gender - suggesting it is a function of socio-economic status and prior planning mechanisms.</p>	<p><b>Limitations identified by author:</b> Single measure of informal planning is problematic as does not enable certainty over which aspects of retirement individuals are thinking about or how shed any light on their understanding of issues surrounding retirement. Also, negative relationship between anticipated finances and informal planning suggests the variable might in fact be assessing worry over retirement finances rather than proactive planning mechanisms.</p> <p><b>Limitations identified by review team:</b> Assumption that weaker relationship between informal planning and financial preparedness for women is down to maladaptive thoughts; but that for men the stronger association may be down to more proactive response is a very narrow interpretation. Although</p>

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	<p>socioeconomic status, work involvement and retirement perceptions on retirement planning</p> <p><b>Data collection:</b> Subsample taken from New Zealand Health Work and Retirement Survey - longitudinal survey across two waves (2006; 2008). Secondary analysis of this of extant literature.</p> <p><b>Method(s):</b> Literature review and analysis of subsample from longitudinal survey. Data analysed using two structural equation models (SEMs)</p> <p><b>Setting(s):</b> New Zealand -data from nationally administered survey.</p> <p><b>Dates:</b> Longitudinal -2006 and 2008</p>	<p>increase representation in analysis.</p> <p><b>Number and characteristics of participants:</b> 2,692 in total - still working, born before 1946, men and women.</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p>The relationship between informal planning and financial preparedness was weaker for women than men. The authors interpreted this as possibly meaning for that for women, informal planning reflected maladaptive thoughts that had little impact on financial preparedness. Whereas the stronger association for men suggested more of a proactive response.</p>	<p>the researchers call for more specific measures here (see below).</p> <p><b>Evidence gaps/recommendations for future research:</b> More specific measures of retirement planning that capture the psychological aspects of financial preparedness are required to allow for the control of factors such as retirement worry.</p> <p><b>Source of funding:</b> No financial support received.</p>

## Oakman J &amp; Howie L (2013)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Oakman, J., &amp; Howie, L.</p> <p><b>Year of publication:</b> 2013</p> <p><b>Citation:</b> How can organisations influence their older employees' decision of when to retire? Work: A Journal of Prevention, Assessment and Rehabilitation, 45(3), 389-397.</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> This article reports on a study of older employees of a large public service organisation and examines their experiences of employment and their intentions to retire.</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Survey used to isolate relevant issues, then focus groups undertaken to follow these up</p> <p><b>Method(s):</b> Questionnaire followed by open ended discussions in</p>	<p><b>Sample population:</b> Employees working for a large organisation in Melbourne aged 40 and over</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> Age 40 or over</p> <p><b>Number and characteristics of participants:</b> 332 carried out survey, 42 in focus groups</p> <p><b>Response rate (if relevant):</b> Not reported</p>	<p><b>Brief description of method and process of analysis:</b> This study was part of a larger research project undertaken in 2007. A questionnaire (N=332) was offered to older employees (aged 40+) of a large public service organisation, in Melbourne. Focus group interviews (N=42) were conducted to explore issues raised in the questionnaire.</p> <p><b>Key findings relevant to the review:</b> Evidence indicated that mature workers were growing in confidence; they recognised limitations but were aware they had significant skills. They expected their employer to accommodate them by making modifications to their work in the later stages of their career. If these did not eventuate, they indicated they would move to other work or into retirement.</p> <p><b>Personal influences</b> Focus group participants were insightful about limitations as they aged, expressed confidence about their expertise, liked to work in areas where they felt best utilised, and expressed a desire to mentor younger staff. Loyalty to family and partners was also evident and if duties relating to caring were compromised, leaving work was viewed as inevitable.</p> <p><b>Organisational influences</b> There were two main sub-themes relating to the impact of an organisation on intention to retire: policy - which represented the actions participants thought companies could take to influence retirement intentions; and perceptions - which represented more indirect influences of employers on retirement intentions.</p> <p><i>Job satisfaction</i> Job satisfaction and the contributory factors varied greatly between participants. Participants agreed that as they grew older they placed greater importance on job satisfaction, particularly when their financial situation enabled them to make choices about when to retire. Participants discussed job satisfaction in relation to part-time work, and felt that if it was offered, it would greatly enhance the organisation's ability to retain older workers. Participants felt that the challenge was to ensure that part-time work provided job satisfaction.</p> <p><i>Job control</i> Participants wanted greater control over their work, acknowledgement of their experience, and to contribute to the planning of work practices. This would engender trust and respect, enhancing the attractiveness of the work environment. Many</p>	<p><b>Limitations identified by author:</b> N/A</p> <p><b>Limitations identified by review team:</b> A greater level of analysis (cross referenced by more than one researcher?) would have added richness, as would a broader sample; having older workers from one company is not representative.</p> <p><b>Evidence gaps/recommendations for future research:</b> N/A</p> <p><b>Source of funding:</b> Not reported</p>

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	<p>focus groups</p> <p><b>Setting(s):</b> Employees aged over 40 working for a large public service organisation in Melbourne</p> <p><b>Dates:</b> Research undertaken in 2007</p>		<p>participants wanted to remain at work if some changes to their full time status were initiated. They enjoyed their work, and criticisms pertained to organisational issues rather than the demands of their work. Focus group participants reported having control over certain aspects of their work, except for changes to policy, direction of the business, and setting work targets. This was frustrating and a barrier to job satisfaction.</p> <p><b>Legislative influences</b></p> <p>This concerned government policies that regulate superannuation and age pension availability. Two sub-themes were developed from the data: superannuation and ‘age’ (ie State) pension. Participants highlighted superannuation as the most significant factor in determining retirement timing, although indicated they would choose to retire early regardless if job satisfaction was low and health issues developed. Adequate superannuation did not necessarily result in a desire to retire. Participants with sufficient superannuation reported they could enjoy work and make strategic choices about the work they did. This group were very amenable to the influence of organisations in attracting them to remain at work, and were seeking to improve the flexibility of their work arrangements. Salary levels in the final years of work were influential in the calculation of superannuation benefits, which was a disincentive to staying at work part-time. Participants who wanted to reduce their work hours felt unable to do so without significant penalties to their final superannuation pay out, which was a critical issue in the retention of mature age workers. Access to the Age pension was not a strong influence on retirement intentions. Rather, most participants indicated that access to superannuation had a greater influence.</p>	

## Olesen et al. (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Sarah C. Olesen, Peter Butterworth, Bryan Rodgers</p> <p><b>Year of publication:</b> 2012</p> <p><b>Citation:</b> Is poor mental health a risk factor for retirement? Findings from a longitudinal population survey Soc Psychiatry Psychiatr Epidemiol (2012) 47:735-744</p> <p><b>Quality rating:</b> ++</p>	<p><b>Research questions:</b> Does mental health predict subsequent retirement outcomes and does the association vary with the timing of retirement.</p> <p><b>Research approach:</b> Quantitative</p> <p><b>Data collection:</b> Secondary analysis of survey data</p> <p><b>Method(s):</b> Secondary analysis of survey data</p> <p><b>Setting(s):</b> Australia</p> <p><b>Dates:</b> 2001 - 2006</p>	<p><b>Sample population:</b> People aged between 45 and 75</p> <p><b>Sampling approach:</b> Multi-level sampling of nationally representative data.</p> <p><b>Inclusion/exclusion criteria:</b> Aged between 45-75 years at the beginning of the survey. Those who had already retired before the survey or were never employed were excluded.</p> <p><b>Number and characteristics of participants:</b> 1516 males; 1287 females at Wave 1</p> <p><b>Response rate (if relevant):</b> The response rate for this sample at each wave of subsequent data collection was: 84.3% (Wave 2), 83.0% (Wave 3), 77.5% (Wave 4), and 75.7% (Wave 5).</p>	<p><b>Brief description of method and process of analysis:</b> Study includes 5 waves of the Household, Income and Labour Dynamics in Australia (HILDA) survey. Multi-level sampling was used to gain a representative sample of private households.</p> <p>Mental health was assessed using the Mental Health Inventory (MHI-5). Retirement status was self-defined.</p> <p>Covariates were included in multivariate model. They were selected based on previous research and theory. They were: age, physical health functioning (PF-10), income, financial hardship, spousal status, social support, social activity, workplace conditions, and job satisfaction.</p> <p>Discrete time survival analysis was performed.</p> <p>Probabilities expressed as hazard rate ratios (HRR).</p> <p><b>Key findings relevant to the review:</b> Unadjusted results: Association between mental health and retirement is greatest in the youngest cohort of men (HRR 1.37, 95% CI 1.17-1.60), and progressively decreases throughout older cohorts (55-59 years HRR 1.17, 95% CI 1.02-1.34; 60-64 years HRR 1.19, 95% CI 1.01-1.39; 65-75 years HRR 1.01, 95% CI 0.81-1.26). Mental health did not predict retirement in women.</p>	<p><b>Limitations identified by author:</b> Does not consider those who re-enter the workforce. Does not consider whether retirement was planned.</p> <p><b>Limitations identified by review team:</b> A larger proportion of women and men in the original sample had never entered the workforce, resulting in a relatively healthier population of women. Specific timings of retirement were not reported, reducing the capacity to estimate immediacy of event. MHI-5 refers only to current mental health, so data does not capture history of mental health, which would have led to underestimation of conditions.</p> <p><b>Evidence gaps/recommendations for future research:</b> Greater knowledge on policies that facilitate</p>

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			<p>Adjusted results:                      Mental health remained a predictor in retirement for men, but interaction with age did not.                      Most workforce variables did not independently predict retirement.                      After age, physical functioning was the strongest predictor of retirement in men (1.38 CI 95% 1.24-1.53). The strongest predictor in women was spousal status (0.46 CI 95% 0.32-0.66) followed by physical functioning (1.25 CI 95% 1.14-1.36).                      Using a broader definition of workforce exit which included those leaving paid work to become 'homemakers', the authors found mental health significantly predicted workforce exit amongst women in the youngest cohort (45-54) only.</p>	<p>longer working for individuals who have a mental health condition.                      How mental health is managed at work.  <b>Source of funding:</b>                      National Health and Medical Research Council</p>

## Patrickson (NR)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Margaret Patrickson</p> <p><b>Year of publication:</b> NR</p> <p><b>Citation:</b> Working after 75: Who, How and Why? IES</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> -Do they reflect similar experiences to their younger counterparts in that their numbers are dominated by those seeking psychological or financial benefits or by this even older age have their reasons changed, and if so, how?</p> <p>-What about their skills as a measure of human capital?</p> <p>-Have they remained up to date and if so what practices have been followed to ensure their skills remain valuable?</p> <p>- Why and how do they succeed in securing and keeping employment?</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> NR</p> <p><b>Method(s):</b> Interviews</p> <p><b>Setting(s):</b></p>	<p><b>Sample population:</b> People 75 years of age and over who were still in some form of employment</p> <p><b>Sampling approach:</b> NR</p> <p><b>Inclusion/exclusion criteria:</b> Those who had continued to work over 75.</p> <p><b>Number and characteristics of participants:</b> N=31, 16 were men, age range was from 75 up to 91, majority being 75-81 (21 participants), 71% of people were in professional/managerial position, 84% were university graduates. The most common hours worked was 5-15 hours a week.</p> <p><b>Response rate (if relevant):</b></p>	<p><b>Brief description of method and process of analysis:</b> All interviews were recorded and the content later imported into NVivo 10 and analysed to discover major themes concerning their experiences and categorised as follows: -Qualifications and Type of Jobs Undertaken -Type of work undertaken -The job demands -Benefits from continuing to work -The downside of continuing to work -Health matters</p> <p><b>Key findings relevant to the review:</b> Results indicated participants scored highly on measures of human capital, occupied jobs where the supply of skilled labour was small and the demand was high, were well networked, in good health, above average in their proactive approach, and had already established reputations in their field.</p> <p>However simply securing employment and receiving positive feedback was not enough for some participants, as another highly valued component contributing to their enjoyment was the opportunity to craft their own job albeit in different ways. For some this meant designing the way in which the work was done, for others it meant working where, when and how they felt</p>	<p><b>Limitations identified by author:</b> NR</p> <p><b>Limitations identified by review team:</b> Recruitment method not reported, analysis not clearly described which makes it difficult to assess the reliability of the process and any sources of bias</p> <p><b>Evidence gaps/recommendations for future research:</b> If government wants people to work longer, we need to understand far more about how to attract and maintain the engagement of older people in the workforce.</p> <p><b>Source of funding:</b> NR</p>

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	<p>NR</p> <p><b>Dates:</b> NR</p>	<p>NA</p>	<p>most comfortable.</p> <p>Crafting was undertaken by almost all the sample. Most common was autonomy in choosing how to do the work, followed by negotiating a delivery date for the work undertaken then scheduling it around other commitments. If self-employed or a contractor the pricing of jobs was within their jurisdiction. Many employees were able to choose whether to work at home or on the employer's premises and occasionally who they might work with if they were part of a team. They seemed to understand the value of their skill scarcity and used this to either negotiate or assume additional autonomy of value to them.</p> <p>Positive outcomes reported in order of priority were psychological factors, such as an opportunity to exercise skills, substantial autonomy to craft their own ways of working and confirmation of professional identity and continued competence, followed by social factors, such as meeting people and financial factors. Few mentioned any drawbacks. An unexpected benefit was that working contributed to their maintaining their good health.</p> <p>Despite ageing being associated with perceptions of deterioration, both physically and mentally, a small yet growing proportion of the population is delighted to remain in the workforce, albeit in a reduced capacity, enjoys being still able to contribute and relishes the opportunity working provides them to enjoy a positive stream of psychological benefits.</p>	

## Pillay et al. (2006)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Hitendra Pillay, Tricia Fox, Kathy Kelly, Megan Tones</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Pillay, H., Fox, T., Kelly, K., &amp; Tones, M. (2006). Exploring work choices to slow early labour force exit of mature aged Australians: Results from the transitional employment survey. <i>The constraints to full employment or work choices and welfare-to-work, 8th Path to Full Employment Conference 13th National Conference on Unemployment, 7-8th December 2006, University of Newcastle.</i></p> <p><b>Quality rating:</b></p>	<p><b>Research questions:</b> The aim of this study was to investigate how the mature aged worker viewed the effect of timeframe, education level and occupation type on willingness to participate in transitional employment.</p> <p><b>Research approach:</b> National survey</p> <p><b>Data collection:</b> Online questionnaire</p> <p><b>Method(s):</b> Computing percentages for each option (cross-tabulations) and qualitative analysis of the data</p> <p><b>Setting(s):</b> Australian local government offices across</p>	<p><b>Sample population:</b> Australian government employees over 50 years of age</p> <p><b>Sampling approach:</b> NR</p> <p><b>Inclusion/exclusion criteria:</b> NR</p> <p><b>Number and characteristics of participants:</b> A total of 1,120 local government employees aged over 50 years participated in the study. 58 % of the sample was within six of fewer years from retirement, 44% had been educated to university level, 26% were in a professional occupation and 23% were in management.</p> <p><b>Response rate (if relevant):</b> NR</p>	<p><b>Brief description of method and process of analysis:</b> Aside from demographic data, survey questions asked respondents to respond to questions that were thematically clustered around themes including: work conditions; training and development; mutual roles and responsibilities; incentives and benefits; and community service usage, with reference to transitional employment. Response patterns were examined for each demographic category. These patterns were clustered into the themes for Transitional Employment (TE).</p> <p><b>Key findings relevant to the review:</b> The results of the study have shown that interest in transitional employment, and preferences relating to transitional employment differ according to timeframe until retirement, education level, and occupation type. The findings demonstrate that transitional employment interventions could be more effective for older workers if the demographic characteristics of the intended recipients are incorporated into their design. For instance, on the job training or short courses may be most appropriate for older workers close to retirement, whilst lengthier courses may be preferable for workers with more than 6 years until retirement. The results also show that current and past work and educational experiences influence transitional</p>	<p><b>Limitations identified by author:</b> Age and gender were not recorded</p> <p><b>Limitations identified by review team:</b> Some of the occupational groups could have been combined as now large number of groups makes it difficult to interpret the findings.</p> <p><b>Evidence gaps/recommendations for future research:</b> NR</p> <p><b>Source of funding:</b> NR</p>

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-	the country  <b>Dates:</b> NR		employment preferences. Workers with low levels of formal education and low status physical jobs were the least receptive to transitional employment and represent a challenge as they may be reluctant to participate in training and development, and their jobs are detrimental to their health. The diverse preferences reported by mature aged workers also support the need for greater flexibility of work conditions and training opportunities	

## Pillay et al. (2008)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Hitendra Pillay, Kathy Kelly &amp; Megan Tones</p> <p><b>Year of publication:</b> 2008</p> <p><b>Citation:</b> Exploring work and development options to reduce early labour force exit of mature aged Australians, International Journal of Training Research, 6:2, 20-39, DOI: 10.5172/ijtr.6.2.20</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The aim of the study was to investigate the effect of retirement timeframe, education level and occupation type on mature aged workers aspiration and willingness to participate in transitional employment.</p> <p><b>Research approach:</b> Survey</p> <p><b>Data collection:</b> Online</p> <p><b>Method(s):</b> Quantitative</p> <p><b>Setting(s):</b> Local government offices</p> <p><b>Dates:</b> NR</p>	<p><b>Sample population:</b> Local government workers over 50 years of age across Australia</p> <p><b>Sampling approach:</b> Within the mature aged cohort, three demographic variables were selected: timeframe until retirement (less than 6 years, more than 6 years), education level (University, Vocational Education and Training, School), and occupation level (Professionals and Managers; Administrators; and Blue Collar—Technicians, Tradespersons, Operators, and Labourers).</p> <p><b>Inclusion/exclusion criteria:</b> Self-selection among participants to whom a questionnaire was sent based on sampling criteria</p> <p><b>Number and characteristics of participants:</b> N=994, 59% had less than six years until retirement, 47% had a university degree, 53% were in professional/managerial position</p> <p><b>Response rate (if relevant):</b></p>	<p><b>Brief description of method and process of analysis:</b> Series of Chi square tests were conducted to identify demographic group differences according to timeframe until retirement, education level and occupation level.</p> <p><b>Key findings relevant to the review:</b> The majority of participants was interested in transitional employment, and were prepared to undergo training and development and work with management staff in order to achieve this end. Two general perceptions of transitional employment emerged. The first was transitional employment as an opportunity for learning and career development or change, which was most commonly aspired to amongst respondents with more than six years until retirement, a university education, or a professional/managerial role. The second was transitional employment as it is more traditionally viewed: as a chance to continue on in one's current role at reduced hours post retirement. The remaining groups represented variations on this theme. Implications of the current study include the divergence of transitional employment</p>	<p><b>Limitations identified by author: --</b> The survey was conducted online and used self report methodology, and it is therefore difficult to determine the exact response rate.</p> <ul style="list-style-type: none"> <li>- Gender, and possibly other unmeasured variables such as health status, may have exhibited a unique effect on transitional employment aspirations</li> <li>- The definition of "official minimum retirement date" was open to interpretation by participants, and expected retirement proximity would have likely varied according to a range of variables.</li> </ul> <p><b>Limitations identified by review team:</b> Self-referral which could have caused response bias of those thinking favourably on transitional employment</p> <p><b>Evidence gaps/recommendations for future research:</b> More research needed in potential impact of gender and health status on transitional employment aspirations</p> <p><b>Source of funding:</b></p>

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		NR	and training and development aspirations amongst a mature aged cohort, as well as mature aged workers' perceptions of organisational management's roles in supporting transitional employment.	NR

## Pillay et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Pillay, Hitendra K. and Kelly, Kathy and Tones, Megan J.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> Supporting the mature aged workforce. New Zealand Journal of Human Resource Management</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> What are the participants knowledge and attitudes regarding age diversity issues? How do local government councils (employers) respond to ageing issues through policy and practice? Do employers incorporate ageing issues in future business plans?</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Qualitative interviews</p> <p><b>Method(s):</b> Qualitative interviews</p> <p><b>Setting(s):</b> Local government council sites</p> <p><b>Dates:</b> Not reported</p>	<p><b>Sample population:</b> Local government workers</p> <p><b>Sampling approach:</b> Purposive</p> <p><b>Inclusion/exclusion criteria:</b> Study aimed to select broad range of interviewees. Little reported on inclusion exclusion criteria.</p> <p><b>Number and characteristics of participants:</b> 25 participants. Majority were older workers in managerial positions, but sample did include some younger workers, and 'outdoor' workers.</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> Research and interview questions informed coding categories. Data were coded for key themes and placed in data matrices.</p> <p><b>Key findings relevant to the review:</b> Stereotyping of older workers was positive and negative. Knowledge and experience seen as indispensable, but also seen to have lower physical capacity. Lower physical capacity seen to be an issue in terms of occupational health and safety and lower productivity. Older workers seen as often reluctant to retrain for less physically demanding jobs. One council tried to accommodate 'outdoor' older workers through progression via less physically demanding work roles. Organisational focus on physical work demands were viewed as antithetical to transitions to retirement. From an individual perspective applicability of personal retirement plans to organisational needs was a key factors. Poor relationships between supervisors and staff lead to no discussions of</p>	<p><b>Limitations identified by author:</b> Limited sample size and purposive sampling methods limits generalizability</p> <p><b>Limitations identified by review team:</b> N/A</p> <p><b>Evidence gaps/recommendations for future research:</b> Analysis of flexible work options from an organisation perspective.</p> <p><b>Source of funding:</b> Australian Research Council</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>retirement issues.</p> <p>Flexible work, job share and part time were not seen as targeting mature workers.</p> <p>Transition to retirement policies was highly regarded amongst employees approaching retirement.</p>	

## Pit and Byles (2012)

Study details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Pit, S.W. and Byles, J</p> <p><b>Year:</b> 2012</p> <p><b>Citation:</b> Pit, S.W. and Byles, J. (2012). The association of health and employment in mature women: A longitudinal study. <i>Journal of women's health, 21</i>. 273-280</p> <p><b>Country of study:</b> Australia</p> <p><b>Study design:</b> Longitudinal survey study</p>	<p><b>Research aims/objectives</b> Longitudinal study sought to identify which health problems are associated with employment among mid-age women over time. The research aimed to determine the health problems that were more associated with workforce participation using data from a nationally representative sample, the mid-age cohort of the ALSWH</p> <p><b>Method of allocation:</b> Women aged 45-50 were randomly selected from the national Medicare database.</p> <p><b>Intervention/s description:</b> NA</p>	<p>Data were analysed from the mid-age cohort of the Australian Longitudinal Study on Women's Health (ALSWH), which has five waves</p> <p><b>Sample characteristics, including population demographics</b> Women aged between 45-50 drawn from the Medicare database</p> <p>Baseline survey (1996) n=13,715</p> <p>Survey 2 (1999), n=12,338</p> <p>Survey 3 (2002), n=11,226</p> <p>Survey 4 (2004), n=10,905</p> <p>Survey 5 (2007), n=10,638</p> <p><b>Eligible population:</b></p>	<p><b>Outcomes:</b></p> <p><i>Measure of employment status:</i> collected by self-report questionnaire and asked if they had spent more than 1 hour in various employment practices.</p> <p><i>Measures of demographic characteristics:</i> Location was classified into urban and rural/remote according to the Rural remote and metropolitan areas index. Women were asked about their highest educational qualification, current marital status, if they had children living at home, being a carer was classified as yes or no. The relative socioeconomic disadvantage index was used which reflects the general socioeconomic indicators that contain variables related to economic and social characteristics of families and households and education level and occupation of individuals. A higher score represents a greater advantage.</p> <p><i>Measure of health problems:</i> at each point in time women were asked if they had been treated for a variety of conditions. Analysis was limited to survey points 3,4 and 5 because arthritis was only measures from s3 onwards, and as arthritis has been found to have a large impact on work to include this variable would distort findings.</p> <p><i>Measures of lifestyle:</i> smoking was measured by number of cigarettes smoked a day and BMI was reported</p> <p><i>Measures of health status:</i> Short form SF-36 Quality of Life questionnaire was used to create a measure of quality of life. A physical component and mental health component was derived from this score.</p> <p><b>Method of analysis:</b> At each survey, demographic characteristics, health problems, lifestyle factors and quality of life were compared for women who were employed and those who were not using chi-squared tests for categorical variables and t-tests for continuous variables.</p>	<p><b>Limitations identified by author:</b> A higher proportion of women who responded to S3, S4 and S5 were employed at S1 suggesting that a healthy cohort effect has taken place. This may underestimate the effect size if the ORs of health problems and their association with employment, particularly for diseases with high mortality or morbidity rates, causing women with these health problems to not take part in follow up surveys.</p> <p>The study did not take into account women's previous or current occupational level or severity of disease.</p> <p>Women who were on holiday during the study period may not have fallen into the employed category</p>

<p><b>Quality score</b> +</p>	<p><b>Country of study</b>  Australia</p> <p><b>Setting</b>  Women selected from the medicare database</p> <p><b>Location</b>  Rural and remote areas were covered</p>	<p><b>Describe how individuals, groups or clusters were recruited</b> <b>Selected population:</b>  Focus if study was women from the 1946-1951 birth cohort who have been surveyed five times over a 12 year period (1996-2007).</p> <p><b>Excluded population/s:</b> (as above)</p>	<p>Generalised estimating equations (GEE) were used to conduct nested multivariate longitudinal analyses, using the GENMOD statistical programme. <b>Results for relevant outcomes:</b></p> <p>Across the 3 survey periods, the % of women who participated in each survey and who were employed in 2001, 2004 and 2007 were 77%, 72% and 67% respectively.</p> <p>Attrition between surveys was associated with employment status, indicating an increase bias towards women who were more likely to be employed at each survey (p&lt;0.0001 on chi-square).</p> <p>Women's ongoing participation in the workforce at older ages was affected by both sociodemographic and health factors, with single women and those from more disadvantaged areas being more likely to work, and those with caring responsibilities of people they live with and health conditions being less likely to work (p&lt;0.005).</p> <p>Women who reported psychiatric conditions (OR=0.48, 0.3-0.78, p&lt;0.005), diabetes (OR=0.82, 0.69-0.99, p&lt;0.0050), depression (OR=0.81, 0.71-0.91, p&lt;0.0050), anxiety (OR=0.84, 0.74-0.98, p&lt;0.0050), and high blood pressure (OR=0.89, 0.80-0.98, p&lt;0.005) were less likely to be employed.</p> <p>Being employed decreased as physical and mental health deteriorated and with self-reported conditions Back pain, arthritis, cancer, obesity and being a current smoker were associated with employment but not when quality of life is added to the model</p>	<p><b>Limitations identified by review team:</b></p> <p>Generalisability to other areas/counties.</p> <p>Different occupations could be at more risk than others.</p> <p>Health measures based on accurate reporting by individuals taking part.</p> <p><b>Source of funding:</b> None</p>
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## Pit et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Pit, S. W., Shrestha, R., Schofield, D., &amp; Passey, M.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> Health problems and retirement due to ill-health among Australian retirees aged 45-64 years. Health policy, 94(2), 175-181.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To examine which health problems are associated with retirement due to ill health among Australians aged 45-64 years.</p> <p><b>Research approach:</b> Quantitative</p> <p><b>Data collection:</b> Survey analysis</p> <p><b>Method(s):</b> Cross-sectional analysis of self-reported data of 1933 retired men and 3160 retired women aged 45 and over, living in NSW in 2008, who took part in the 45 and Up Study.</p> <p><b>Setting(s):</b> Retired men and women, aged over 45, living in New South Wales</p> <p><b>Dates:</b> Dataset released in 2008</p>	<p><b>Sample population:</b> People aged 45 living in New South Wales</p> <p><b>Sampling approach:</b> Random sampling of those who had retired</p> <p><b>Inclusion/exclusion criteria:</b> Retired and aged over 45. Discounted were those who had completed (version 1) of the questionnaire, as there were discrepancies in the questions asked.</p> <p><b>Number and characteristics of participants:</b> 1933 retired men and 3160 retired women aged 45 and over, living in NSW in 2008</p> <p><b>Response rate (if relevant):</b> Response rate to the 45 and Up Study estimated at 17.9%.</p>	<p><b>Brief description of method and process of analysis:</b> Participants randomly selected from the national Medicare Australia health insurance database. People living in rural areas and aged 80 years and over were oversampled by a factor of two. The dataset was released in August 2008. 3160 females and 1933 males, who were recruited between 2006 and 2008, were studied. Data were collected by self-report questionnaire. Retirees were asked why they had retired, and allowed multiple responses. The reason for retirement was coded as '1' for anyone who recorded they had retired due to ill-health even if they had also listed other reasons for retirement, and 0 if they had retired for other reasons. Health problems were categorised as either 'present' or 'absent', and self-reported health status was categorised into three groups, and location into five. Age was grouped in 5-year intervals. Marital status was defined as either 'married/defacto' or 'other'. Education was classified according to the highest qualification completed. Logistic regressions were used to estimate odds ratios of retiring due to ill-health versus other retirement reasons while adjusting for location, age, marital status and education. A P-value of &lt;0.01 was chosen for statistical significance because there is a potential for a greater risk of type I error due to multiple comparisons. Records with missing values were excluded from the adjusted models.</p> <p><b>Key findings relevant to the review:</b> The probability of retiring due to ill-health was 18% (572/3160) for women and 31% (599/1933) for men. After adjusting for socio-economic variables and other health problems, women who reported ever having been told by a doctor that they had thrombosis, depression, osteoarthritis, or cancer (except melanoma and skin and breast cancer), were twice as likely to have retired early due to ill-health as women without these health problems. The number of health problems associated with retirement due to ill-health appeared to be greater for men.</p>	<p><b>Limitations identified by author:</b> Firstly, several mechanisms might explain associations between ill-health retirement and health status, but causality could not be determined due to cross-sectionality. Associations between health conditions and ill-health retirement do not indicate that these conditions led to retirement. Several questions do not necessarily reflect the situation at the time of retirement; depression or arthritis may have started after retirement, or cancers may have been cured prior to retirement. However, a number of studies investigated early retirement which can make confident claims about causality: A Finnish study found depressed men retire on average 1.5 years younger, and the Whitehall II study among British civil servants found a higher paid job, lower job satisfaction, and lower self-reported health predicted early retirement. However, neither assessed impacts of specific conditions on early retirement by gender.</p> <p>Second, the study had a low response rate (17.9%), so it is not appropriate to generalise to the general population. Further, the survey was in English and excluded the mentally impaired who could not sign their own consent form; probably not representative of NSW but may apply to English speakers and healthier people who are more likely to respond. However, comparisons are valid even when the sample is from a select group. For example, the</p>

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			<p>From most to least significant, stroke, cancer (except melanoma and skin and prostate cancer), osteoarthritis, depression, anxiety and heart disease had a significant association with retirement due to ill-health among male retirees. The strongest association with retirement due to ill health was in self-reported health status. Compared to female retirees who reported excellent to very good health, women who rated their health as fair or poor were 7.67 times as likely (95% CI: 5.06-11.62) to have retired early due to ill-health. Also, women who rated their health as good were 2.85 times as likely (95% CI: 2.03-4.01) to have retired early due to ill-health. The same pattern emerged for male retirees, but the associations were slightly stronger for males who rated their health as fair or poor (OR: 8.87 (95% CI: 5.60-14.05)). The adjusted odds of retiring due to ill-health declined with increase in age for men but not for women. Only women aged between 50 and 54 had higher odds of being retired due to ill-health than women aged between 60 and 64 years. Single women had higher odds of being retired due to ill-health than their married counterparts, but no association was found for men after adjusting for other covariates. In comparison to men with a university degree, men with a trade or apprenticeship had the highest odds of being retired due to ill-health followed by men with an education equivalent to or lower than high school.</p>	<p>impact of smoking was first identified in a group of British doctors—not at all representative of the general population. Third, the study lacks clinical data, does not include all chronic conditions, and is based on self-report. Although some studies have found self-reported to be a valid measure, and the study uses validated questionnaires to elicit data that would otherwise be unavailable, under-reporting remains a problem. For example, respondents may experience poor health but not recognise that it is due to diabetes and not report it; as a result the association between diabetes and ill health retirement would be underestimated. This may partly explain the stronger association with ill-health retirement from self-reported health status than individual health problems. Fourth, our study did not include disease severity or factors to improve people’s functioning, such as medication or other treatment.</p> <p><b>Limitations identified by review team:</b> N/A</p> <p><b>Evidence gaps/recommendations for future research:</b> N/A</p> <p><b>Source of funding:</b> National Health and Medical Research Council</p>

## Pond et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Pond, R., Stephens, C., &amp; Alpass, F.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> How health affects retirement decisions: three pathways taken by middle-older aged New Zealanders. Ageing and Society, 30(03), 527-545.</p> <p><b>Quality rating:</b> -</p>	<p><b>Research questions:</b> How does health determine retirement pathways?</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> 2 semi-structured interviews (initial, then 18 month follow up), subsequently transcribed and coded through Atlas.ti</p> <p><b>Setting(s):</b> Older (aged 55-70) New Zealanders with numerous employment statuses</p>	<p><b>Sample population:</b> 60, down to 50 for second stage, who had previously participated in 'a large nationwide postal survey about health, work and retirement'</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> Aged 55-70, had taken part in aforementioned survey and specified that they would be willing to be interviewed face-to-face</p> <p><b>Number and characteristics of participants:</b> 60 older New Zealanders (32 women, 28 men) aged 55-70 in various stages of retirement and employment status</p> <p><b>Response rate (if relevant):</b> Not</p>	<p><b>Brief description of method and process of analysis:</b> A qualitative, longitudinal design was used. First interviews used a life course approach and asked about retirement and the factors that influenced workforce participation. The second set of interviews asked about work, retirement, health and well-being over the 18 months, and again what influenced their employment and retirement choices. Interviews were digitally recorded, transcribed, and coded the data using ATLAS.ti. Data were organised according to their common and distinguishing features. Transcripts from second interviews were compared and contrasted with the first to find common themes and any potential contradictions.</p> <p><b>Key findings relevant to the review:</b> Three pathways were identified: 'impaired' (health and disability affect ability to work); 'maximisation of life' (retiring whilst healthy to fulfil other goals); and 'protective' (motivated by concern to promote and protect health).</p> <p>I. The impaired pathway: poor health affects the ability to work</p> <p>Several participants' health problems had impaired performance, comfort or ability to function at work, and consequently they had retired, reduced their hours or found alternative employment more suited to their health condition. There were cases of work participation being affected by an impairment caused by accidents and injuries (some were work-related), and others of musculoskeletal, cardiovascular, respiratory and multiple health conditions. Although conceivable, no one reported poor mental health as leading to retirement or work reductions from late middle age, although a couple mentioned that poor mental health had affected their earlier working life. Because bodily health is inextricably linked with interpretative processes (McDonough and Amick, 2001), the impaired pathway is actually the process by which people's bodily ill-health and their interpretation of this interact to limit their ability to continue working as before.</p> <p>II. The pathway that maximises a finite, precious life</p> <p>Participants articulated two distinct variants of the maximisation pathway: 'optimising present good health' and 'maximising life following a health scare'.</p> <p><b>Optimising good health whilst you have it</b></p> <p>Several participants retired/planned to retire explicitly because they were healthy, with the intention of maximising enjoyment of remaining good health. Several referred to inevitable decline, the unpredictability of health, and maximising non-work facets of life in remaining years. The impact of witnessing others die/ become ill was commonly noted. Death and illness of those around instilled awareness and anxiety, and these reminders of mortality have been found to be significant for those in their middle-older years (Karp 1991). The health of close relatives was also used as a marker to predict one's own morbidity, creating either a sense of urgency or sufficient time. Some</p>	<p><b>Limitations identified by author:</b> Ethnically not representative (Maori over-represented). Misrepresentation also occurs based on economic living standards index categories; mean score about right, but higher proportions living in 'hardship' and 'comfort', and a lower proportion with a 'good' living standard.</p> <p><b>Limitations identified by review team:</b> Little discussion of ethics, analysis and role of researchers not really discussed in detail</p> <p><b>Evidence gaps/recommendations for future research:</b> Same methodology with a more systematic analysis</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p><b>Dates:</b> First interviews October-November 2006, follow up May-June 2008</p>	<p>reported</p>	<p>found work fulfilling and intended to continue, but others believed that work competed with other important things in life, leading some to reduce/relinquish work whilst healthy. Notably, this was dependent on financial security and meeting one's costs to sustain desired living standard; it could not be achieved by those experiencing hardship and serious financial pressure.</p> <p><b>Maximising life after a health scare</b></p> <p>A few participants decided to prioritise life outside work after a serious health scare. Those who experienced them were suddenly reminded of mortality, and reappraised their life, priorities and aspirations. As other research on middle-older age adults has found (Karp 1991), life's finitude was pertinent. Several participants referred to the importance of maximising remaining life, typically whilst healthy enough to engage in fulfilling activities. Witnessing others with serious illnesses or experiencing a health shock oneself reminded participants of their own vulnerability and the importance of taking advantage of remaining time. As many saw work as competing with available time for fulfilling activities, some retired or reduced work hours if they could afford to do so; those who continued to work were conscious of the risks of delaying retirement. This pathway is consistent with notions of positive ageing and the third age, during which older people remain active and enjoy their remaining healthy years before frailty and dependency.</p> <p>III. The retirement pathway that protects health and body</p> <p>Protecting one's health was a clear concern for most participants. Many engaged in physical activity and/or controlled their diet to maintain or improve health, and those who did not referred to ambitions or failings in this regard; this is not surprising considering the ubiquity of the 'health promotion' discourse. Many conceptualised work as inimical to good health, leading some to choose less stressful jobs, reduce their hours or retire. Several participants did so to protect themselves from stress, and some had taken into account doctor's or partner's advice. Several who were still working made it clear that they would no longer tolerate stressful working conditions. Many expected retirement to improve health, mainly because they would have more time to exercise. Those who had retired spoke of less stress and more exercise, and some thought that retirement-related health benefits compensated for age-related health decline. There were, however, contradictory opinions about whether retirement negatively or positively influenced health: some believed people experience health benefits from work, and some thought people susceptible to decline or death shortly after retirement. Seeing retirement as a phase lacking purpose and activity was not always associated with delaying retirement. Instead some participants had developed other interests or transitioned into retirement gradually.</p>	<p><b>Source of funding:</b> Health Research Council of New Zealand</p>

## Quine S &amp; Bernard D (2006)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Quine, S. and Bernard, D.</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Quine, S. and Bernard, D. (2006). Understanding baby boomers' expectations and plans for their retirement: findings from a qualitative study. <i>Australasian Journal of Ageing</i>, 25, 145-150.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The objective of the research was to explore the range of expectations and plans for retirement of Australian baby boomers to inform policy. Specific aim was to contribute to the understanding of baby boomers' attitudes and personal strategies and whether (and if so how) these vary by socioeconomic and other demographic factors.</p> <p><b>Research approach:</b> Cross-sectional Qualitative study</p> <p><b>Data collection:</b> 12 Focus Groups in NSW, Australia</p> <p><b>Method(s):</b> Focus groups looking at work, retirement and financial and other planning.</p> <p><b>Setting(s):</b> Rural and urban NSW, Australia</p> <p><b>Dates:</b> 2004</p>	<p><b>Sample population:</b> Australian baby boomers, born between 1946 and 1955.</p> <p><b>Sampling approach:</b> Recruitment relied on volunteers to local clubs and those interested were asked to contact the facilitator. Participants were offered a small incentive for their time.</p> <p><b>Inclusion/exclusion criteria:</b> Not reported</p> <p><b>Number and characteristics of participants:</b> 78 participants included, (50 married, 11 de facto, 8 divorced, 3 separated, 3 widowed, 3 single), 36 above 55, and 36 below 55 and 42 above 56. 32 worked full time, 29 were part time and 17 were not in the workforce, 28 had high urban status, 25 low urban status and 25 mixed rural status. There was a mix of educational attainment.</p> <p><b>Response rate (if</b></p>	<p><b>Brief description of method and process of analysis:</b> Researchers sought to recruit participants to a focus group who were similar to each other in social-economic status, gender and geographical location. Semi-structured topic guide was developed by the researchers and used by the focus group facilitators with topics including ageing, working life, plans for retirement, adequacy of money in retirement, need to support others in retirement, housing, lifestyle, health, insurance, physical and emotional support needed. Focus groups lasted for approx. 90 minutes, audiotaped with permission of the participants and transcribed. Data was analysed manually by 2 researchers, providing a measure of interrater reliability. Basic content and thematic analysis was used.</p> <p><b>Key findings relevant to the review:</b>  Many participants had not made any retirement plans and of those who had this was often restricted to their finances, and was more likely among participants in higher social-economic groups. Planners had put into place financial plans and some thought into the near future post-retirement, whereas non-planners were living life on a 'day to day' basis. None of the participants, irrespective of their social-economic status, had given much thought to planning for their advanced old age and were unwilling to do so.  Socio-economic status the variable that made the most difference in terms of the opportunity to plan. Age also appeared important, with younger baby boomers being less likely to have considered or planned for their old age. Apart from proximity to retirement the age demarcation may also be associated with the fact that older baby boomers who were public servants were more likely to qualify under the</p>	<p><b>Limitations identified by author:</b> There were a higher proportion of participants with tertiary education than in the baby boomer population attributable to the deliberate selection of a sizeable number of participants from high socio-economic status backgrounds to enable comparison with low socio-economic status participants.</p> <p><b>Limitations identified by review team:</b> Generalisability to other areas/countries Participants may have been more open in interviews if they felt intimidated in a focus group session. Narrow sampling approach. Incentive to participate may have led to a different population participating.</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
		relevant):	<p>superannuation scheme.</p> <p>Participants from low socio-economic background generally had less occupational opportunities and flexibility, less job satisfaction, less private health insurance and less money available for retirement</p> <p>Enjoyment was an incentive to remain in the workforce. Those employed part time were more likely to report enjoyment, irrespective of their socio-economic status. Stress was viewed as a disincentive to remain in the workforce by participants from all backgrounds but was reported more frequently by high socio-economic status men with their own business.</p>	<p><b>Evidence gaps/recommendations for future research:</b> Not reported</p> <p><b>Source of funding:</b> Not reported</p>

## Reynolds et al. (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Francis Reynolds, Alexandria Farrow, Alison Blank</p> <p><b>Year of publication:</b> 2012</p> <p><b>Citation:</b> International Journal of Ageing in Later Life 7(2): 79-106</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> What are the subjective benefits of working beyond the age of 65</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b></p> <p><b>Method(s):</b> Semi-structured interviews.</p> <p><b>Setting(s):</b> Home and the workplace</p> <p><b>Dates:</b> Not reported</p>	<p><b>Sample population:</b> Older employees (65+)</p> <p><b>Sampling approach:</b> Participants recruited through local and national advertisements. Why / how individuals were selected not reported.</p> <p><b>Inclusion/exclusion criteria:</b> Individuals were eligible if they were FT/PT employed or self employed.</p> <p><b>Number and characteristics of participants:</b> 31 people. Aged between 65 and 91. 11 women, 12 men. 14 full time and 17 part time. Various industries were represented.</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> Interviews were conducted either over the phone or face to face. Each took around an hour. Key topics were presented to participant with follow up questions asked.</p> <p>Data was coded according to key themes by all researchers and discussion was held to establish credibility of the findings.</p> <p><b>Key findings relevant to the review:</b> Three main reasons for continuing to work. Personal development, health and wellbeing and financial reasons. Working was thought to promote emotional and physical health/afforded way to stay in control over health. Stopped respondents getting bored and gave them a purpose. Work provided a platform for personal development. It made some feel valued and engaged. Good health presented as enabling. Part time working and self-employment were ways to continue to work later in life.</p>	<p><b>Limitations identified by author:</b> Self selection bias is evident. Most participants were professional and in good health. None were from manual professions and only a few were in a situation in which they were obliged to work out of financial necessity.</p> <p><b>Limitations identified by review team:</b> N/A</p> <p><b>Evidence gaps/recommendations for future research:</b> Future research could address how health problems associated with old age are addressed by people who have extended their careers to their later 60s.</p> <p><b>Source of funding:</b> Institute of Occupational Safety and Health</p>

Rice et al. (2011)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Rice, N. E., Lang, I. A., Henley, W., &amp; Melzer, D.</p> <p><b>Year of publication:</b> 2011</p> <p><b>Citation:</b> Common health predictors of early retirement: findings from the English Longitudinal Study of Ageing. Age and ageing, 40(1), 54-61</p> <p><b>Quality rating:</b> ++</p>	<p><b>Research aims:</b> To identify common symptoms and conditions that predict early work exit, at the population level.</p> <p><b>Research approach:</b> Cohort Study</p> <p><b>Data collection:</b> English Longitudinal Study of Ageing (ELSA)</p> <p><b>Method(s):</b> Comparative analysis of potential health indicators of early retirement</p> <p><b>Setting(s):</b> England,</p>	<p><b>Sample population:</b> ELSA</p> <p><b>Sampling approach:</b> Reported elsewhere</p> <p><b>Inclusion/exclusion criteria:</b> Participants were employed at the baseline, present, and both follow-up data collection points, otherwise they were excluded. Additionally, those that left then re-entered the workforce at the 2 and 4 year follow up periods respectively were excluded.</p> <p><b>Number and characteristics of participants:</b> 1,693 workers aged 50 and over at baseline who were younger than the contemporaneous</p>	<p><b>Brief description of method and process of analysis:</b> Respondents chose the best description of their current situation: retired; employed; self-employed; unemployed; permanently sick or disabled; looking after home or family or other. Individuals were classified as ‘in work’ if they answered ‘self-employed’ or ‘employed’. 54 Individuals who did not answer this question at baseline were excluded. Outcome measures classified respondents into those who made the transition from working at baseline to not working at 4-year follow-up, and those who remained in employment throughout. The following baseline health predictors were considered: general health (excellent, very good or good versus fair or poor); long-standing limiting illness (any longstanding illness, disability or infirmity which limits activities); activities of daily living (ADLs) (difficulty with any of the following: dressing; walking across a room; bathing or showering; eating; getting in or out of bed and, using the toilet); instrumental ADLs (IADLs) (difficulty with any of the following: map reading; preparing a hot meal; shopping for groceries; making telephone calls; taking medications; doing work around the house or garden; managing money). Respondents were asked whether a doctor had ever told them that they have (or have had) any cardiovascular or chronic conditions. Analyses restricted to those with a prevalence of 10% or more (asthma, hypertension, arthritis and any heart condition (from: angina; heart attack; congestive heart failure; heart murmur; abnormal heart rhythm; other heart trouble)). Also considered were those with no diagnosed conditions compared with those with one, two or three or more conditions. Respondents were asked about difficulties they had walking a quarter of a mile unaided. Responses dichotomised to compare individuals reporting no difficulty with those reporting any degree of difficulty or being ‘unable to do this’. Respondents with problems were asked to choose which symptoms made walking difficult from a show-card of 17 symptoms, including leg or foot pain and shortness of breath. Respondents were asked whether they were often troubled with pain, and if so to rate the severity of the pain (from 0 to 10) in their back, hips, knees and feet, when walking. Symptomatic pain when walking was considered as a dichotomous variable (no pain versus any pain) and trends for pain severity. Also considered were responses to questions about claudication, including whether individuals experienced pain in either leg that comes on when walking. ELSA included the validated eight-item version of the Centre for Epidemiological Studies Depression (CES-D) symptoms index. This research considered three or more symptoms as identifying depression in line with previous studies that have used the eight-item scale. Individuals were asked about income, wealth and pensions. ELSA-derived financial variables were used to create baseline measures for net total (non-pension) wealth; pension wealth (private plus state pensions) assuming retirement at the state pension age, and income from employment. The following factors were also considered as potential</p>	<p><b>Limitations identified by author:</b></p> <p>As in any such longitudinal study, attrition is a potential weakness of the ELSA study: if the characteristics of individuals who drop out of the study differ from those remaining in the study, inferences drawn at the population level may not be valid. To account for attrition, ELSA created longitudinal weights for individuals who were present at all three waves. These weights were based on a sequence of attrition models for each wave, which is multiplied by the weight created at the previous wave. The sequential nature of the weighting attempts to reduce any bias arising between</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>people aged 50 and over</p> <p><b>Dates:</b> Data initially collected in 2002; follow-up in 2004 and 2006. Analysis undertaken in 2010.</p>	<p>retirement age (60 for women, 65 for men) at 4-year follow-up. All were private homeowners in England.</p>	<p>confounders for early work exit: partner retirement (whether respondents had a partner who retired during the follow-up period); education; activity level of job; smoking status; alcohol consumption frequency; body mass index. All modelling was conducted in STATA version 10.1, considering the predictive effects of potential confounders on risk of early retirement, in individual age- and sex adjusted logistic regression models. Any traits with significant associations with <math>P &lt; 0.1</math> were included in a fully adjusted multivariable regression model. A backwards stepwise elimination procedure selected a more parsimonious model, using multi-parameter Wald tests to establish strength of association with each stage of the model selection. Final model covariates included: age; gender; individual pension wealth; alcohol consumption; self-rated health and partner retirement. The predictive effects of pain, mobility limitations and symptoms of depression were assessed by adding baseline measures of these symptoms to the derived model described above.</p> <p><b>Key findings relevant to the review:</b></p> <p>The following factors were significant predictors of early work exit: pension wealth; increasing age; partner retirement; high alcohol consumption; fair or poor self-rated health; limiting long-standing illness; IADL difficulties; diagnosed asthma; having three or more doctor diagnosed conditions. The odds of early work exit were higher for individuals with symptomatic depression. Workers with more symptoms of lower limb pain and associated mobility difficulties, and more depressive symptoms, are more likely to make an early transition out of work than their 'healthier' counterparts in the short term. Occupational health interventions targeted at older workers with symptoms of depression and lower limb pain and associated mobility difficulties may promote extension of working lives in these groups.</p> <p><b>Key points</b></p> <ul style="list-style-type: none"> <li>• Governments are seeking ways of keeping older people in employment for longer.</li> <li>• Summary health measures predict early retirement, but more specific symptoms and conditions need to be identified.</li> <li>• We assessed health symptoms and conditions as predictors for early retirement in a group of workers followed up for 4 years.</li> <li>• Older workers with depressive symptoms or mobility difficulties, especially with leg pain, are more likely to retire early.</li> <li>• Health interventions targeting these conditions may enable older workers to remain in the labour force.</li> </ul>	<p>each wave of ELSA. In addition to using survey weights to account for attrition, we tested whether the baseline outcomes investigated were different in our sample (baseline workers present at all study waves) compared with the baseline workers who dropped out of the study.</p> <p><b>Limitations identified by review team:</b></p> <p>Narrow scope; could include those in social housing or in other regions of the UK</p> <p><b>Source of funding:</b></p> <p>The UK National Institute for Health Research (NIHR), as part of the Peninsula Collaboration for Leadership in Applied Health Research and Care (PenCLAHRC).</p>

Royal College of Nursing (2013)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Royal College of Nursing</p> <p><b>Year of publication:</b> 2013</p> <p><b>Citation:</b> Royal College of Nursing. (2013). <i>NHS Working Longer Review</i>. London: Royal College of Nursing.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The aim of the study was to determine attitudes to proposed pension age changes and asked respondents across all healthcare sectors about their attitudes to working until 68, to assess whether they would be able to cope with the nursing role.</p> <p>The research also aimed to find the views of RCN members aged 60 and over about their experience of work and retirement.</p> <p><b>Research approach:</b> Mixed-methods</p> <p><b>Data collection:</b> On-line survey</p> <p><b>Method(s):</b> Evidence was formed from a number of sources, including preliminary findings from the RCN 2013 employment survey; an online survey of members (either retired or aged 60+) conducted in July 2013 and member consultation and feedback</p>	<p><b>Sample population:</b> The first survey was sent to all 410,000 RCN members. The second survey was sent to all RCN members who were aged 60 or over and/or were in a retired membership category. 1,470 members replied, a response rate of 21%.</p> <p><b>Sampling approach:</b> Not reported</p> <p><b>Inclusion/exclusion criteria:</b> As stated above, the second survey was for those aged 60 or over and/or were in a retired membership category.</p> <p><b>Number and characteristics of participants:</b> 1,470 responded to the second survey, other characteristics were not reported.</p> <p><b>Response rate (if relevant):</b> Second survey had a response rate of 21%.</p>	<p><b>Brief description of method and process of analysis:</b> Not reported</p> <p><b>Key findings relevant to the review:</b> From the first survey: 77% stated that they would not feel capable of coping with a nursing role until the age of 68, with only 12% saying they would feel capable. 84% of those with a disability stated they would not feel capable of working until the age of 68, and 77% of those with no disability said they would not be capable. Self-employed respondents plus those working for NHS bank or agencies are most likely to be most positive about working until 68, while those working in NHS hospitals, community settings and trusts or boards are the least positive. Those nearest to the age of 68 are more likely to feel capable of working at this age.</p> <p>In the second survey targeted at those 60+. 60% said they were, or had at some time retired, and 94.9% declared they were in receipt of an occupational pension. Of those who answered the question, 49.3% had returned to healthcare employment (not necessarily the NHS) after they had retired. Here, working shortened hours, having flexible working, not</p>	<p><b>Limitations identified by author:</b> Not reported</p> <p><b>Limitations identified by review team:</b> Unsure if there are gender differences Different specialisms may have different concerns. Unclear how different the responses are from other generations working the NHS Are these findings generalizable to other countries/ other regions in UK/ hospitals that are less busy/ different management structures?</p> <p><b>Evidence gaps/recommendations for future research:</b> Not reported</p> <p><b>Source of funding:</b> Not reported</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>from discussion within branches and boards from across 4 countries of the UK.</p> <p><b>Setting(s):</b> Not Reported</p> <p><b>Dates:</b> 2013</p>		<p>having night shifts, being in a less physically demanding role, having management support and being in a less stressful role were all important factors helping in the return to work in health care employment.</p> <p>Members were asked if these factors were available to them in their pre-retirement role and only 40.9% said yes they were. When asked why they were not available previously the most common response was poor management support and understanding, and many reported that part time work was just not available and the band they had to work in had fulltime rotational shifts.</p> <p>For those who had not returned to healthcare employment, many comments were made in relation to unsupportive management particularly in relation to ill health, perceptions about income and the taxation implications of returning to work.</p> <p>Specific issues related to their field of practice that concerned them in relation to a higher retirement age and nurses having to work longer included: the emotional and physical demands; encountering ageism and negative attitudes; long shifts/night shifts; keeping up with the changes on IT/medical technology (and be trained and supported to do so within adequate time).</p> <p>Difficulty with night shifts was a particular concern with many</p>	

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>comments made, and a number of cross-cutting issues were also raised: increasing workload, staff shortages, support and respect from colleagues, reorganisations and political changes, hearing difficulties, commuting demands, working with younger staff who are quicker at the job, eye sight issues, standing for prolonged periods of time, hormonal changes and the physical demands of the role.</p> <p>Other relevant comments and observations that arose were thematically analysed including:</p> <p>Long working hours, valuing older workers, management/ colleague support, the impact of physical and emotional demands, having choice.</p>	

## Schofield D et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Schofield, D., Fletcher, S., Page, S., &amp; Callander, E.</p> <p><b>Year of publication:</b> 2010</p> <p><b>Citation:</b> Retirement intentions of dentists in New South Wales, Australia. Human resources for health, 8(1), 9.</p> <p><b>Quality rating:</b> -</p>	<p><b>Research aims:</b> Elucidate work patterns and retirement intentions of older dentists</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Survey</p> <p><b>Method(s):</b> Self-reported survey sent out to members of the Australian Dental Association, New South Wales</p> <p><b>Setting(s):</b> Older dentists (aged 50+) in New South Wales, Australia</p> <p><b>Dates:</b> October</p>	<p><b>Sample population:</b> 768 older dentists</p> <p><b>Sampling approach:</b> Survey sent out to all dentists aged 50+ on the ADA NSW database</p> <p><b>Inclusion/exclusion criteria:</b> Age and location, and those included had to not have retired</p> <p><b>Number and characteristics of participants:</b> 153 dentists aged 50+ practicing in New South Wales</p> <p><b>Response rate (if relevant):</b> 20% (described as a better-than-average response to a mail out survey from NSWADA)</p>	<p><b>Brief description of method and process of analysis:</b> The survey collected demographic and practice characteristics; information on dentists' intended age of retirement and expected reasons for leaving the workforce; as well as financial details such as the value of assets and debts, expected sources of funding for their retirement, and superannuation information. A one-sample t-test was used to test differences between the age at which dentists wished to retire and the age at which they thought they realistically would. One-way ANOVAs examined differences in intended retirement age between groups. Multivariate regression was used to establish what influences dentists to retire by identifying predictors of intended retirement age; missing values were replaced by the mean for that variable. Variables were entered in 5 steps: Demographic variables; Partner variables 'education, employment, income, and health'; work variables; Property ownership; and location variables. Statistical analyses conducted using SPSS with significance set at <math>p = 0.05</math>.</p> <p><b>Key findings relevant to the review:</b>  <u>Variation in retirement intentions</u>  On average, dentists in New South Wales intend to retire at 66, although would do so at 64 if they had the choice (<math>p &lt; 0.05</math>). Only 9% of survey respondents thought that they would retire before 60. 43% intended to leave the workforce within five years, while almost three-quarters intend to stop working by 2018. Dentists with children intend to retire significantly later than those without (<math>p &lt; 0.05</math>). Study participants were asked to indicate which of a number of possibilities they predicted would be the reason for their future retirement. For all dentists, the most common responses were to have more leisure time (51%), being able to afford to stop working (49%) and job stress or pressure (23%; multiple responses could be selected and there was no ranking of the responses). Males were more likely than females to expect to retire due to a lack of interesting work, with no female dentists indicating that this would be a reason for retirement. Females more often predicted their retirement to be associated with ill health. Female dentists expecting to retire because their spouse wanted them to predicted a significantly older retirement age than males retiring for the same reason (<math>p &lt; 0.05</math>), while the reverse is true for dentists who envisage themselves leaving the workforce because they can afford to do so (<math>p &lt; 0.05</math>). Multivariate regression analysis revealed that of a number of variables entered, only age and home ownership were significant predictors of intended retirement age, with 27% of variance attributable to current age and home ownership responsible for a further 2% (<math>p &lt; 0.05</math>), suggesting that paying off</p>	<p><b>Limitations identified by author:</b> N/A</p> <p><b>Limitations identified by review team:</b> No mention of control variables. Data not represented graphically or collated in one accessible format.</p> <p><b>Evidence gaps/recommendations for future research:</b> Could be replicated in the UK if a professional database exists</p> <p><b>Source of funding:</b> Mr Bernard Rupasinghe and the NSW branch of the Australian Dental Association</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	2007		<p>debt is an important determinant of retirement.</p> <p><u>Semi-retirement</u></p> <p>Some dentists transition into retirement via part-time work. Two-thirds of the dentists in this study worked in a practice where part time work was available. Of these, 71% were either currently working part time or considering part time work in the future. Of the dentists for whom part time hours were not available in their current practice, two thirds reported that they would like the option. 54% of survey respondents declared a desire to continue working at reduced hours at either their current location or in another practice after ceasing full time work. 37% of dentists intend not to work in dentistry at all following retirement from their current practice, while 27% plan to work as a locum part time.</p> <p><u>Policy impacts</u></p> <p>The changes to superannuation arrangements in 2006 appear to have had little effect on the retirement plans of older dentists in NSW, with 57% reporting that there would be no change to their intended retirement date. Of those who predicted the superannuation changes would have some impact, two-thirds thought that they would retire later than previously planned (19% of the total sample). A further 13% were unsure how the new policy would affect their retirement.</p>	

## Shacklock K (2006)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Shacklock, K.</p> <p><b>Year of publication:</b> 2006</p> <p><b>Citation:</b> Extended working lives? The meaning of working to older university workers in Australia. International Journal of Human Resources Development and Management, 6(2), 161-173</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> To explore the meaning of working to older workers to better understand whether and why they might want to continue working</p> <p><b>Research approach:</b> Qualitative</p> <p><b>Data collection:</b> Interviews</p> <p><b>Method(s):</b> Semi-structured interviews with 30 employees aged 50 or above</p> <p><b>Setting(s):</b> An Australian Public University</p> <p><b>Dates:</b> NR</p>	<p><b>Sample population:</b> 30</p> <p><b>Sampling approach:</b> Snowballing sampling technique until data saturation was achieved</p> <p><b>Number and characteristics of participants:</b> 30 employees all employees of an Australian public university over the age 50</p> <p><b>Response rate (if relevant):</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> In-depth, semi-structured, exploratory interviews with 30 employees, lasting 96 minutes on average, recorded, transcribed, and uploaded to nVivo. Data was sought in response meanings of working, intentions to continue working, and working past 65. Thematic analysis was completed to find dominant and less dominant themes. A single organisation (an Australian public sector university) was selected as the context for the study. Thirty participants were selected using the purposeful sampling technique (15 males; 15 females aged at least 50 years), snowballing sampling technique also used to find some working retiree participants. Once data began being repeated, the point of 'saturation' no more participants were sought.</p> <p><b>Key findings relevant to the review:</b></p> <ul style="list-style-type: none"> <li>• Working is important to older workers</li> <li>• The majority (22 of 30) of participants responded that working was one of the 'most important' or 'more important' things in their lives. Not one participant rated working as being 'least important'.</li> <li>• 'Family' is more important than 'working'</li> <li>• Participants were each asked to rank seven choices in importance in their life. The majority (21 of 30) of participants rated 'family' first. By comparison, 'working' was ranked first by a third (5 of 15) of the academic staff, compared with a minority (1 of 15) of the general staff participants.</li> <li>• There is a relationship between the meaning of working and the intention to continue working</li> </ul> <p>Most of those participants who rated 'working' as important or very important and found meaning in working wanted to continue working, and past the age of 65 years. Most of those who rated 'working' as less important, especially those who rated 'family' first, and who reported finding less meaning in working wanted to stop working. Those participants who reported finding more</p>	<p><b>Limitations identified by author:</b> Limited generalizability; small sample size, single organisation, industry, all were working full-time and all were aged 50 years or older. Additionally, they worked within a university, and therefore may have unique intrinsic motivating factors (for example, freedom, intellectual contribution or access, and lifelong learning and its associated environment). Finally, with only one trained coder interpreting the data, there was no inter-rater reliability to add to validity.</p> <p><b>Limitations identified by review team:</b> NA</p> <p><b>Evidence gaps/recommendations for future research:</b> Similar research could be undertaken in other industrialised countries with similar workforce characteristics.</p> <p><b>Source of funding:</b> NR</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p>meaning in and importance of working also wished to continue working, while the opposite relationship also held. There appeared to be a positive link between the meaning of working and wanting to continue working.</p> <p>I. Working means satisfaction, challenge and/or achievement</p> <p>Older workers enjoyed a variety of aspects of working, a ‘great love’ for working, being able to exercise their talents, that there was ‘no need to run away to do other things’, not being able to separate the concept of working from the enjoyment gained from it, the intellectual stimulation, and the monetary reward. Participants (both academic and general staff) found a variety of meanings of working but the majority were related to the satisfaction, challenge, and achievement.</p> <p>II. Working means helping or seeing others grow and develop</p> <p>Many (10 academic staff; 3 general staff) participants observed that one of the key meanings of working for them was being able to help or see other people grow and learn. Both academic and general staff reported such meanings and rewards from working.</p> <p>III. Job type influences the meaning of working</p> <p>There appeared to be a difference in participants’ meanings based on employment category; academics generally found working to be more important than did general staff. It appears that the type of job or category of employment influences the meaning of working.</p> <p>IV. Autonomy, flexibility and variety are desirable aspects of working</p> <p>Participants’ perceptions of nine aspects of working were sought, asking them to rank in order of importance; ‘autonomy’ was the most frequently (12 of 30) rated ‘most important’ working characteristic. ‘Variety’ was the second most frequently (4 of 30) rated ‘most important’ work characteristic. The majority (21 of 30) of participants commented during interview discussions that ‘flexibility’ at work was desirable and a positive influence on their intentions to continue working.</p>	

## Shacklock et al. (2009)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Kate Shacklock, Yvonne Brunetto, Silvia Nelson</p> <p><b>Year of publication:</b> 2009</p> <p><b>Citation:</b> The different factors that affect the intentions of males' and females' to continue working. Asia Pacific Journal of Human Resources vol. 47 no. 1 79-101</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> Do perceptions of work-related factors (attachment to work, importance of working, autonomy, flexibility, interpersonal relationships, interests outside of work and work environment) influence older workers' intention to continue paid work?</p> <p>Does the impact of perceptions of work-related factors on older workers' intention to continue paid work vary between men and women?</p> <p><b>Research approach:</b> Quantitative. One-shot experimental design.</p> <p><b>Data collection:</b></p> <p><b>Method(s):</b> Literature review to develop concepts followed by a survey.</p> <p><b>Setting(s):</b> The workplace</p> <p><b>Dates:</b></p>	<p><b>Sample population:</b> Public sector employees aged over 50</p> <p><b>Sampling approach:</b> Purposive sampling. An organisation was chosen because it was one of the largest employers in the region and represents a broad range of employees and at different levels in a hierarchy.</p> <p><b>Inclusion/exclusion criteria:</b> Workers over the age of 50</p> <p><b>Number and characteristics of participants:</b> 379 respondents, of which 67.3% were male, and 31.9% female. 47.9% were aged 50-54 33.2% were aged 55-59 14.9% were aged 60-64 3.7% were aged 65 - 70 The average age of respondents was 55.29 years.</p> <p><b>Response rate (if relevant):</b> 38%</p>	<p><b>Brief description of method and process of analysis:</b> A questionnaire was developed to measure the importance of five factors on individuals decision to remain in work. The actors are: 'autonomy', 'interpersonal relations', 'work environment', 'flexibility' and 'attachment to work'. Questions used a 7 point likert scale from 1 strongly agree to 7 strongly disagree.</p> <p>The questionnaire was distributed randomly to 1012 employees over 50 years old.</p> <p>Regression analysis was used to analyse the data.</p> <p><b>Key findings relevant to the review:</b> Intention to continue work was significantly correlated to several variables: the importance of work, autonomy at work, flexibility at work, the work environment and interests outside of work (<math>F = 21.88</math>, <math>R^2 = .312</math>, <math>p &lt; .000</math>).</p> <p>Three work-related factors were significantly related to older workers' intention to continue paid work, including importance of work (<math>\beta = -.142</math>, <math>p &lt; .05</math>), flexibility (<math>\beta = .120</math>, <math>p &lt; .05</math>) and interests outside of work (<math>\beta</math></p>	<p><b>Limitations identified by author:</b> Study population is limited to a single large public sector organisation in Queensland Australia. Self reporting bias could limit the generalizability of the findings.</p> <p><b>Limitations identified by review team:</b> N/A</p> <p><b>Evidence gaps/recommendations for future research:</b> Repetition of the study on a wider population would provide more validity and reliability to the findings. Future studies could look at the differences between types of work, level of seniority, professional/manual.</p> <p><b>Source of funding:</b> Not reported</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	Not reported		<p>= .407 <math>p &lt; .001</math>).</p> <p>Work-related factors influencing older workers' decisions to continue paid work are different between men and women.</p> <p>Regression model: men (<math>F = 11.98</math>, <math>R^2 = .269</math>, <math>p &lt; .000</math>)                      women (<math>F = 13.10</math>, <math>R^2 = .476</math>, <math>p &lt; .000</math>)</p> <p>A two-tailed t-test suggests that there are significant differences for attachment to work (<math>t = -2.81</math>, <math>p &lt; .05</math>), autonomy (<math>t = 4.04</math>, <math>p &lt; .000</math>), flexibility (<math>t = -2.94</math>, <math>p &lt; .05</math>), work environment (<math>t = 3.46</math>, <math>p &lt; .001</math>) and interests outside work (<math>t = 2.30</math>, <math>p &lt; .05</math>).</p> <p>Levene's test for equality of variances was not significant, and the compared variances were substantially equal, except in relation to autonomy (<math>F = 6.60</math>, <math>p &lt; .05</math>), work environment (<math>F = 5.78</math>, <math>p &lt; .05</math>) and interests outside work (<math>F = 5.88</math>, <math>p &lt; .000</math>).</p> <p>Decision to stay in work is influenced by similar factors as the decision to leave work. But there are significant differences between men and women.</p>	

## Shacklock and Brunetto (2012)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Kate Shacklock and Yvonne Brunetto</p> <p><b>Year of publication:</b> (2012)</p> <p><b>Citation:</b> Shacklock, K. and Brunetto, Y. (2012). The intention to continue nursing: work variables affecting three nurse generations in Australia. <i>Journal of Advanced Nursing</i>, 68, 36-46.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The aims of the study were to examine how seven variables had an impact upon the intention of hospital nurses to continue working as nurses and to investigate whether there are generational differences in these impacts.</p> <p><b>Research approach:</b> Research was a quantitative design</p> <p><b>Data collection:</b> Data was collected using a self-report survey of 900 nurses.</p> <p><b>Method(s):</b> Anonymous surveys were sent out to the hospitals with a detailed explanation sheet, and informed consent was obtained from respondents. Data were collected using a survey instrument containing 15 demographic measures (age, gender and so on), and 8 variables. The variables were measured by being rated on a scale from 1 to 6: Leader-member exchange was measured by using a 6-item validated instrument; work-family conflict was measured</p>	<p><b>Sample population:</b> Nursing staff in 7 private hospitals, and 4 generations appear in some workplaces. Nearly 4% of the respondents were men, and 96% were women, 8% were aged &lt;29 years (GenY), 38% were aged between 29-43 years (GenX) and 54% were aged between 44-64 years (Boomers). 79% were married or living with a partner, 12% were single and 7% divorced. 33% had worked at the hospital for more than 15 years, 8% between 10-15 years, 18% between 5-10 years and 29% between 1-5 years, 12% for &lt;1 year. 58% worked part-time, 28% worked full-time and 13% were casual. Sample was considered to be representative of the Australian nursing population.</p> <p><b>Sampling approach:</b> 2,500 anonymous self-report surveys were sent out to all ward nurses in these 7 hospitals and 900 useable responses were obtained, a response rate of 36%.</p> <p><b>Inclusion/exclusion criteria:</b> The oldest generation (aged 62+) were omitted from the sample for analysis because the sample was too small.</p> <p><b>Number and characteristics of participants:</b></p>	<p><b>Brief description of method and process of analysis:</b> Data were analysed using SPSS to undertake regression analyses. Correlation coefficients were determined and regression analyses were undertaken to test the hypotheses.</p> <p><b>Key findings relevant to the review:</b> Findings indicate that the intention to continue working is significantly related to six of the independent variables: supervisor-subordinate relationship (LMX), WFC, perception of autonomy at work, attachment to work, interpersonal relationship at work, and the importance of working to individual. These combined variables accounted for 21% of the variance in nurse intentions (<math>F=34.656</math>, <math>p&lt;0.001</math>). There were differences between the generations in the variables affecting a nurse's intention to continue nursing. There was a positive relationship between nurses' satisfaction with the supervisor-subordinate relationship and their intention to continue nursing (<math>0.10</math>, <math>p&lt;0.05</math>).</p>	<p><b>Limitations identified by author:</b> The use of only private hospital nurses and public sector hospital nurses' intentions to remain in nursing may be influenced differently as the public and private health sectors are different in Australia. More research is needed to clarify whether the variables influencing future working intentions of these nurses are the same or different to those having an impact on private sector nurses.</p> <p>Common method bias is a possibility in self-report cross-sectional studies where common method variance may influence the significance of relationships between variable.</p> <p>May be differences in nurse work intentions based on their area of specialisation, as certain cultures exist within certain specialties.</p> <p>Nursing may also be different from other organisations as it is dominated by women and regarded as a caring profession, and offers a variety of working arrangements. Such opportunities are not always available in other working environments, and so this research may not apply to the nursing context.</p> <p><b>Limitations identified by review team:</b></p>

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	<p>using Netemeyer et al., validated instrument (6 item measure), perception of autonomy was a 3-item measure, attachment to work was operationalised by the researchers using the empowerment literature (3 items), importance of working was measured using 3 items from MOWIRT's, interpersonal operations measured using Glaser et al. (5 items), flexible working arrangements measured using 3 items, intention to continue nursing was measured using Shacklock's items and generational differences were measured by the date of birth provided by respondents: boomers were 1945-1964, GenX 1965-1970, GenY 1980 onwards.</p> <p><b>Setting(s):</b> 7 private hospitals, located in 4 states in Australia (large, medium and small dealing with acute cases and a teaching hospital)</p> <p><b>Dates:</b> 2008</p>	<p>(see above)</p> <p><b>Response rate (if relevant):</b> Response rate of 36%.</p>	<p>There was a negative relationship between nurses' perceptions of WFC and their intentions to continue nursing (0.09, <math>p &lt; 0.05</math>). There was a positive relationship between perceptions of attachment to work and intentions to continue nursing (0.34, <math>p &lt; 0.001</math>). Positive relationship between perceptions of importance of working and their intentions to continue nursing (0.12, <math>p &lt; 0.05</math>). For GenY there was a positive relationship between the intention to continue nursing and attachment to work (0.54, <math>p &lt; 0.001</math>) but not with interpersonal relations. For GenX there were positive relationships between the intention to continue nursing with the LMX (0.15, <math>p &lt; 0.05</math>) and the attachment to work (0.37, <math>p &lt; 0.001</math>). For boomers there were relationships between the intention to continue nursing and 5 variable: WFC (-0.14, <math>p &lt; 0.001</math>), perceptions of autonomy (0.15, <math>p &lt; 0.001</math>), attachment to work (0.25, <math>p &lt; 0.001</math>), interpersonal relationships (0.12, <math>p &lt; 0.05</math>) and the importance of working (0.12, <math>p &lt; 0.05</math>).</p>	<p>Generalisability to the UK setting</p> <p>In-depth research to understand why decisions are made.</p> <p>Difference between over 65s not included.</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>Future research can explore the notion of ageing per se being the cause of differences between generations.</p> <p>International research comparisons would assist the growth of knowledge in this important healthcare management area.</p> <p><b>Source of funding:</b></p> <p>Research received no specific grant.</p>

## Smeaton et al. (2009)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Smeaton, Deborah, Sandra Vegeris and Melahat Sahin-Dikmen</p> <p><b>Year of publication:</b> 2009</p> <p><b>Citation:</b> Smeaton, D, S. Vegeris and M. Sahin-Dikmen (2009) <i>Older workers: employment preferences, barriers and solutions</i> Equality and Human Rights Commission, Research Report 43</p> <p><b>Quality rating:</b> ++</p>	<p><b>Research questions:</b> What are the needs and preferences of older people in relation to work? What are the obstacles to the achievement of those preferences? What are the means by which those obstacles may be overcome?</p> <p><b>Research approach:</b> Mixed methods: Interview study Survey</p> <p><b>Data collection:</b> Telephone interviews</p> <p><b>Method(s):</b> <u>Literature review:</u> Explored evidence on the preferences and aspirations of older people and the barriers to their achievement. Gaps in knowledge generated at this stage used to inform survey. <u>Stakeholder interviews:</u> Fourteen telephone interviews (30 to 40 minutes) representing 12 organisations. Digitally recorded (with consent)</p>	<p><b>Sample population:</b> For survey only: All individuals aged between 50 and 75</p> <p><b>Sampling approach:</b> Random sample of households generated through Random Digit Dialling.</p> <p><b>Inclusion/exclusion criteria:</b> None reported.</p> <p><b>Number and characteristics of participants:</b> N = 1,494 Distribution of older people is broadly similar to LFS demographics. The exception is health with comparative data derived from ELSA. Half of the survey described their health as very good or excellent compared to 43% of the 50+ in ELSA. <u>Gender:</u> 56% female <u>Age:</u> 50-54 (21%), 55-59 (24%), 60-64 (25%) and 70 plus (14%)</p>	<p><b>Brief description of method and process of analysis:</b> Interviews analysed thematically. Survey data weighted by age, gender and country using the 2001 Census.</p> <p><b>Key findings relevant to the review:</b> Premature labour market exit can be spurred by a poor match between preferences and work experience. One-fifth of survey respondents are not happy with their level of seniority, one-fifth feel the degree of flexibility in the hours they work is not ideal and nearly one-fifth would like to see a change in the flexibility of their working locations. One in 10 would like to change their status between employed and self-employed. A little over half (55%) of all men and women aged between 50 and 75 are dissatisfied with some aspect of their job. Therefore emphasises importance in ensuring that older workers are able to secure the jobs and conditions they want and need in order to extend working life objectives. Aside from occupations, the most common cause of work dissatisfaction among respondents is hours work, with 18% wanting fewer hours and 15% wanting more control over the hours worked. Smaller proportions would like to work longer or different hours (three and four% respectively). The more hours worked, the more likely an individual will state they are not ideal. The most common reasons given for not working their preferred hours is that it would be incompatible with their occupation (20%), that they cannot afford to or that it would involve a pay cut (19%), that their employer would not allow it (13%) and that their hours are a requirement of the job (10%). Similar reasons were given for not working with their preferred reasons for flexibility, and 68% of employees reported they could attain their preferred jobs or flexibility if the jobs available paid better salaries. Downshifting responsibility is recognised as an important aspect of pre-retirement packages. Nineteen% of men and 21% of women over 50 are not happy with their level of responsibility, suggesting downsizing pathways may be being blocked. Eleven% of older workers were not happy because they wanted promotion and more responsibilities compared to four% who expressed a preference for less seniority - similar for both men and women. This highlights the importance of avoiding assumptions of decline among workers in their 50s and 60s. Where particular jobs may become physically challenging at older ages,</p>	<p><b>Limitations identified by author:</b> None reported</p> <p><b>Limitations identified by review team:</b> Methodology for employer interviews unclear. Evidence base for organisational good practice is very limited. Method of analysis very limited. Evidence from qualitative interviews is sparse. Literature review could be more expansive</p> <p><b>Evidence gaps/recommendations for future research:</b> None reported</p> <p><b>Source of funding:</b> EHRC</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>and transcribed.</p> <p><u>Organisational good practice:</u> Documentary review focusing on health and health and well-being interventions, flexible working, job design, job quality and stress and phased retirement, downshifting and other pre-retirement packages. Drew on three published studies and well as web searches targeted towards employers recognised as having good practice. Case studies from Age Positive and Eurofound were particularly highlighted.</p> <p><u>Employer feedback:</u> Ten telephone interviews with employers in England Scotland and Wales, identified through an IFF Research study. Covered retail, communications, finance, transport, energy and education.</p> <p><u>Survey of older people:</u> Piloted among 27 individuals resulting in some minor modifications. Twenty minute telephone survey conducted between 15<sup>th</sup></p>	<p><u>Ethnicity:</u> White British (91%), white other (6%) other (5%).</p> <p><u>Health:</u> Very good/excellent (50%), good (27%), fair (14%), poor (9%)</p> <p><u>Employment:</u> 60% under SPA were employed (three% higher than in LFS 2007), while 14% were self-employed (13% in LFS). One% were in voluntary work (no comparison) and 25% were unemployed.</p> <p>For survey participants over SPA, 17% were in employment, 5% were self-employed, 5% were undertaking voluntary work and 73% were unemployed or inactive.</p> <p><b>Response rate (if relevant):</b> Valid response rate for survey: 21%</p>	<p>employers can support their staff in terms of leave of absence or career breaks to enable them to prepare for the future. This perspective places the onus on individuals to deal with, and respond to, physically challenging jobs. Employers can also review options for adapting and redesigning jobs to prevent or reduce physical decline.</p> <p>Sixty-three% of respondents felt a more inclusive recruitment policy among employers would better facilitate the achievement of their ideal jobs. Sixty-one% felt that economic conditions were to blame for the lack of part-time or flexible work, although the report cites some more reactive examples such as reduced hours, four day weeks or merged shifts.</p> <p>Forty-seven% of older workers who were in less than ideal jobs felt more affordable training may help them to secure the jobs or employment conditions they needed or preferred.</p> <p>Levels of underemployment escalate over time. This could suggest that older workers downshift later in life to maintain more manageable levels of responsibility, workload or pressure, so promoting longevity. However, the need to reduce responsibility, pressure and employment challenges could over stated with many individual wishing to maintain promotion, development and training opportunities and continue to pursue work-related challenges. The authors argue the issue is then the extent to which older workers have opportunities denied. Main reasons given by respondents working below capacity were a preference for work that is not too demanding or stressful (17%), a lack of work that makes use of my skills or qualifications (13%), wanting to leave a more stressful or demanding job (10%) or that current work is more interesting and rewarding than previous work (10%).</p> <p>Positive and negative aspects of work - 74% of the 50+ are in work that they agree or strongly agree makes good use of their skill and experience. This may explain why one-quarter of employees who could afford to retire now, nevertheless remain working. Many older workers are exposed to stressful working conditions (39%), long working hours (32%) or get tired at work (32%), particularly those in professional occupations. Five% unemployed and inactive respondents were out of work as it had become strenuous or stressful. Individuals may choose or be forced to leave stressful, tiring or overly demanding jobs, so these aspects should be routinely audited and monitored as part of employers age positive opportunity policies.</p> <p>Poor health - Sixty% of those in fair or poor health and dissatisfied with some aspect of their job noted that it would be helpful if employers were more sensitive to health needs. Sixty-eight% of those in fair or poor health felt their</p>	

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>January and 5<sup>th</sup> February. All individuals aged between 50 and 75 were in scope. Quotas set for age (50-54; 55-59; 60-64; 65-75), gender, region (Scotland; Wales; nine English GORs), ethnicity (ethnic minority; not ethnic minority) and working status (employed; self-employed; not working and would like a paid job; not working and would not like a paid job).</p> <p>Age quota was relaxed during fieldwork to ensure working status quota targets could be met. Older people in Scotland and Wales were oversampled for cross-country comparisons. Unemployed job-seekers also over-sampled.</p> <p><b>Setting(s):</b> Scotland, Wales and England</p> <p><b>Dates:</b> 2009</p>		<p>relationship with their manager was good and enabled them to discuss work problems. As line managers can have discretion in allowing modifications to working arrangements the employee/line manager relationship can be critical for those in poor health. The authors feel it is concerning therefore that 32% of such older works do not feel able to discuss difficulties or request alternative arrangements from their manager. They suggest a workplace advocate would be particularly helpful in these situations.</p> <p>Fifty-three% of unemployed older people claimed that they needed flexitime or other flexible hours in order to return to work.</p> <p>Inactive over state pension age - fairly large minority (32% of men, 20% of women) are or may be interested in re-entering the labour market past retirement age. Of these, 53% would like a three or four day week, with a mean of 5 hours per week. Forty% would prefer a casual contract.</p> <p>For those that want a job, 14% reported they are not working as their employer thinks they are too old, and nine% said their employer wouldn't keep them on.</p> <p>Plans to retire after state pension age - Older workers employed in the skilled trades, sales and personal service jobs are more likely to be planning delayed retirement compared with individuals in other occupational groups. Work experiences such as long hours, using skills, stress and fatigue are not associated in either direction with delayed retirement plans.</p> <p>Interviews with employers suggested that individual and business needs should be balanced. An organisation must be in a position to support requests to continue working beyond SPA, while businesses need to take into account succession planning and the need to manipulate staff numbers in line with the business cycle. As one employer observed in the context of recessionary conditions: <i>'It depends on the individual's circumstances. Some people desperately would like to stay because maybe they're not covered by the pension scheme. Those individuals obviously want to stay as long as possible but, obviously, we would gauge that with the needs of succession planning and the need, like I say, because the organisation's changed so much we need to make sure that, where possible, we avoid compulsory redundancies'</i>.</p> <p>Individuals in work above state pension age - 12% would like to work on a full-time basis, 38% of men and 42% of women would like more flexible employment in their current job in terms of hours or days worked. Half of all men and women would favour a more intermittent flow of employment. This depends upon employers being willing and able to recruit older individuals and offer part-time or flexible employment. In some sectors this may be unrealistic: <i>'... what we</i></p>	

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
			<p><i>find is if you have a fairly small store, for example, and we had a couple of people that were already on term-time contracts and everybody else had requested one as well, it might get to a point where we weren't able to operate that store/department with that many people on just a term-time contract, then it would have an impact obviously on us.... Sometimes as well with the older workers, what we tend to find is when they take flexible retirement ... they believe that they can almost pick and choose the hours they'd like to work because they're now retired, [...] so we do have a little bit of, not conflict, but it's a bit of a rude awakening for them to realise sometimes that actually their expectations [are unrealistic]... It's not just a 'great you've taken flexible retirement, when would you like to pop in?'</i></p> <p><u>Organisational good practice:</u></p> <p>Age positive practices found in four HRM areas: recruitment, working hours and patterns and workplaces, retirement and health and well-being.</p> <p>Recruitment: removal of date of birth from application forms, removal to ageist language, develop competency approach to reduce reliance on chronological education and work history and active recruitment of older people.</p> <p>Working hours and patterns, and workplaces: Flexible working hours and places. Note: these may be difficult to implement due to the communication of new policies to staff, persuading managers of the benefits of flexible working, the investment needed to set up new systems and structures to support new ways of working and balancing the needs of the business with operating flexible working practices.</p> <p>Retirement policies: removal of a normal retirement age, flexible or phased retirement, advice and help with retirement planning Note: There may be issues with implementation which are similar to those around flexible working.</p> <p>Health and well-being: initiatives aimed at promoting healthy living, reducing sickness absence and helping employees on sick leave return to work more quickly.</p>	

## Smith et al. (2010)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Erica Smith, Andrew Smith and Chris Selby Smith</p> <p><b>Year of publication:</b> (2010)</p> <p><b>Citation:</b> Smith, E and Smith, A. and Selby Smith, C. (2010). Old dogs, new tricks: training mature-aged manufacturing workers. <i>Journal of Workplace Learning</i>, 22, 277-291.</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b> The three main questions are:</p> <p>What are the views of the strengths and weaknesses of mature-aged workers, as a group, that are held by employers, in-company trainers, mature-aged workers themselves and experts from stakeholder groups?</p> <p>How do mature-aged workers respond to training opportunities?</p> <p>How do (and can) companies organise training processes to make them suited to mature-aged workers.</p> <p><b>Research approach:</b> Qualitative approach - in two phases</p> <p><b>Data collection:</b> Phase 1: consisted of interviews with selected</p>	<p><b>Sample population:</b> Managers (line and human resource), training staff and mature-aged workers (and in one case a worker focus group)</p> <p><b>Sampling approach:</b> The case studies were accessed through personal approaches from the researchers to companies known to be open to research studies. Interviewees were selected by the companies within the parameters of the types of interviewee required.</p> <p><b>Inclusion/exclusion criteria:</b> Not reported</p> <p><b>Number and characteristics of participants:</b> In one organisation 4interviews in total, with 2 factory floor interviewees (aged 60 and 61), 4 interviews in the second organisation with 2 factory floor interviewees (aged 50 and 57) and 10 interviews in the third organisation, with 6 factory floor interviews (age ranged from 45 to 68)</p> <p><b>Response rate (if relevant):</b> Not reported.</p>	<p><b>Brief description of method and process of analysis:</b> Data analysis for the overall project was undertaken in several stages. The two phases were written up independently. For phase 1, themes relating to the employer, employee and training perspectives were drawn out. For phase 2, each company case study was written up individually and then a cross-case thematic analysis was undertaken, and finally the overall findings of the study were analysed and related back to the literature.</p> <p><b>Key findings relevant to the review:</b> Mature aged workers were able to bring a variety of experience, especially job experience to the company. Their experience meant that they were able to succeed in training and learning situations better than their young peers.</p> <p>In all case study organisations, managers and trainers emphasised the greater maturity and reliability of mature-aged workers. Mature workers could quickly see the positive aspects of change and its significance, and could help with the development of younger workers. Many mature aged workers showed enthusiasm for learning, glad to be given the opportunity to learn again, to start something new in later life and saw themselves with a new phase of their lives ahead of them. However, they could lack confidence for training, perhaps produced by having been outside the formal education system for a</p>	<p><b>Limitations identified by author:</b> Relatively small amount of fieldwork was carried out</p> <p>Only two female mature workers were captured through the case studies - the study was in the manufacturing industry which is male-dominated and so a gender bias was to be expected, but it does mean that the findings might not apply to other industries, particularly those with a larger female workforce.</p> <p>One of the researchers died suddenly before the thematic analysis was carried out, and therefore the authors were unable to validate themes with his, or discuss with him the data which he had written up.</p> <p>The research is confined to shop-floor workers in manufacturing and does not address the training of mature-aged managers and professionals. The research is small-scale but provides new insights and importantly the voices of the workers themselves</p> <p><b>Limitations identified by review team:</b> Research solely based in Australia and in the manufacturing sector, so there are questions about how generalisable the results are to the UK population.</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>experts in the training of mature-aged workers, and Phase 2: case studies in three manufacturing companies.</p> <p><b>Method(s):</b> Expert interviews in phase 1 were designed primarily to inform the protocols for the phase 2 case studies by identifying issues for questioning. The case studies involved interviews with managers, training staff and mature-aged workers in settings that were chosen to represent different types of manufacturing, regional and metropolitan locations.</p> <p><b>Setting(s):</b> One manufacturing organisation in a regional city in New South Wales, another organisation in a regional city in New South Wales and a third manufacturing organisation in Melbourne, Victoria (metropolitan)</p> <p><b>Dates:</b> Not reported.</p>		<p>long time and having fewer qualifications than younger workers. Mature aged workers might suffer from some health problems and this could affect training and learning as much as work. They preferred training to be work-based and practical, and ‘just-in-time’ to assist with particular tasks when they needed a job. Mature-aged workers might have to be persuaded into training, and recognised the role that encouragement by senior managers can play in improving confidence levels. Mature-aged workers were reported to have quite low level literacy levels, which meant that training materials may have to be adapted. The most obvious area of challenge for mature-aged workers was assessment, with mature aged people more anxious than younger learners about being assessed. They were also most reluctant to respond to questioning especially when being trained in groups.</p> <p>Mature aged workers can be seen as an asset to an organisation, they can be quicker to learn than younger workers and were often more focused at work, and more reliable in their work efforts. But some adverse physical factors did play a role in the training and learning of mature aged workers, problems with eyesight and late on-set diabetes could have an impact on the mature aged worker also.</p>	<p><b>Evidence gaps/recommendations for future research:</b></p> <p>Not reported</p> <p><b>Source of funding:</b></p> <p>Not reported</p>

## Talbot et al. (NR)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> Rachel Talbot, Colette Nicolle, Martin Maguire and Lucy Rackliff</p> <p><b>Year of publication:</b> NR</p> <p><b>Citation:</b> <i>The Journey to Work - a barrier to older workers?</i> Rachel Talbot, Colette Nicolle, Martin Maguire and Lucy Rackliff Loughborough Design School, Loughborough University c.a.nicolle@lboro.ac.uk</p> <p><b>Quality rating:</b> +</p>	<p><b>Research questions:</b></p> <ul style="list-style-type: none"> <li>- How might commuting affect an older person's ability to continue working?</li> <li>- Can older workers adapt their travel to accommodate changing needs and job circumstances?</li> </ul> <p><b>Research approach:</b> Mixed method</p> <p><b>Data collection:</b> Telephone interviews and online/paper based survey</p> <p><b>Method(s):</b> NR</p> <p><b>Setting(s):</b> Wide range of industry Types and locations in the UK</p> <p><b>Dates:</b> The overall project</p>	<p><b>Sample population:</b> Older workers in the UK</p> <p><b>Sampling approach:</b> Snowballing sampling strategy</p> <p><b>Inclusion/exclusion criteria:</b> Those employees who were 45 years of age or older completed the questionnaire</p> <p><b>Number and characteristics of participants:</b> 17 interviews conducted at the time of reporting with an equal split between men and women and age. Survey: 1215 respondents completed the survey. Out of these, 63% were female (787) and 37% male (443). The majority of respondents were aged between 45 and 55 with 28% (339) in the 45-49 age group and 36% (442) in the 50-55 age group. A further 25% (304) were aged between 56-60, and only 10% (124) were aged over 60. The relatively low number of participants in the over sixties group may be influenced by the state retirement age of females being 60 prior to 2010. The majority of respondents (78%, 952) worked in the public sector with only 6% (76) working in the private</p>	<p><b>Brief description of method and process of analysis:</b></p> <p>Two forum discussions were held with domain experts, employer representatives and older workers who formed the project's expert and user panels and they suggested number of issues discussed at the interviews.</p> <p>The purpose of the survey was to investigate the extent to which the journey to work may prove a barrier to older workers. The survey sought primarily qualitative data; however, some quantitative data have also emerged (eg on age of workers, type of work environment, commuting distances, method of transport, working practices, and the proportion of the respondents who have or have had problems with their journey to work). The questionnaire survey also served as a recruitment process for the core data collection activities, the upcoming interviews and focus groups.</p> <p>A subset of these respondents was contacted by an email asking them to further participate in the project by taking part in a phone interview. Attempts were made to ensure that a range of respondents were selected as representing the older and younger age ranges, both genders, the type of journey travelled (eg village to city), and the different issues raised within</p>	<p><b>Limitations identified by author:</b></p> <p>Authors note that a number of workers from the public sector were facing reduced income due to the combined effects of salary freezes with inflation and the possibility of forced relocation due to funding cuts. Combined with relatively generous pension options this may lead such workers to consider retirement more readily than workers in other sectors and thereby the study may overstate the potential impact of commuting on older workers</p> <p><b>Limitations identified by review team:</b></p> <p>No information on to how many the survey was sent and how the organisations were identified (where the survey was sent). Further, it was not reported how people were initially selected for the interview. These may cause selection bias.</p> <p><b>Evidence gaps/recommendations for future research:</b></p> <p>NR (Study was ongoing and recommendations were not yet published).</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>Was conducted between 2008-2012</p>	<p>sector. A further 15% (176) of respondents selected 'other', the majority of whom worked for a charity. This large number of public sector employees was a result of the snowballing effect of the initial survey distribution. For the majority of respondents, the car was their main transport mode (75%, 914).</p> <p><b>Response rate (if relevant):</b> NR</p>	<p>the survey.</p> <p><b>Key findings relevant to the review:</b> 25% (302) stated that they had specific difficulties with their journey to work, 32% (391) could foresee future issues, and 19% (232) had considered retiring or changing their job as a result of their difficulties.</p> <p>The most common 'Cost' related issue for both current and future difficulties was related to the petrol/diesel costs and/or running a vehicle. A worry among some respondents was that the cost of their commute and car ownership in the future will outweigh the benefit of working.</p> <p>Often 'Stress' was caused by traffic volume and holdups and the resultant worry of not arriving at work on time. Health related issues included specific medical conditions and disabilities as well as more general aches and pains that respondents felt affected their mobility. For future issues, respondents' concerns were that existing health issues would get worse or they would develop them as they get older.</p> <p>A common solution to traffic issues and avoiding the stress of the journey was to plan the journey to and from work to avoid peak travel times. This was possible as employers operated flexitime schemes.</p>	<p><b>Source of funding:</b> The New Dynamics of Ageing Programme</p>

## Taylor et al. (2013)

Study details	Population and setting	Research parameters	Outcomes and methods of analysis	Results	Notes by review team
<p>Authors:</p> <p>Taylor, P., McLoughlin, C., Brooke, E., Biase, T.D. and Steinberg, M.</p> <p>Year:</p> <p>2013</p> <p>Citation:</p> <p>Taylor, P., McLoughlin, C., Brooke, E., Biase, T.D. and Steinberg, M. (2013). Managing older workers during a period of tight labour supply. <i>Ageing and Society</i>, 33, 16-43.</p> <p>Country of study:</p>	<p>Source population/s:</p> <p>Country of study</p> <p>Setting</p> <p>Australia</p> <p>Location (urban, rural)</p> <p>Queensland</p> <p>Sample characteristics, including population demographics</p> <p>Employers with more than 50 employees in 2010. Survey covered all employment sectors and asked a broad range of questions. Large organisations were 535% of responding organisations (200 more employees) 47% were with employees between 50-199. 73% were profit, 2&amp;% were government or not for profit. 57% of employees were male. 20% were aged over 50</p>	<p>Research aims/objectives</p> <p>Aimed to assess current attitudes and practices towards older labour in the context of the potential to utilise other potential labour supply options amid a recent tightening of labour supply to examine employer perceptions regarding the need to act concerning issues of workforce ageing and to explore the relationship between perceived competition for labour and workforce ageing as potential current determinants of organisational policy making regarding policies towards older workers.</p> <p>Research questions/hypotheses</p> <p>Method of allocation:</p> <p>Intervention/s description:</p>	<p>Outcomes:</p> <p>Survey covered all employment sectors and asked a broad range of questions concerning the management of labour supply, including about the employment of older workers.</p> <p>Method of analysis:</p> <p>Firstly descriptive statistics calculated concerning the status of workforce ageing in these employing organisations, comparative data on the extent of adoption of different solutions to issues of labour supply, and organisational responses to issues of workforce ageing. Followed</p>	<p>Report results for all relevant outcomes:</p> <p>Larger and public sector organisations were more likely to foresee an increase in the proportion of their workforces aged 50 and over in the coming 5 years, 60% of all organisations expected to experience workforce ageing over this period. Private sector organisations were more likely to perceive no need to respond to time periods than not for profit ones. The majority of all organisations felt that action was required within a 5 year time horizon. 1/3 public employers saw an immediate need to act. Retraining for older workers was not a common response, although continuous career development supported by training was rated highly. Knowledge capture and transfer including coaching and mentoring were important responses overall. Health and well-being was important for public and nfp organisations. Increasing job flexibility and promoting employment for women were commonly reported, investing in labour saving technology was also rated highly by employers in the</p>	<p>Limitations identified by author:</p> <p>In the response to this survey there was an over-representation of those responsible for human resource matters. There is the issue of whether the survey respondent was in position to comment on company practices or merely reporting policies. Also, organisations have been reliant on one, or at best a limited number of data sources within organisations and have been carried out at one point in time. This leads to problems with unreliability of data, but it is also not possible to tell how practices develop and change over time and how workers and managers influence, respond to and are affected by these changes. There is a need for more longitudinal studies and qualitative research within workplaces to properly discern trends and improve the understanding of where deficiencies in organisational knowledge exists and how age barriers are manifested.</p> <p>Limitations identified by review team:</p>

Study details	Population and setting	Research parameters	Outcomes and methods of analysis	Results	Notes by review team
<p>Australia</p> <p>Aim of study:</p> <p>Aimed to assess current attitudes and practices towards older labour in the context of the potential to utilise other potential labour supply options amid a recent tightening of labour supply to examine employer perceptions regarding the need to act concerning issues of workforce ageing and to explore the relationship between perceived competition for labour and workforce ageing as potential</p>	<p>and 27% were younger than 30, 53% aged between 30-50.</p> <p>41% were HR manager/HR officer, 17% director/CEO/Managing director role, 14% regional of department manager roles, 12% general managers, 10% heads/directors of department. 6% in administrator or other roles.</p> <p><b>Eligible population:</b> Describe how individuals, groups or clusters were recruited <b>Selected population:</b></p> <p>Participating organisations were selected at random within Queensland from the business lists and a response rate of approximately 30% can be considered to be substantially higher than the response rate generally found in corporate surveys</p>		<p>by multivariate analysis where the characteristics of workplace labour supply strategies are explored and resulting in composite variables are used as dependent variables in multivariate regression analysis with a range of organisational characteristics, respondent perceptions and attitudinal variables used as independent variables.</p>	<p>public sector. Public organisations also made efforts to recruit more younger workers.</p> <p>The factors that were most likely to influence organisations to take action to address labour supply were organisational size, with large organisations almost three times more likely than medium ones to adapt their HR strategies, followed by whether organisations were experiencing an increase in job role complexity. Of lesser importance was whether employers were experiencing competition for labour from within Australia, where employers experiencing such competition were almost twice as likely to apply these responses.</p> <p>Some firms were more likely to adopt flexible employment policies including part-time retirement, reduction of working hours before retirement, early retirement schemes, extra leave for older workers and decreasing the workload for older workers to address labour supply. The firms most likely to adopt these policies were:</p> <ul style="list-style-type: none"> <li>• expecting a substantial loss to retirement over the next five years where employers were twice as likely to use flexible employment strategies for older</li> </ul>	<p>Lack of qualitative approaches to provide a more descriptive understanding of how older workers are managed in periods of a tight labour supply.</p> <p><b>Source of funding:</b></p> <p>Australian research council (LPo884065), the Australian Population Institute, Success Factors and the Department of Employment, Economic Development and Innovation in Queensland.</p>

Study details	Population and setting	Research parameters	Outcomes and methods of analysis	Results	Notes by review team
<p>current determinants of organisational policy making regarding policies towards older workers.</p> <p>Study design: survey</p> <p>Quality score<sup>4</sup>  +</p>	<p><b>Excluded population/s:</b></p>			<p>workers.</p> <ul style="list-style-type: none"> <li>• larger with such organisations 70 % cent more likely to use these responses</li> <li>• employed more older workers where for every percentage point increase in employees over the age of 50, the probability of using these responses rose by 2%</li> <li>• experiencing competition for labour from within Australia where employers experiencing such competition were 40% more likely to use these responses</li> <li>• experiencing a shortage of critical skills where employers were 40% more likely to apply these responses</li> <li>• concern about workforce productivity due to ageing over the next five years with such employers 50%% more likely to apply these responses.</li> </ul> <p>Factors which made firms less likely to adopt these strategies were:</p> <ul style="list-style-type: none"> <li>• having problems recruiting machinery operators and drivers where employers were half as likely to employ these responses</li> <li>• experiencing difficulties recruiting labourers where organisations were 60% less likely to apply these responses</li> <li>• experiencing increases in job</li> </ul>	

Study details	Population and setting	Research parameters	Outcomes and methods of analysis	Results	Notes by review team
				<p>stress where employers were 40% less likely to apply these response</p> <ul style="list-style-type: none"> <li>• operating in the private sector where organisations were 35% less likely to apply these responses</li> </ul> <p><i>Exploratory factor analysis:</i></p> <p>4 components that were extracted had a mix of responses to labour shortages of which the most relevant to the review is:</p> <p>1 - increase usage of older workers                      - this component focuses on the recruitment and usage of older workers. Most important predictor was whether employers were anticipating a substantial loss of staff to retirement over the next 5 years, followed by whether employers were experiencing problems with time to fill vacancies</p>	

## Then et al. (2014)

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
<p><b>Authors:</b> F.S. Then, T. Luck, M. Lupp, M. Thinschmidt, S. Deckert, K. Nieuwenhuijsen, A. Seidler, S.G. Riedel-Heller.</p> <p><b>Year of publication:</b> 2014</p> <p><b>Citation:</b> Then, F.S., Luck, T., Lupp, M., Thinschmidt, M., Deckert, S., Nieuwenhuijsen, K., Seidler, A., Riedel-Heller, S.G. (2014). Systematic review of the effect of the psychosocial working environment on cognition and dementia. <i>Occupational and Environmental Medicine</i>, 61, 358-365.</p> <p><b>Quality rating:</b> ++</p>	<p><b>Research questions:</b> The study reviews the recent work on the longitudinal impact of psychosocial work conditions on cognitive functioning and on dementia. With the goal to create a work environment that promotes cognitive abilities, the review deals with work-related risk factors and focuses also on work-related protective factors potentially enhancing cognition.</p> <p><b>Research approach:</b> Systematic review</p> <p><b>Data collection:</b> Systematic literature search of on-line databases (Medline via the PubMed interface and PsycINFO via the EBSCO host interface) for articles published up to 31<sup>st</sup> March 2011.</p> <p><b>Method(s):</b> Search results were evaluated in three phases - first stage the titles and abstracts of all identified studies were screened (carried out by 2 researchers based on the inclusion/exclusion criteria - evaluation of the two independent reviewers reached a consensus of 97.4%). In the second phase the full texts of</p>	<p><b>Sample population:</b> 17 articles of adequate quality were identified</p> <p><b>Sampling approach:</b> N/A</p> <p><b>Inclusion/exclusion criteria:</b> Only scientific journal articles in German and English reporting longitudinal cohort studies, case-control studies or randomised controlled trials were included. Population was the working population equal to or older than 17, who had exposure to psycho-social work environment characteristics (ie stress, mental load, workload, effort, reward, shift work, time pressure, job insecurity, institutional changes like downsizing or merger, social support/mobbing, bullying, leadership style, climate and work-related justice. Outcome measures were long-term cognitive (dis)abilities: measured in terms of errors, injuries, processing speed, alertness, distraction, memory, testing of intellectual skills (eg intelligence), dementia and Alzheimer's disease. Publications included only articles in journals.</p> <p><b>Number and characteristics of participants:</b> N/A</p>	<p><b>Brief description of method and process of analysis:</b> (See method)</p> <p><b>Key findings relevant to the review:</b> The review indicates that a great variety of psychosocial work conditions are associated with cognitive functioning and dementia risk. The majority of studies that examined work complexity with data was associated with a lower incidence of dementia, especially in twin studies on Alzheimer's disease. The results support the assumption that cognitive activities at work protect against cognitive decline. Higher work complexity with people was also found to be associated with significantly reduced dementia risk and better cognitive performance. Protective effects of cognitive activities at work on the risk of cognitive impairment and dementia similar to those of high work complexity, were found for high challenge work, high intellectual demands, high cognitive stimulation and high mental workload. Higher work demands are necessary to</p>	<p><b>Limitations identified by author:</b> Interpretation of the review findings should be made with caution, as they cannot exclude the possibility of a publication bias or selective reporting within the identified studies. They only included observational studies from two databases. Even though they aimed to include a broad range of psychosocial work conditions, they could not be sure that there might not be others which they did not consider.</p> <p><b>Limitations identified by review team:</b> <b>Evidence gaps/recommendations for future research:</b> In order to test the consistency of the results a meta-analysis could be conducted as soon as enough evidence has been produced. Underlying mechanisms of causation of dementia and work complexity need to be investigated in more detail.</p> <p><b>Source of funding:</b> The project was funded by the German Federal Institute for Occupational Safety and Health (Bundesanstalt für Arbeitsschutz and</p>

Study Details	Research parameters	Population and sample selection	Outcomes and methods of analysis and results	Notes by review team
	<p>the potentially eligible studies were evaluated (evaluation conducted by the same reviewers and studies that strictly adhered to the inclusion/exclusion criteria received a yes and were eligible for inclusion in the study) and in the third phase the quality of the studies was assessed (all studies that reached this stage underwent a quality assessment according to the SIGN and CASP checklists. To be considered of adequate quality a study had to fulfil the criteria for internal validity and the criteria showing that a potential bias was believed unlikely). Each phase was documented in a review protocol.</p> <p><b>Setting(s):</b> N/A</p> <p><b>Dates:</b> N/A</p>	<p><b>Response rate (if relevant):</b> N/A</p>	<p>ameliorate and maintain higher cortical functions, which then again preserve cognitive abilities up to old age. However, job demands were not always statistically significant.</p> <p>The psychosocial work condition 'job control' was examined in four studies, and in all studies high job control was significantly associated with a better cognitive status. The level of executive functioning has shown to be related to dementia risk.</p> <p>Only two of the identified studies on the impact of psychosocial work conditions of cognitive functions dealt with organisational aspects of work. One study investigated the effect of long working hours on performance in specific cognitive abilities and the other study investigated the effect of low levels of organisational justice. Both studies observed a significant decline in cognitive performance. It is likely that long working hours as well as low organisational justice cause chronic stress which then impairs different aspects of cognitive processing.</p>	<p>Arbeitsmedizin). FST is supported by LIFE - Leipzig Research Centre for Civilisation Diseases, Universität Leipzig, by means of the European Social Fund and the Free State of Saxony (LIFE-102P7). TL was supported by a research fellowship of the German Research Foundation (grant: Lu 730/1-1).</p>

## Winwood et al. (2006)

Study details	Population and setting	Research parameters	Outcomes <sup>2</sup> and methods of analysis	Results <sup>3</sup>	Notes by review team
<p>Authors:</p> <p>Winwood, P.C., Winefeld, A.H and Lushington, K.</p> <p>Year:</p> <p>(2006)</p> <p>Citation:</p> <p>Winwood, P.C., Winefeld, A.H and Lushington, K. (2006). Work-related fatigue and recovery: the contribution of age, domestic responsibilities and shiftwork. <i>Journal of Advanced Nursing</i>, 56, 438-449.</p> <p>Country of study:</p> <p>Australia</p>	<p><b>Source population/s:</b></p> <p><b>Country of study</b></p> <p>Australia</p> <p><b>Setting</b></p> <p><b>Location</b> Not reported</p> <p><b>Sample characteristics, including population demographics</b></p> <p>1280 nurses from 2400 surveyed at 2 South Australian hospitals (54% response rate).</p> <p>846 female nurses working full-time were selected. Mean participant age was 39.6 years, 439 were partnered and 284 had dependents. 812 worked 8-hour shifts and a rotating pattern of shifts were regularly worked by 635 participants of whom 521 reported that their shift rotations were</p>	<p><b>Research aims/objectives</b></p> <p>Aim of the study was to identify the relationship between age, domestic responsibilities, recovery from shiftwork related fatigue and the evolution of maladaptive health outcomes among full-time working female nurses</p> <p><b>Research questions/hypotheses</b></p> <p>Among full time working nurses older, partnered nurses with dependents would report lower levels of recovery between shifts and higher fatigue compared with younger nurses without dependents</p> <p>Regular working a rotation of different shifts, particularly including night duty,</p>	<p><b>Outcomes:</b></p> <p>In addition to providing demographic details, participants completed the Occupational Fatigue Exhaustion Recovery Scale (OFER), a new instrument particularly useful for measuring fatigue and recovery among the participants in the study. 15 items form 3 subscales: chronic fatigue (OFER-CF), acute fatigue (OFER-AF) and recovery between shifts (OFER-IR). OFER-IR is unique among reported fatigue measurement scales. The OFER-IR subscale includes items such as recovering from work between shifts isn't a problem for me. Likert response scales between 0 and 6 (strongly disagree to strongly agree) are used for all items.</p> <p>OFER scale has been reported to possess robust psychometric characteristics of construct and convergent validity, and internal reliability ranging from 0.8 to 0.85. It has been validated as a gender bias-free measure of fatigue/recovery among several populations, including nurses.</p>	<p><b>Report results for all relevant outcomes:</b></p> <p>The strongly negative and statistically significant correlation between recovery (OFER-IR), with both acute and chronic fatigue scores was expected as recovery and fatigue can be considered as reciprocal.</p> <p>The correlation between age and length of experience was strong and statistically significant (0.71), as expected, indicating that older nurses had longer experience. However, the statistically significant positive correlation of age with OFER-IR (recovery) suggests a tendency towards better recovery with greater age, which was the reverse of what had been hypothesized</p> <p>Results confirmed the theoretical association between shift pattern and increased work strain outcomes in the Shift Pattern variable structure, and justified its further use in analysis.</p> <p>This analysis indicated significant differences in all of the dependent variables according to Age Group [Wilks' = 0.951; F (12, 2196) = 4.99, P = &lt; 0.001]. The OFER-CF (chronic fatigue) scores of the &gt;55 group were significantly lower than for all other groups except the 35-44 years group [F (4,832) = 3.79, P= 0.005]. Similarly, the OFER-AF (acute fatigue) scores of the &gt;55 group were significantly lower than for all other age groups except the 35-44 year group [F (4,832) = 3.75, P = 0.005]. Lastly, the &gt;55 group OFER-IR (recovery) scores were significantly higher than all other groups [F (4,832) = 13.14, P = &lt;0.001].</p> <p>Taken together, these observations suggest that increasing age was associated with decreased</p>	<p><b>Limitations identified by author:</b></p> <p>Results are subject to the limitations of all correlational, self-report study designs, and thus causality cannot be inferred from them.</p> <p>No attempt was made to distinguish the effects that special needs categories of dependent and partner may have in individual cases. May require a more specialised study.</p> <p><b>Limitations identified by review team:</b></p> <p>Generalisability of findings to other countries</p>

Study details	Population and setting	Research parameters	Outcomes <sup>2</sup> and methods of analysis	Results <sup>3</sup>	Notes by review team
<p>Aim of study: Reporting a study of the relationship between age, domestic responsibilities, recovery from shiftwork-related fatigue and the evolution of maladaptive health outcomes among full-time working female nurses</p> <p>Study design: cohort survey design</p> <p>Quality score +</p>	<p>irregular and unpredictable. Mean length of experience of being a nurse was 10.3 years, age and length of experience being highly correlated. 198 were enrolled as nurses (mean age 42.7), 485 were registered nurses (mean age 37.1) 142 were clinical nurses (mean age 40.6) and 21 were clinical nurse managers (mean age 46.6). This was broadly consistent with the wider population of nurses working in Australia as reported in national statistics. Participants were invited to take part in the study via a pack attached to their pay slips</p> <p><b>Excluded population/s:</b> part time workers and men excluded</p>	<p>would be associated with lower recovery and higher maladaptive fatigue (independent of age and domestic responsibilities) compared with regularly working a single predictable day shift</p>	<p><b>Method of analysis:</b> All statistical analyses were undertaken using SPSS v 12. Histograms of the three OFER subscales were generated and checked for normality distribution. Pearson's r bivariate correlations between age, length of service, fatigue and recovery were calculated. Shift pattern construct validity was checked using a one-way ANOVA analysis of CF and recovery mean scores according to shift pattern, and post-hoc comparisons also conducted. Variations in OFER-CF and OFER-IR scores according to age were investigated using General Linear Model Multivariate Analysis (MANOVA) in which Age was entered as a fixed factor and OFER-CF and OFER-IR scores as dependent variables. Wilk's lambda statistic was used as the criterion for F-test significance. Relationships between Age, Job Category and Shift Pattern were investigated by oneway ANOVA, with Bonferroni post hoc comparison, and chi square analysis. Main effects of Partner and Dependent Status and Shift Pattern on Fatigue and Recovery were investigated using MANOVA analysis in which OFER-CF and OFER-IR scores were entered as dependent</p>	<p>chronic fatigue and increased recovery outcomes. Older participants tended to work fewer high-stress shift patterns. (F (3, 833) = 28.17, P = &lt;0.001) More nurses with greater work responsibilities tended to work fewer of the high-stress shift patterns (p=&lt;0.001) These observations are best explained by the common practice of senior (older and more experienced) nurses with greater job responsibility, acquiring progressively more latitude over the shifts they work, and for more administrative work functions to be undertaken during the day rather than at night. However, both factors clearly confound the simple association between age and nursing work-strain, as senior job category nurses also tended to be older. Among participants working permanent night duty, the mean scores for chronic fatigue and recovery were consistently poorer than for those working a single shift during the day. Lower maladaptive fatigue associated with better recovery among partnered nurses with dependents. Within this subgroup, working multiple shifts without night work, fatigue mean scores were significantly lower than reported by unpartnered nurses without dependents working the same shift [OFER-CF score difference = -9.5: t (25) = -2.12, P = 0.04]. The fatigue and recovery mean scores of partnered nurses without dependents were not notably better than those of partnered nurses with dependents; in fact they tend to be worse. This suggests that having dependents is not a significant determinant of chronic fatigue score</p>	<p><b>Source of funding:</b> KL (author) obtained funding for the study but source not stated.</p>

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Study details	Population and setting	Research parameters	Outcomes <sup>2</sup> and methods of analysis	Results <sup>3</sup>	Notes by review team
			variables, Partner, Dependent Status and Shift Pattern were fixed factors, and Age was entered as a covariant to partial out the effect of age.	when a nurse is partnered. By comparison, the mean fatigue and recovery scores of unpartnered nurses who have dependents tended to be the worst of any of the subgroups.	

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## Appendix 7: Bibliography - Excluded Studies and Reasons for Exclusion

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## Focus

*Study focussed on chronic illnesses or return to work*

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## Appendix 9 Supplementary Contextual References

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