Itroduction and overview: international framework and literature review

Introduction

In recent years, there has been a growing interest in the experiences of older workers. The immediate drivers have been European social policy aimed at increasing older people's labour market participation; as well as national government initiatives to close early retirement routes. However, the longer term drivers are steadily ageing populations across Europe, coupled with lowering real retirement ages in most EU member states.

Various projects have focused on push and pull factors leading to early retirement including discrimination, pensions, caring responsibilities and redundancy. The Elders project is focused on one particular push factor: the impact of workplace restructuring on older workers' employability, as well as health and well-being. There are three interrelated reasons why the topic is particularly in relation to older people's employability. First, older workers have long been regarded by both employers and the State as a reserved army of labour, brought into and forced out of the labour market as economic conditions require. (Riach 2006, Bruginiani et al. 2001)This places them in a precarious position, relative to their younger colleagues during both organisational and economic restructurings. Second, as Blossfeld et al (2006) noted, organisational restructuring can have a particularly strong impact on older workers who find it difficult to adapt to technological change. Finally, older workers are concentrated in traditional industries and therefore adversely impacted in shifts toward service based economies (Quadagno, Hardy & Hazelrigg 2003) The purpose of this report is to provide a review of literature on the relationship between age, job insecurity and health and well-being. The report has two main objectives:

- To review the literature on causality between job insecurity and poor health in order to identify the impact of workplace restructuring on older workers;
- To identify good practice which has been carried out by employers, unions and other organisations to mitigate the effect of job insecurity on older workers' health.

This report is divided into five sections. First, we will briefly discuss different models for understanding job insecurity. Second, we will discuss the impact of job insecurity of different groups of workers. Third, we will review the literature which has identified specific health risks which have been associated with job insecurity. Fourth, we will discuss the impact of health problems associated with job insecurity on older workers' employability. Fifth, we will discuss health interventions which have been tested and proven effective. Finally, we will draw conclusions.

Job insecurity- three models

It is worth at the start to clarify how job insecurity is defined in order to identify causal relationships. The research brief focuses on the impact of workplace restructuring on older workers' health and well-being. However, it is not the workplace restructuring itself which has a direct impact on health and well-being, but rather the associated impact on work orientation. There are three useful models for capturing the impact of job insecurity on workers.

- The job loss model which calibrates the negative impact of job insecurity against the real or perceived loss of intrinsic and extrinsic benefits from work (e.g. Doogan 2001)
- The job demand model which measures the balance between workers' psychosocial expenditure in work relative to its benefits (Lewchuk, Clarke & de Wolff 2008) (alternatively referred to as the Effort-Reward imbalance model (Siegrist, von dem Knesebeck & Pollack 2004)
- The job control strain model which measures the degree to which workers feel in control of their working conditions. (Karasek 1990)

Distinction between the three models is important in determining causality. The job loss model might seem the closest associated with workplace restructuring since the situation can be seen to result in a loss of tangible workplace benefits such as job security, career progression routes, workplace social networks and ultimately work itself. Indeed there is a raft of literature resulting from a large scale survey of UK civil servants whose careers were interrupted as a result of Government restructuring (Ferrie et al. 2001, Stansfeld et al. 1998) There are, however, two limitations to the model. First, because of the diversity of work orientations, the focus of what benefits are lost during a work transition may vary from person to person. In a study of Israeli teachers, for example, Rosenblatt et al (1999) suggested that men were more concerned with the loss of financial security, while women were concerned with the loss of more intrinsic benefits of work. The second limitation is that the intensity of perceived job loss depends on the individual having hitherto enjoyed high quality work. Indeed, what made the Whitehall II survey such a valuable dataset was the fact that the respondents occupied what they had perceived to be jobs for life. While the model can capture the impact of the shock of workplace restructuring on permanent employees, it is not so effective in measuring the impact of low quality work on the job occupant's well-being. Some evidence suggests that contingent employees may be less affected by workplace restructuring than permanent employees simply because they had previously adapted to precarious employment. (Virtanen et al. 2001) The second limitation is particularly important in relation to older workers since (as can be seen In the ISSP figures mentioned below) perceptions of job insecurity may increase gradually over time. Therefore, older workers (particularly those who have experienced job loss) may have developed coping strategies to deal with loss.

The job demand model may be a better way to measure the impact of job insecurity across a heterogeneous workforce. Here the measurements are quantified in terms of inputs and outputs.

Inputs might include not only work effort, but also emotional labour, stress, damage to health and other factors. Under this paradigm, social protection through employment law or collective bargaining acts as a buffer to mitigate the demand of work on the individual. Contingent workers can accordingly be seen to occupy high input/low output jobs in which the detrimental effect is cumulative rather than immediate. For example, there is some evidence to demonstrate that past experience with job loss can have a lingering impact on workers, even where they subsequently find re-employment. (Mathers, Schofield 1998))

Finally, the job control strain model posits that workers face mental and physical health risks when they when facing high workload and little control or decision-making when managing work. (Karasek 1990) Control and decision making are key factors within this model since they determine the extent to which the worker can emancipate herself from the constraints of a stressful work context, such as precarious employment. Low levels of control could result in maladaptive work practices and/or deterioration of mental and physical health.(Gershon, Lin & Li 2002)

The three models are not mutually exclusive, and manifestations of one type of job insecurity would likely also reflect another. However, the three models suggest different approaches to intervention. The job loss model would suggest that efforts to protect workers' health should focus on mitigating the shock associated with workplace restructuring. Compensatory benefits such as redundancy or early retirement routes could reduce the loss associated with unemployment. The job demand model would suggest solutions could come in the form of either reducing the input or increasing the output from work. As mentioned above, social protection in the form of, for example, a collective agreement on job security could act as a buffer against the impact of threats associated with workplace reorganisation. Alternatively, the outputs in terms of work benefits could be increased. Opportunities for job rotation, flexible working and learning have been posited as benefits which could be of high value to older workers. (Walker 2002, Flynn, McNair 2007) Finally, the job control model would suggest that measures to increase older worker autonomy and decision-making would reduce the stress associated with job insecurity. This could be in the form of either collective decision-making (for example, negotiated agreements on how redundancies would be handled) or individual autonomy (for example, increasing a worker's skill to increase the chance of re-employment).

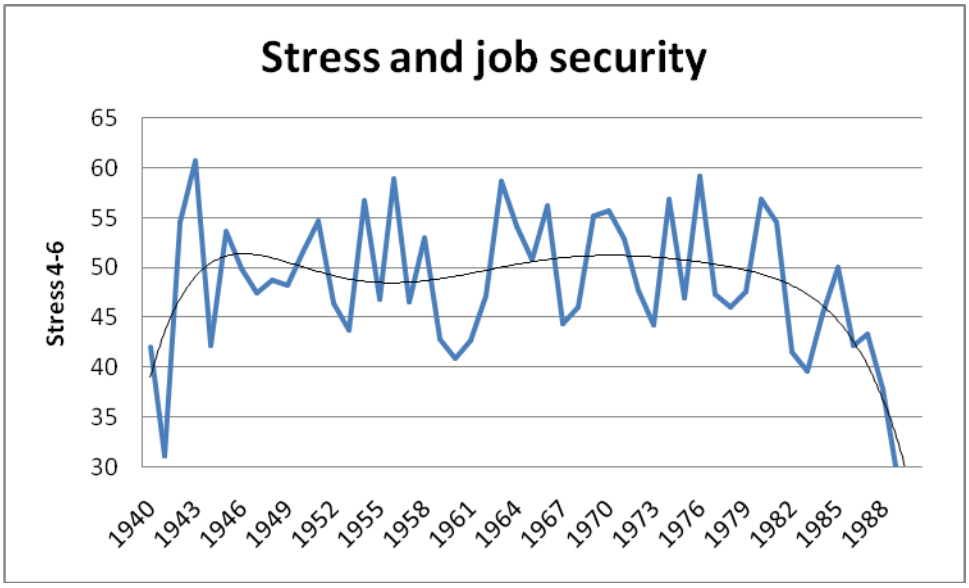
Job insecurity and groups of workers

This section will discuss the impact of job insecurity on different groups of workers. The objective here is to consider whether certain groups of workers require particular interventions in order to mitigate health risks. The most logical place to start would be to consider whether age itself impacts on job insecurity, health and well-being. As mentioned above, older workers' labour market positions make them particularly vulnerable to job insecurity. In addition, strong evidence exists of the prevalence of age discrimination (Sargeant 2001); barriers to re-employment (Heap 2004); and negative attitudes from management (Itzin, Phillipson & Laczko 1993, Taylor 2003) which would each reinforce feelings of job insecurity.

Comparisons between age groups are somewhat complicated by two factors. First, there is a level of heterogeneity within all age groups, and not all segments of the populations follow the same pattern. There is strong evidence to suggest that older workers with qualifications for example, have higher levels of job control and job satisfaction than those who do not. (McNair et al. 2004) Second, data on older workers' patterns are affected by the "survivor factor" (Griffiths, Knight & Nor Mohd Mahudin 2009)From their 50's onward, workers with low levels of job security or job satisfaction will leave the labour market through early retirement routes. Workplace "survivors" would then report higher levels of job satisfaction than would those who had exited. Understanding these limitations, cross-national data can provide some insight into patterns of work orientation.

Chart 1 shows the differences in perceived job insecurity. Data was drawn from the European Social Survey which asked respondents about the likelihood of losing their jobs within the next 12 months. The chart shows that feeling of job insecurity is U shaped with high levels of concern amongst the younger and older populations.

Job related stress, on the other hand, is an inverse U shape, felt most acutely by people in their 40's and 50's. (Health and Safety Executive)The relationship between age, stress and job insecurity is mixed. Using the ESS data only of people who report their job loss to be likely or very likely, the likelihood of stressful working conditions is again mostly U-shaped (although it drops off for the very young and people over 65). People in their 60's who are facing job threat are most likely to be experiencing workplace stress. Such finds are also reached by Milczarek et al (2009) who found that workplace stress was highest for people 40-54. Similar trends were observed for other stress-related symptoms such as overall fatigue, sleeping problems, anxiety and irritability.



This would suggest that the threat of job loss rises as people approach retirement age. Such stress is most likely accelerated by the lack of re-employment prospects. McNair et al (2005) studied job transition patterns and found, while people under 60 were most likely to make transitions for career related reasons, by the age of 60, transitions were more likely to occur for redundancy than career promotion. Gallo et al(2006) suggests that proximity to retirement increases the probability that job loss would lead to depression. However Breslin and Mustard (2003) identifies the 31-55 year age group as most susceptible, citing the threat of financial hardship as the main causal factor.

Hansson et al (2001) has suggested that older workers may have adopted coping mechanisms which reduce the impact (or at least the appearance of impact) of workplace stress on well-being. Such coping mechanisms he cites include setting realistic goals and calibrating stressful situations against previous experiences. He quotes Lazarus (1996) as well in suggesting that older workers may position themselves in work situations which mitigate stress (for example, not seeking a promotion if it is expected to be denied). Hansson concludes that older workers may exhibit higher tolerances to workplace stress. However, there is some question over whether such coping is real or masking. McNair (2010) suggests that older workers may hide job deficits such as training needs for fear of being "caught out" in the workplace. Such a phenomenon could also occur in relation to feelings of job insecurity, with older and more vulnerable workers not willing to voice concern over job threats. Hanson himself notes that older workers' coping strategies could result in some becoming overwhelmed, as problems at work remain unarticulated and unrectified.

There is some evidence to suggest that job control decreases with age, although the consensus seems to be that other factors such as qualifications and job status have greater impact. (EFA 2002, Barnes, Parry & Taylor 2004) Older workers with high levels of human capital tend also to have a high degree of job autonomy, including on the decision over when to retire, while those with low skills are more vulnerable to being either pushed or pulled from the labour market, or

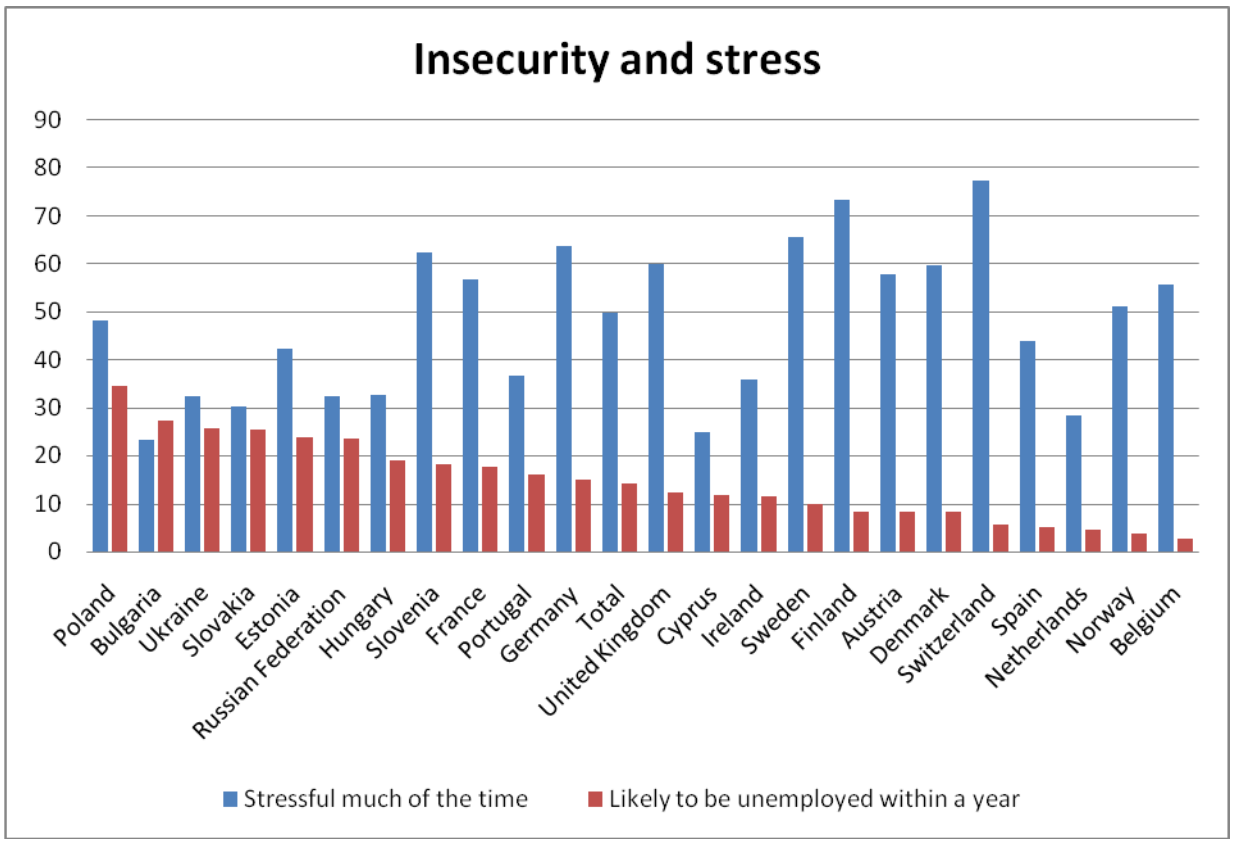
compelled to stay in work for financial reasons. (Flynn 2010) D'Souza et al (2005) considered the relationship between job status, job control and mental health. They found that people in higher status jobs had lower levels of depression and anxiety. However, they also found that high job strain was more likely to be associated with depression for high status workers than for lower status ones.

Pension entitlements play a strong role in determining job control, particularly in contexts such as the UK in which the majority of pension funds come from occupational and private sources. Parry and Taylor (2007) note that people who need to work after the State Pension Age for financial reasons may frame their contexts in terms of work orientation, such as having a strong work ethic, in order to make sense of their labour market positions.

Others, however, have noted that white collar workers have most acutely felt the impact of workplace restructuring associated with globalisation. In a national sample, 60% of British managers had experienced a workplace restructuring resulting in downsizing or outsourcing.(Worrall, Cooper 1998) As Sparks et al (2001) noted, managers who would be assumed to be most in control of their work context experienced job insecurity and loss of morale as a result.

Turning to the impact of national context, variations of older workers' perceived job security would be expected when comparing cross national data. A small number of studies have compared age management strategies cross-nationally, identifying the influences of culture (Chiu et al. 2001); institutional regimes (Muller-Camen et al. 2010) and perceptions of age discrimination. (Brooke 2003) European Social Survey data presents a picture which would seem somewhat counter-intuitive. On the one hand, the highest levels of job insecurity for people 50-55 is consistently shown to be within Eastern Europe. Somewhat surprisingly, older workers in the liberal market economies of the United Kingdom and Ireland show lower levels of insecurity than France or Germany which both have stronger employment laws than their two European counterparts. Bockerman (2003) suggests that there may be a trade-off between levels of job protection and prospects for re-employment. The Netherlands, Belgium, Switzerland and social democratic countries of Denmark and Finland have the lowest levels of job insecurity.

Surprisingly, the pattern on workplace stress in relation to 50-55 year olds appears to be almost inverse to that of job insecurity. Countries such as Belgium and Switzerland which have the lowest levels of job insecurity also have the highest levels of stress, while many of the Eastern European countries show that workplace stress for this age group is relatively infrequent. There may be a few intervening factors which could explain the difference. Differences in welfare regimes are likely to create differences in perception. Across Europe, national governments are rapidly closing off early retirement routes (OECD 2005) and the impact is most acute in State funded rather than mixed pension regimes. For example the German government's withdrawal of the Altersteilzeit scheme has started to be phased out from the beginning of 2010 with older workers expecting to need to work longer before they can begin their pensions.



Turning to the impact of gender, the evidence presents somewhat of a mixed picture. Most of the evidence suggests that women are more likely to suffer workplace stress than men. (Griffiths, Knight & Nor Mohd Mahudin 2009) However, some studies (Cheng et al. 2005) (Rosenblatt, Talmud & Ruvio 1999) suggest men and women in managerial positions are more likely to feel the insecurity associated with potential job loss.

It has been noted that women are more likely to be in high demand/low output jobs, which in turn offer fewer buffers to job insecurity. (Bardasi, Jenkins 2002) Women traditionally have smaller and fewer occupational pensions than men. (Dixon 2003) They also tend to be lower paid and largely work part-time, and their work histories are often interrupted to raise families or care for other relatives. (Gough 2001) (Campbell 1999) They are also more likely to be subject to age discrimination. For example, Duncan and Loretto (2004) noted that employers tend to perceive female workers to be old at an earlier age than they do men. Such workplace disadvantages can be reflected in health conditions. For example, both Rugulies et al (2008) and Lee et al (2004) have linked job insecurity with heart problems for women, particularly for women with poor job prospects.

The stress associated with combining work and caring responsibilities has also been noted as having a detrimental effect resulting in tiredness and lack of leisure.(Hirsch 2003) It has also been noted that for some older people unpaid caring work is as damaging to health and wellbeing as the worst kinds of paid work, damaging the quality of life of both carer and cared for. (McKie, Bowlby & Gregory 2005)(Mooney, Stratham 2002) Costa and Sartori (2007) note that women

on average see a decline in their Workability Index from the age of 35, ten years earlier than men, owing to dual home and work responsibilities. Caring responsibilities can also impact on employability (Vickerstaff 2006) particularly as access to flexible working is more limited for older women with caring responsibilities than younger women with children. (Yeandle et al. 2003) That said, women who have had caring responsibilities throughout their careers may, at the end of their working lives, be more adaptable to flexible working as an alternative to retirement. (Owen-Hussey, McNair & Flynn 2006)

Griffiths et al (2009) have noted that women are more likely than men to have adopted coping mechanisms for dealing with stress such as verbal expression and positive self-talk. However, as discussed above in relation to older workers generally, there is somewhat of a fine line between coping and masking. Mooney and Stratham (2002) note that older women with caring responsibilities can tend to let the stress associated with work and home responsibilities accumulate until the point of unsustainability, upon which they may prematurely exit the labour market.

Finally, we turn to the relationship between work contract and job insecurity. There is some contradictory evidence in relation to how permanent and contingent workers perceive their own job security and its impact on their health. Benach and Muntaner (2007) argues that atypical working patterns associated with flexible production can have as detrimental effect on individuals' mental health as unemployment. Like unemployment, atypical working is associated with deskilling, financial insecurity, lower compensation, impaired working conditions and work uncertainty. Kim et al (2006) also notes the link between non-standard working conditions and poor mental health, identifying a relationship in men between atypical working and suicidal ideation. Benavides et al (2006) notes that temporary workers have higher incidences of workplace injury than permanent workers, in part due to lack of training.

Virtanen et al (2001, 2002) suggests that fixed term workers have better self-rated health than permanent ones. They are less likely to be absent from work for health reasons, although it is also noted that this may be due to them also being less likely to benefit from paid sick leave. Their research, focused on permanent and contingent health care workers in Finnish hospitals, suggest the impact of job insecurity on health is more acutely felt by permanent employees. Virtanen et al (2005) suggest unstable career trajectories can have a detrimental effect on fixed term employees' mental health, but psychological distress can be reduced where the employee is on a career trajectory toward permanent employment.

In conclusion to this section, evidence of the impact of job insecurity on the health of different groups of older workers can support all three models. On the one hand, some evidence suggests that workers in better labour market positions may feel the greatest shock from loss of job security. This can be seen in relation to permanent employees, and perhaps to a certain degree from a cross-national comparative basis across Europe. Workers in more precarious employment conditions (e.g. older workers, temporary workers, women with caring responsibilities) may have developed coping strategies to manage. On the other hand, there is

also strong evidence to suggest a cumulative (but perhaps reversible) impact of precarious employment on health and well-being. Finally, the experience of older workers with high and low skill s suggest that control over career trajectories is an important factor associated with health and well-being of older workers. For the older workforce, control is particularly manifest in terms of decisions of whether or not to remain in the labour market. High skilled workers can either emancipate themselves from work with health risks or stay high value work.

In the next section, we will discuss the specific health risks which have been associated with job insecurity.

Job insecurity and health

Over the past two decades there has been a growth in literature on the relationship between job insecurity and health. The main drivers for this interest have been technological change, globalisation and privatisation which have changed the nature of work. It has further been noted that job insecurity is gaining attention because it is not only affecting blue collar workers, but managers and professionals as well. (Sparks, Faragher & Cooper 2001) There has been a growth in flexible and contingent work which, as discussed above, may also have health implications. The relationship between insecurity and health may be particularly important in relation to older workers because of their adaptability to technological change. Further, it has been noted that job insecurity is felt most prominently by the youngest and oldest members of the labour market. (Burchell et al. 2001) Finally, the main cause of labour market exit before the age of 60 is ill health incapacity. (McNair et al 2004)

As Ferrie (2001) notes, the main focus of most studies has been the link between job insecurity and psychological morbidity, with all but one study establishing a link. Most of the research relies on self-reporting and cross sectional. As Ferrie notes, one notable exception is the Whitehall II longitudinal study which was able to chart the changes in UK civil servants' self-reported mental well-being during a three year period of privatisation. One of the interesting results from the study was that the impact of *rumours* of the privatisation three years before it occurred had a greater impact on civil servants' mental health than the privatisation itself. (Ferrie et al. 1998) Another longitudinal study (Dekker, Schaufeli 1995) suggest the impact on mental health is cumulative. While the initial shock of a workplace restructuring can have an immediate impact on workers' health, more long term consequences can result in withdrawal from work and burnout.

In a study of German manufacturing workers, Frese and Mohr (1987) show that unemployment leads to higher levels of depression. They attribute the mental health complaint to the knock on effects of unemployment such as financial problems and "the daily hassles of unemployment." Age is not found to be a compounding factor. However, they do note that depression starts to recede either when he finds permanent work *or* when he transitions into full retirement. A second study (Linn, Sandifer & Stein 1985) found a relationship in men between unemployment, depression and anxiety, with unemployed men more exposed to mental health risk than those

employed. However, they also found wide variation within the unemployed group, and surmised that men with strong familial and social networks also had higher self esteem.

Studies have focused on the issue of job control as the link between insecurity and mental health. Amick et al (1998) used the Karasek job control model to assess the impact of high demand/low control work on women working in nursing homes. Their findings suggested a causal relationship between high strain work, poorer mental and physical health and lower functionality. Decision making latitude was associated indirectly with low strain work, and it was suggested that job control could increase functionality as well as improve health.

D'Souza et al (2005) investigated the relationship between job control, insecurity and mental health. They found that both job strain and job insecurity were independently associated with depression, anxiety and GP visits.

Adams and Flatau used an Australian national longitudinal dataset to measure the change in job security and its impact on mental health as measured by self reporting. They surmised that a one percent change in job security (as measured as likelihood of losing one's job) results in a positive 0.22% change in mental health.

Hellgren and Sverke (2003) considered the causal relationship between job insecurity and physical and mental health. While most studies have focused on whether job insecurity causes health risks, they considered whether impaired well being could result in precarious employment. For example, mental health issues could impair a worker's ability to build social networks which could act as a buffer to job insecurity. At the same time, health problems could limit a worker's career development opportunities, leading to high demand/low output employment. They found that the causal relationship between job insecurity and mental health complaints was significant, but that the reverse was not. They also found that there was no significant relationship between job insecurity and physical health complaints. Similarly, Jin et al (1995) argues that more research is needed before the causality between unemployment and adverse health outcomes can be established.

Turning to physiological health issues, an early study of men who suffered job loss determined a relationship between job loss and increased blood pressure. High blood pressure was persistent for men who stayed in unemployment or probationary employment for up to two years, although reduced for those who regained permanent employment . (Schnall et al. 1998)

Beale and Nethercutt (1987) looked at the impact of plant closure on the physical health of not only employees, but also family members. Health complaints were measured by GP and hospital visits. They found a strong relationship between physical health complaints and job insecurity. Similar to the findings of Whitehall II study, the threat of redundancy was found to be as large a causal factor in health complaints as the job loss itself.

Further analysis of the Whitehall II study found that job insecurity was associated with higher blood pressure, but only for the female respondents. A study of New York city male blue- and white-collar workers found that older men with at least 25 years work experience in which over

50% of their time was exposed to high job strain (i.e. high demand and low control) was higher both at work and at home. (Schnall et al 1998)

Arber (1996) used British General Household Survey data to chart the impact of inactivity on ill-health. She found that job class has the most significant impact on long-term health problems, Surprisingly, the impact of job class on health was greater for inactive people than those employed, which would suggest that social divisions in relation to health increase after people exit the labour market.

In another Whitehall II study, Bosma et al (1997) investigated the relationship between job insecurity and risk of coronary disease. Over a three year period, measuring new cases of angina, pains across the chest, and any coronary event, he found a relationship between the two for both men and women. Job demand and social support were not found to be associated with the link to heart disease, although job control was. He recommended that policies giving workers a stronger say in decision would contribute to better cardiovascular health.

Kivimaki et al (2001) showed a causal link between workplace downsizing and musculoskeletal problems. They estimate an odds ratio between severe musculoskeletal pain and major and minor downsizing of 2.59 and 5.50 respectively. The likelihood of such health problem increased particularly for women and people on low income. The attributed the association to increases in physical demands, reduction of skills discretion, and psychosocial factors. Cole et al (2001) similarly found an association between high job strain and musculoskeletal pain, although only in women. In a survey of flight attendants, Lee et al found that those with lower back disorders were more likely to have high perceived job demand, job insecurity and physical load. Carayon et al (1999) argue that psychosocial factors can contribute to the prevalence of work related musculoskeletal disorders. However, solutions need to take into account both psychological and ergonomic factors simultaneously.

Evidence on the link between job insecurity and lifestyle is mixed. Green and Johnson (1990) does not find a link between the take up or cessation of smoking and job strain, but does find that smokers whose job strain increases are likely to smoke more intensely. Lee et al (2002) compared the smoking habits of employed and unemployed cohorts in Scotland and found the latter more likely to take up the habit. However, this was considered in part to be influenced by previous social factors such as upbringing. Therefore causality could not be fully determined.

Research on the association between job insecurity and alcohol consumption seems to centre on the "spill-over" theory (Steffy, Laker 1991) (succinctly that poor working conditions drives one to drink. Some evidence is presented which shows temporary workers more likely to be alcohol dependent than permanent workers. (De Cuyper et al. 2008); although other researchers question the line of causality. (Sikora et al. 2008)

HSE data (Health and Safety Executive 2009) on workplace injuries suggest that men over 55 are less likely to have workplace injuries than younger colleagues, while for women the reverse is true. It is suggested that older women's susceptibility to injury may be due to higher rates of

blue collar work relative to younger colleagues. The relationship between precarious employment and workplace injury has been studied by Benavides (2005) who found a higher likelihood of injury amongst temporary than permanent employees. However, this was attributed more to length of service and lack of training rather than employment status itself. Barling et al (2003) found that people in high quality jobs (extensive training, variety and autonomy) were less likely to have occupational injuries and higher job satisfaction, which again may indicate that the psychosocial factors are less influential on the prevalence of injury than the training and support provided by the employer.

The evidence on working hours, particularly, shift work, and well-being is not as clear cut as one would assume. (Griffiths et al 2009) Allen et al suggest that the impact of working hours on health may be age related but only for those working very long hours (60 or more) Griffiths et al cite one intervention of veterinarians (Reijula et al. 2003) to reduce long hours by cutting back on-call time. Shields (2002) found that shiftwork for men (both younger and older) may increase the risk of chronic conditions, while for both men and women, night work was associated with psychological distress. Some suggestions have been made that interventions for older workers should focus on reducing working hours and shifting older workers onto daytime rotas. (Costa and Sartori 2007) Other evidence suggests that impact of shift work may be cumulative (Harma 1996). Therefore moving an older employee onto day work is akin to shutting the proverbial door after the horse has bolted.

Finally, we were not able to find studies focused on the relationship between job insecurity and work functionality. In terms of intellectual capacity, evidence compiled for the then UK Department for Trade and Industry found consensus that, up until the age of 70 at least, work capability does not decline. For workers over the age of 70, there have been too few studies to reach a conclusion. As people age, the speed with which information is processed declines, but their ability to process large chunks of information increases. (Warr 1994) This has sometimes been posited as a distinction between "fluid" and "crystalised" knowledge. (Crawford et al. 2009)

Physical capacity does decline with age, although the decline is not necessarily uniform. The most widespread work-related problems reported by workers aged over 55 years all relate to physical functional capacity, which, due to ageing, tends to deteriorate among workers in this age group. Next in line are general fatigue, along with stress symptoms and headaches, followed by psychosomatic symptoms – such as sleeping disorders, anxiety and irritability. (Ilmarinen 1999) Older workers who have worked in physically demanding jobs may be slower in decline of physical strength than the general population. (Schibye et al. 2001) At the same time, few jobs require maximal exertion. Warr (1994) distinguishes between age impaired/ age neutral/ and age enhanced jobs to distinguish between occupations which depend on physical strength (which reduces with age) and mental capacity which may be neutrally or positively affected. Older workers may self-select themselves from "age impaired" jobs by changing workload from physically demanding to intellectually challenging work.

In conclusion to this section, the various studies have identified an association between job insecurity and health and well-being, including both mental and physical well-being; propensity to injuries, lifestyle, and long hours. While an association with functionality has not been identified, age impacted functionality can impact on older workers real and perceived employability, particularly during periods of uncertainty such as a workplace restructuring.

In the next section, we will discuss interventions which have been identified for mitigating the negative impact of job insecurity on older workers' employability.

Workplace interventions

Ageing workforces have become a focus of international institutions. The impact of ageing demographics on both economic development and older people's social welfare has been identified as a priority issue for the United Nations which calls on governments and social partners to take measures including: identifying and removing barriers to work for the older inactive; promote life-long learning, healthy living, and access to technology in order to enable extended work opportunities; address issues around the informal labour market which affect older workers' access to social security and adequate working conditions; and foster flexible retirement opportunities. (United Nations 2002 para 28) There is a particular emphasis on protecting older female workers as well as vulnerable older workers who are more likely to be in the informal sector. (ibid, action d) The World Health Organization has also identified work opportunities in later life as a component of *Active Ageing* (World Health Organization 2002) ; and the International Labour Organization, together with the International Organization of Employers, has convened a symposium of employer organisations to develop strategies for addressing the impact of ageing on sustainable economic growth. (ILO 2009)

Although many countries are facing demographic windows, the issue of ageing populations is particularly important to Europe. As part of the European Employment Strategy, the Lisbon Council in 2000 set a strategy for increasing older worker participation in the workforce from 38.8 per cent to 50 per cent by 2010. The Stockholm Council 2001 called for clearer strategies for extending working lives and reducing early labour market exit. Although the aim is to increase the employability of people aged between 55 and 64, the Council adopted a strategy which targets all generations of employable age, with the objectives of encouraging and facilitating people to extend their working lives. The Council's strategy rests on six pillars which include helping employees avoid early exit; improving job design in later life; removing incentives for early exit from national tax-benefit systems; eliminating age discrimination; increasing accessibility to learning opportunities; and "developing a social partnership with employers and employee representatives to facilitate longer working lives."(European Commission 2005 p13)

Because of European initiatives to raise 55-64 year old people's participation rate to 50%, the European Union's research body, the European Foundation for the Improvement of Working and Living Conditions (EUROFOUND) has become a repository for good practice in relation to age management. There are a few sources of data which are particularly helpful. First, a database

of innovative age management practices was developed. The data houses HR management policies which have been adopted by organisations of different sizes across the EU. The database is searchable by head office location, organisational size, organisational sector, target worker group and policy area. HR policy areas cover health and well-being, recruitment, training and development, flexible working, health, ergonomics, retirement, and changed attitudes. Second, case studies have been synthesised into country reports which juxtapose employer practices with national government public policy initiatives. Third, synthesised reports have been produced drawing on first the EU-15 (Taylor 2006) and subsequently the New Accession States. (Mandl, Oberholzner & Dorr) Finally, a good practice age management guide has been produced which draws on all of the case studies across the European Union. (Naegele, Walker 2006)

Because this is the international report for the Elders project, we will focus on the three cross European good practice guides, but draw on good practices across the EU. We will focus on four main policy areas which are most directly related to the Elder project's brief:

- Health promotion and workplace design
- Redeployment
- Flexible working time
- Learning and development

Health promotion and workplace change

Naegel and Walker recommend the following practices:

- studies on health risks in the workplace;
- organisational health reports and working groups on health;
- the use of health experts to advise the organisation;
- employee surveys;
- employee participation and education;
- regular health checks;
- training supervisors and key workers in health management techniques;
- ergonomic workplace (re)design;
- preventive redeployment;
- health-promoting working time arrangements

The emphasis here seems to be on taking a systematic approach to reviewing health risks in the workplace. They emphasise early intervention (for example that health checks should be provided to all employees and not just older workers). They also suggest that employee participation is crucial in order to use the knowledge of older workers.

In reviewing the EU-15 case studies, Taylor noted that Nordic countries put significantly greater emphasis on the issue, with almost all of the case studies from this region featuring a dimension of health and well-being. In particular, he noted that the Finnish National Programme for

Ageing which combined public policy initiatives with social partnership derived employer initiatives. By contrast, only a small minority of case studies from the UK, France and Belgium featured health and safety measures.

It is also worth mentioning that subsequent to this publication, the first two sectoral level agreements on age were reached in Germany: first in Iron and Steel Industry, and subsequently in the Chemical sectors. (Frerichs, Sporket 2007) The drivers for the initiatives were both the immediate shock of changes to the Block Retirement model (mentioned above) as well as long-term ageing demographic problems in the sector.

Mandl et al noted that Eastern European governments have developed programmes around occupational health. The main drivers have been the rapidly ageing population and high proportion of the population of people with disabilities. They mentioned particularly an initiative in Estonia known as the Occupational Health Action Plan aimed at encouraging employers to adopt active ageing programmes.

In terms of employer initiatives, two are worth noting. The first is an initiative by Dell Slovakia to build employee networks across age groups in order to foster mentoring and professional communities. Such an initiative would seem to foster support networks and increase work autonomy, particularly for older workers who can share their experience and knowledge with co-workers.

The second initiative was that of Voestalpine Austria, a steel company. Due in large part to a long time freeze in recruitment and early retirement programme to further twenty years of downsizing, the company had a workforce within a narrow age range which was approaching retirement. The company therefore needed to persuade its older workforce to remain in work, and launched a programme to redesign physically demanding work. It also reviewed its night shift policy, identifying detrimental health impact in the form of stress and sleep loss. Work shifts were rescheduled and older workers were given greater discretion to reduce their night work. The company also developed new training programmes to enable workers of all ages to participate in learning.

This initiative is interesting in light of the Elders project remit insofar as the company is addressing the cumulative health risks which have been associated with continual downsizing. It is reducing the physical expenditure which workers need it put into their jobs in the form of physical strain, and is increasing the benefit in terms of investing in employees' human capital.

Redeployment/job redesign

Naegel and Walker note that redeployment can be used when, because of changes in functionality, older workers' skills are not being maximised in the situ job. They also recommend "preventative redeployment" (p17) with they define as a health protection or career development measure. However, they warn against "sheltered occupation" (or what Japanese employers refer colloquially as "window jobs" that deskill the occupant and have little

productivity. They noted that the indicator of success for redeployment was the ability of the employee to maintain his or her level of productive by using his skills in new ways.

Taylor noted that Western European companies are in some instances scaling back with the use of redeployment, and instead opting to redesign work in which the employee is in situ. This approach reduces the chance or appearance that the older employee is being moved to a window job, while improving the job design for that and future occupiers of the position.

Mandl et al note that redeployment is more firmly embedded in Eastern European workplace culture and has long been a practice to help workers maintain their employability. Redeployment has typically been offered to people with medical issues in order to avoid inactivity.

In regards to employer initiatives, the Slovenia construction company Lip Bed seems to have taken an innovative approach to retaining older employees. From the age of 50, employees can move to less physically demanding work such as mentoring or training apprentices. The programme is meant to enable older workers to shift from using physical labour to mental capital. Although the majority of workers in the company have no formal qualifications, they retain a high level of tacit knowledge which they can apply in productive ways.

The Netherlands' Ministry of the Interior runs a redeployment programme tailored to older white collar workers. The government department had historically operated an early exit arrangement which employees had come to expect as an entitlement. When it was found that the Ministry had a skills shortage, it closed early exit routes but had simultaneously developed programmes for employee development, mobility and redeployment so that older employees could enjoy a degree of job variety as well as use their skills in different ways.

Flexible working time

Naegel and Walker argue that flexible working arrangements could offer benefits to both the employer and employer. For the employer, working hours can be tailored to meet business need and reduce manpower during off-peak times. For the employee, flexible working can "humanise" work by suiting arrangements to the employee's work/life balance needs. They also note that where an employee can reduce his or her working hours, full retirement could be delayed. Finally, the provision of flexible work opportunities could enhance the employer's social image, for example by being known as a family friendly firm.

Taylor argues that Western European businesses are largely embracing flexible working because such arrangements are generally consistent with their vision of a flexible labour market. He notes in particular that in the UK, employer groups and think tanks have lobbied for an increase in the State Pension Age (although the main business organisation, the Confederation for Business and Industry has also lobbied for retention of mandatory retirement.) While the danger of flexibilisation leading older workers into a contingent workforce paradigm, he also notes (p40) that many employers are adopting a lifecourse approach to flexible working, and allowing

workers of all ages to request flexible arrangements during times when they might need such facilities.

Likewise, Mandl et al note that Eastern European states are moving towards more flexible labour markets, and flexible working is consistent with governments' and employers' policies. However, many of the countries have traditionally had workplace cultures in which flexible working hours were provided on an individual accommodation basis between an employee and her or his manager.

In terms of innovative practice, a UK telecommunications company has developed a flexible work initiative in order to encourage older workers to delay retirement. The programme enables participants to reduce workload under a number of schemes known as "wind down" (to work on a part-time or job-share basis); "step down" (to reduce work responsibilities; "time out" (to take a sabbatical); "helping hand" (to pursue charity or community work); and "ease down" (to reduce working hours in the twelve months prior to retirement. The company involved the recognised trade unions in developing and implementing the flexible work policy. The telecommunication company's policy is somewhat novel in that it offers a variety of flexible work arrangements as organisational policy rather than limited to individual accommodation between an employee and his or her line manager.

Aalborg University similarly adopted a range of flexible work arrangements as alternatives to retirement. Knowledge retention was seen as the main driver, as the university identified a large number of staff who had key and unique skills. As with the telecommunication company Aalborg University offers employees both the opportunity to reduce working hours and reduce responsibilities. Also similar to the UK firm, the trade unions were involved in the policy development.

Lifelong Learning

Naegel and Walker emphasise the importance of lifelong learning for both the employee and employee. For employees, learning provides adaptability skills. Hall Mirvis (1995) conceptualised older workers' skills needs in terms of identity development (realising one's skills and unique knowledge) and heightened adaptability (being able to use those skills in new ways, and perhaps in different jobs. Likewise, Naegel and Walker argue that employers can benefit from offering training and learning opportunities to older workers by being able to use skills within their workforces in different ways. They also note that learning can foster knowledge sharing and form a part of a company's knowledge management system.

Taylor observes that many of the Western European states still operate within a skills deficit paradigm, focusing learning opportunities on younger people while making little arrangement for retaining and enhancing older workers' skills. He notes that such an approach is unsustainable within a context of retaining older workers longer. Nevertheless, he notes a number of employer initiatives which are developing in order to enhance workers' abilities to work on different tasks.

Mandl et al note that participation rates in learning vary significantly between member states. Slovenia has the highest participation rate. Almost 16% of men and 20% of women between 25 and 64 are involved in training. The government actively promotes learning through workplace campaigns.

Motherwell Bridge in Malta is a small metalworking company, but it offers an interesting example or an organisation linking lifelong learning with mentoring. All employees are trained in health and safety, skills, and technical training. During training sessions, older workers are actively involved in delivering the training by passing their skills on to younger colleagues while learning new ones. All employees' skills are updated in order to maintain efficiency.

The approach to intergenerational learning has also been adopted, though on a much larger scale in BMW as part of its "Today for Tomorrow" initiative. BMW in Germany has developed a comprehensive programme for making its workplace age ready through changes to the assembly line, adaptation of new recruitment strategies, it has also invested 200 million euros in new learning initiatives. The company delivers the training through workplace learning and mixed age groups. Work teams were given discretion on how their learning would be carried out. It was noted that, "the experienced staff members passed on their wealth of knowledge to the younger employees and, conversely, the experienced employees could obtain new technological and methodological know-how from their younger colleagues."

Conclusion

The brief of the Elders' project is to identify the impact of workplace restructuring on older workers' health and well-being. The weight of evidence suggests that the job insecurity associated with workplace restructuring does have a negative impact on older workers in terms of the shock of job loss; the imbalance of effort and reward; and loss of job control. The literature suggests that there are particular health risks associated with job insecurity:

- Mental health risks
- Cardiovascular disease
- Musculoskeletal problems
- Injury
- Poor lifestyle habits
- Decreased functionality

In addition, attention must be paid to the impact of job insecurity on different groups of workers, particularly by not only age, but also gender, qualifications and job class, and employment status.

The Eurofound case studies of good age management practice provide examples of how the negative impact of job insecurity could be mitigated through social partner initiatives. The focus was on four policy areas which could buffer against precarious employment, increase work reward or increase job control: healthy living to mitigate the impact of job loss on older workers;

flexible working hours to enhance work reward; and job redeployment and lifelong learning to enhance adaptability.

Amick, B., Kawachi, I., Coakley, E., Lerner, D., Levine, S. & Colditz, G. 1998, "Relationship of job strain and iso-strain to health status in a cohort of women in the United States", *Scandinavian Journal of Work and Environmental Health,* vol. 24, no. 1, pp. 54-61.

Arber, S. 1996, "Integrating nonemployment into research on health inequalities", *International Journal of Health Services*, vol. 26, no. 3, pp. 445-481.

Bardasi, E. & Jenkins, S.P. 2002, *Income in Later Life: Work history matters*, The Policy Press, Bristol.

Barling, J., Kelloway, E. & Iverson, R. 2003, "High quality work, job satisfaction and occupational injuries", *Journal of Applied Psychology*, vol. 88, no. 2, pp. 276-283.

Barnes, H., Parry, J. & Taylor, R. 2004, *Working After State Pension Age: Qualitative research*, DWP, London.

Beale, N. & Nethercott, S. 1987, "The health of industrial employees four years after compulsory redundancy", *Journal of the Royal college of General Practitioners,* vol. 37, pp. 390-394.

Benach, J. & Muntaner, C. 2007, "Precarious employment and health: developing a research agenda", *Journal of epidemiology and community health,* vol. 61, pp. 276-277.

Benavides, F., Benach, J., Muntaner, C., Delclos, G., Catot, N. & Amable, M. 2006, "Associations between temporary employment and occupational injury: what are the mechanisms?", *Occupational and environmental medicine*, vol. 63, no. 6, pp. 416-421.

Blossfeld, H., Buchholz, S. & Hofacker, D. 2006, *Globalisation, uncertainty and late careers in society*, Routledge, London.

Bockerman, P. 2003, "Perception of job instability in Europe", *Social Indicators Research,* vol. 67, pp. 283-314.

Bosma, H., Marmot, M., Hemingway, H., Nicholson, A. & Stansfeld, S. 1997, "Low job control and risk of coronary heart disease in Whitehall II (prospective cohort) study", *British medical journal*, vol. 314, no. 558, pp. 565.

Breslin, F. & Mustard, C. 2003, "Factors influencing the impact of unemployment on mental health among young and older adults in a longitudinal, population-based survey", *Scandinavian Journal of Work and Environmental Health,* vol. 29, no. 1, pp. 5-14.

Brooke, L. 2003, "Human resource costs and benefits of maintaining a mature-age workforce", *International Journal of Manpower*, vol. 24, no. 3, pp. 260-283.

Bruginiani, A., Ebbinghaus, B., Freeman, R., Garibaldi, P., Holmlund, B., Schludi, M. & Verdier, T. 2001, "What do to the welfare states" in *The role of unions in the 21st century*, eds. T. Boeri, A. Brugiavini & L. Calmfors, Oxford University Press, Oxford, pp. 159-297.

Burchell, B., Day, D., Hudson, M., Ladipo, D., Mankelow, R., Nolan, J.P., Reed, H., Wichert, I.C., Layerthorpe, F.W. & Teasdale, P. 2001, "Job insecurity and work intensification: flexibility and the changing boundaries of work [review]", *British Journal of Industrial Relations*, vol. 39, pp. 318-320.

Campbell, N. 1999, *The decline in employment among older people in Britain*, LSE, London.

Carayon, P., Smith, M. & Haims, M. 1999, "Work organization, job stress, and work related musculoskeletal disorders", *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 41, no. 4, pp. 644-663.

Cheng, Y., Chen, C., Chen, C. & Chiang, T. 2005, "Job insecurity and its association with health among employees in the Taiwanese general population", *Social Science and Medicine*, vol. 61, pp. 41-52.

Chiu, W.C.K., Chan, A.W., Snape, E. & Redman, T. 2001, "Age stereotypes and discriminatory attitudes towards older workers: An East-West comparison", *Human Relations*, vol. 54, no. 5, pp. 629-661.

Cole, D., Ibrahim, S., Shannon, H., Scott, F. & Eyles, J. 2001, "Work correlates of back problems and activity restriction due to musculoskeletal disorders in the Canadian national population health survey (NPHS) 1994-5 data", *Occupational and environmental medicine*, vol. 58, pp. 728-734.

Commission, E. 2005, *Lisbon action plan incorporating EU Lisbon Programme and recommendations for actions to Member States for inclusion in their national Lisbon Programmes*.

Costa, G. & Sartori, S. 2007, " Ageing, working hours and work ability", *Ergonomics*, vol. 50, no. 11, pp. 1914-1930.

Crawford, J., Graveling, R., Cowie, H., Dixon, K. & MacCalman, L. 2009, *The Health, Safety and Health Promotion Needs of Older Workers*, IOM, Edinburgh.

De Cuyper, N., Kiran, S., De Witte, H. & Aygoglu, F. 2008, "Associations between temporary employment, alcohol dependence and cigarette smoking among Turkish health care workers", *Economic and Industrial Democracy*, vol. 29, no. 3, pp. 388-405.

Dekker, S. & Schaufeli, W. 1995, "The effects of job insecurity on psychological health and withdrawal: a longitudinal study", *Australian Psychologist*, vol. 30, no. 1, pp. 57-63.

Dixon, S. 2003, "Implications of population ageing for the labour market", *Labour Market Trends*, vol. 111, no. 2, pp. 67-76.

Doogan, K. 2001, "Insecurity and long term employment", *Work, Employment and Society*, vol. 15, no. 3, pp. 419-441.

D'Souza, R., Strazdine, L., Clements, M., Broom, D., Parslow, R. & Rodgers, B. 2005, "The health effects of jobs: Status working conditions or both?", *Australian and New Zealand Journal of Public Health*, vol. 29, no. 3, pp. 222-228.

Duncan, C. & Loretto, W. 2004, "Never the right age? Gender and age-based discrimination in employment", *Gender Work and Organization*, vol. 11, no. 1, pp. 95-115.

EFA 2002, *Generation Flex: Current attitudes to the retirement debate*, EFA, London.

Ferrie, J., Martikainen, P., Shipley, M., Marmot, M., Stansfeld, S. & Smith, G. 2001, "Employment status and health after privatisation in white collar civil servants: prospective cohort study", *British medical journal*, vol. 322, pp. 1-17.

Ferrie, J., Shipley, M., Marmot, M., Stansfeld, S. & Smith, G. 1998, "The health effects of major organisational change and job insecurity", *Social Science and Medicine*, vol. 46, no. 2, pp. 243-254.

Flynn, M. 2010, "Who is motivated to extend working life beyond retirement age? Typologies of older workers", *Personnel Review*, vol. 39, no. 5.

Flynn, M. & McNair, S. 2007, *Managing age: a guide to good employment practice*, CIPD, London.

Frerichs, F. & Sporket, M. 2007, *Employment and labour market policies for an ageing workforce and initiatives at the workplace - National overview report: Germany*, European Foundation for the Improvement of Living and Working Conditions, Dublin<I> </I>.

Frese, M. & Mohr, G. 1987, "Prolonged Unemployment and Depression in Older Workers - A Longitudinal-Study of Intervening Variables", *Social science & medicine*, vol. 25, no. 2, pp. 173-178.

Gallo, W., Bradley, E., Dubin, J., Falba, T., Teng, H., Kasl, S. & Jones, R. 2006, "The persistence of depressive symptoms in older workers who experience involuntary job loss: Results from the health and retirement survey", *The Journals of Gerontology, Series B: Psychological Sciences*, vol. 61, no. 4, pp. S221-S228.

Gershon, R.R.M., Lin, S. & Li, X.B. 2002, "Work stress in aging police officers", *Journal of Occupational and Environmental Medicine*, vol. 44, no. 2, pp. 160-167.

Gough, O. 2001, "The impact of the gender pay gap on post-retirement earnings", *Critical Social Policy,* vol. 21, no. 3, pp. 311-334.

Green, K. & Johnson, J. 1990, "The effects on psychosocial work organization on patterns of cigarette smoking among male chemical plant employees", *American Journal of Public Health,* vol. 80, no. 11, pp. 1368-1371.

Griffiths, A., Knight, A. & Nor Mohd Mahudin, D. 2009, *Ageing, Work-related Stress and Health,* TAEN, London.

Hansson, R., Robson, S. & Limas, M. 2001, "Stress and coping among older workers", *Work,* vol. 17, pp. 247-256.

Harma, M. 1996, "Ageing, physical fitness and shiftwork tolerance", *Applied Ergonomics,* vol. 27, no. 1, pp. 25-29.

Health and Safety Executive *Managing the Causes of Work Related Stress,* OPSI, Surrey.

Heap, D. 2004, "Redundancies in the UK An update of previous analyses of redundancies in the UK in relation to age, sex, occupation, industry and region", *Labour Market Trends,* vol. 112, no. 5, pp. 195-201.

Hellgren, J. & Sverke, M. 2003, "Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged variable modelling", *Journal of Organizational Behavior,* vol. 24, no. 2, pp. 215-236.

Hirsch, D. 2003, *Crossroads After 50: Improving Choices in work and Retirement,* Joseph Rowntree Foundation.

Ilmarinen, J. 1999, *Ageing Workers in the European Union: status and promotion of work-ability, employability and employment,* Finnish Institute of Occupational Health, Helsinki.

ILO 2009, *International symposium to discuss responses to the demographic challenges in the workplace, http://www.ilo.org/global/About_the_ILO/Media_and_public_information/I-News/lang--en/WCMS_105139/index.htm,* ILO, Geneva.

Itzin, C., Phillipson, C. & Laczko, F. 1993, *Age barriers at work - maximising the potential of mature and older workers,* Metropolitan Authorities Recruitment Agency, Solihull.

Jin, R., Shah, C. & Svoboda, T. 1995, "The impact of unemployment on health: a review of the evidence", *Canadian Medical Association journal,* vol. 153, no. 5, pp. 529-540.

Karasek, R. 1990, "Lower health risk with increased job control among white collar workers", *Journal of Organizational Behavior,* vol. 11, no. 3, pp. 171-185.

Kim, I., Muntaner, C., Khang, Y., Paek, D. & Cho, S. 2006, "The relationship between nonstandard working and mental health in a representative sample of the South Korean population", *Social Science and Medicine,* vol. 63, no. 2, pp. 566-574.

Kivimaki, M., Vahtera, J., Ferrie, J., Hemingway, H. & Pentti, J. 2001, "Organisational downsizing and musculoskeletal problems in employees: a prospective study", *Occupational and environmental medicine,* vol. 58, no. 12, pp. 811-817.

Lazarus, R. 1996, "The role of coping in the emotions and how coping changes over the life course" in *Handbook of Emotion, Adult Development, and Aging*, eds. C. Magai & S. McFadden, Academic Press, San Diego, pp. 289-306.

Lee, A., Crombie, I., Smith, W. & Tunstall-Pedoe, H. 2002, "Cigarette smoking and employment status", *Social Science and Medicine,* vol. 33, no. 11, pp. 1309-1312.

Lee, S., Colditz, G., Berkman, L. & Kawachi, I. 2004, "Prospective study of job insecurity and coronary heart disease in US women", *Annals of Epidemiology,* vol. 14, no. 1, pp. 24-30.

Lewchuk, W., Clarke, M. & de Wolff, A. 2008, "Working without commitments: precarious employment and health", *Work, Employment and Society*, vol. 22, no. 3, pp. 387-407.

Linn, M., Sandifer, R. & Stein, S. 1985, "Effects of unemployment on mental and physical health", *American Journal of Public Health,* vol. 75, no. 5, pp. 502-506.

Mandl, I., Oberholzner, T. & Dorr, A. "Age and Employment in New Member States", .

Mathers, C. & Schofield, D. 1998, "The health consequences of unemployment: the evidence", *Medical Journal of Australia,* vol. 168, pp. 178-182.

McKie, L., Bowlby, S. & Gregory, S. 2005, "Gender, caring and employment in Britain", *Journal of social policy,* vol. 30, pp. 233-258.

McNair, S. 2010, *Learning and Work in Later Life*, Nuffield Foundation, London.

McNair, S., Flynn, M., Owen, L., Humphreys, C. & Woodfield, S. 2004, *Changing work in later life: a study of job transitions*, University of Surrey, Guildford UK.

Milczarek, M., Schneider, E. & González, E. 2009, *OSH in Figures: Stress at Work*, European Communities, Luxembourg.

Mooney, A. & Stratham, S. 2002, *The Pivot Generation: Informal care and work after 50*, The Policy Press, Bristol.

Muller-Camen, M., Croucher, R., Flynn, M. & Schroeder, H. 2010, "National institutions and employers´ age management practices in Britain and Germany: Path dependence and option creation", *Human Relations,* .

Naegele, G. & Walker, A. 2006, *A guide to good practice in age management*, European Foundation for the Improvement of Working and Living Conditions, Dublin.

OECD 2005, *Ageing and Employment Policies: synthesis report*, OECD, Brussels.

Owen-Hussey, L., McNair, S. & Flynn, M. 2006, *Age Discrimination: a lived experience and the employer dimension*, European Social Fund and SEEDA, Guildford.

Parry, J. & Taylor, R. 2007, "Orientation, opportunity and autonomy: why people work after State Pension Age in three areas of England", *Ageing and Society*, vol. 27, no. 4, pp. 579-598.

Quadagno, J., Hardy, M. & Hazelrigg, L. 2003, "Labour market transitions and the erosion of the Fordist lifecycle: Discarding older workers in the automobile manufacturing and banking industries in the United States", *Geneva Papers on Risk and Insurance-Issues and Practice*, vol. 28, no. 4, pp. 640-651.

Reijula, K., Rasanen, K., Hamalatnen, M., Juntunen, K., Lindbohm, M. & Tasktnen, H. 2003, " Work environment and occupational health of Finnish veterninarians", *American Journal of Industrial Medicine*, vol. 44, no. 1, pp. 46-57.

Riach, K. 2006, "Older Workers: Learning from Three International Experiences", *Social Policy & Society*, vol. 5, no. 4, pp. 551-563.

Rosenblatt, Z., Talmud, I. & Ruvio, A. 1999, "A gender-based framework of the experience of job insecurity and its effects on Work Attitudes of Israeli Schoolteachers", *European Journal of Work and Organizational Psychology*, vol. 8, no. 2, pp. 197-217.

Rugulies, R., Aust, B., Burr, H. & Bultmann, U. 2008, "Job insecurity, chances on the labour market and decline in self-rated health in a representative sample of the Danish workforce", *Journal of epidemiology and community health*, vol. 62, no. 3, pp. 245-250.

Sargeant, M. 2001, "Lifelong learning and age discrimination in employment", *Education and the Law*, vol. 13, no. 2, pp. 141-154.

Schibye, B., Hansen, A., Søgaard, K. & Christensen, H. 2001, " Aerobic power and muscle strength among young and elderly workers with and without physically demanding work tasks", *Applied Ergonomics*, vol. 32, no. 5, pp. 425-431.

Schnall, P., Schwartz, J., Landsbergis, P., Warren, K. & Pickering, T. 1998, "A longitudinal study of job strain and ambulatory blood pressure: Results from a three year follow-up", *Psychomatic Medicine*, vol. 60, pp. 697-706.

Shields, M. 2002, "Shift work and health", *Statistics Canada*, vol. 13, no. 4, pp. 11-33.

Siegrist, J., von dem Knesebeck, O. & Pollack, C. 2004, "Social productivity and well-being of older people: a sociological exploration", *Social Theory and Health,* vol. 2, no. 1, pp. 1-17.

Sikora, P., Moore, S., Greenberg, E. & Grunberg, L. 2008, "**Downsizing and alcohol use: A cross-lagged longitudinal examination of the spillover hypothesis**", *Work and Stress,* vol. 22, no. 1, pp. 51-68.

Sparks, K., Faragher, B. & Cooper, C. 2001, "Well-being and occupational health in the 21st century workplace", *Journal of Occupational and Organizational Psychology,* vol. 74, pp. 489-509.

Stansfeld, S., Fuhrer, R., Shipley, M. & Marmot, M. 1998, "Work characteristics predict psychiatric disorder: Prospective results from the Whitehall II study", *Occupational and environmental medicine,* vol. 56, pp. 302-307.

Steffy, B. & Laker, D. 1991, "Workplace and personal stresses antecedent to employees' alcohol consumption", *Journal of Social Behavior & Personality,* .

Taylor, P. 2006, *Employment Initiatives for an Ageing Workforce in the EU-15*, EUROFOUND, Dublin.

Taylor, P. 2003, "Older workers, employer behaviour and public policy", *Geneva Papers on Risk and Insurance-Issues and Practice,* vol. 28, no. 4, pp. 553-557.

United Nations 2002, *Report of the Second World Assembly on Ageing*, United Nations, New York.

Vickerstaff, S. 2006, ""I'd rather keep running to the end and then jump off the cliff", Retirement decisions: who decides?", *Journal of social policy,* vol. 35, no. 3, pp. 455-472.

Virtanen, M., Kivimaki, M., Elovainio, M. & Vahtera, J. 2001, "Contingent employment, health and sickness absence", *Scandinavian Journal of Work and Environmental Health,* vol. 27, no. 6, pp. 365-372.

Virtanen, P., Vahtera, J., Kivimaki, M., Liukkonen, V., Virtanen, M. & Ferrie, J. 2005, "Labor market trajectories and health: a four year follow up study of initially fixed term employees", *American Journal of Epidemiology,* vol. 161, no. 9, pp. 840-846.

Virtanen, P., Vahtera, J., Kivimaki, M., Pentti, J. & Ferrie, J. 2002, "Employment security and health", *Journal of epidemiology and community health,* vol. 56, pp. 569-574.

Walker, A. 2002, "A Strategy for Active Ageing", *International Social Security Review,* vol. 55, no. 1, pp. 121-139.

Warr, P. 1994, "Age and job performance" in *Work and aging: a European perspective*, eds. J. Snel & R. Cremer, Taylor & Francis, London.

World Health Organization 2002, *Active ageing: a Policy Framework*, WHO, Geneva.

Worrall, L. & Cooper, C.L. 1998, *The Quality of Working Life: The 1998 Survey of Managers' Experiences, Institute of Management Research Report*, Institute of Management, London.

Yeandle, S., Phillips, J., Scheibl, F., Wigfield, A. & Wise, S. 2003, *Line managers and family-friendly employment*, The Policy Press, Bristol.