

European Agency for Safety and Health at Work

The ageing workforce: Implications for occupational safety and health A research review

Executive Summary

**The ageing workforce: implications for occupational safety and health – A research review –
Executive summary**

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The ageing workforce: implications for OSH – A research review – Executive summary

This review has been carried out as part of a larger project of the European Agency for Safety and Health at Work (EU-OSHA), initiated by the European Parliament. The project, 'Safer and Healthier Work at Any Age', aims to enhance the implementation of existing recommendations; the exchange of best practice; and the further investigation of possible ways of improving occupational safety and health (OSH) in order to improve the sustainability of work. It supports the objective of the EU Strategic Framework on Health and Safety at Work 2014-2020 to address ageing in the workforce, and provides an overview of the key issues related to OSH, but is not a comprehensive review.

▪ **Background — why be concerned about ageing and sustainable work?**

The proportion of older people in the general population is increasing across the EU. Even more importantly, this ageing of the general population is mirrored by the ageing of the working population, reflecting, in parallel with demographic trends, a number of socio-economic developments. For instance, there has been a push at the European level to increase the employment rate of those aged 55-64 years. Furthermore, many Member States have increased the official pension age to more than 65 for both men and women, and many Member States are planning to increase the retirement age even further. These changes are motivated by concerns regarding meeting state pension costs. An older working population, an increase in the number of years worked and continuing to work at an older age have implications for OSH and sustainable work.

However, economic measures, such as increasing the official pension age, will be successful only if workers are able to work and retain their physical and mental health into retirement. This requires, among others, measures to improve occupational health.

In particular, increasing the pension age has two possible implications for occupational risk prevention and the sustainability of work. Firstly, many occupational diseases and the effects of demanding work develop over time from cumulative exposure; therefore, extending the number of years worked may extend the exposure to hazards and increase the risks of developing occupational diseases or having one's physical ability affected by demanding work. Secondly, the work ability of those aged over 65 years and their continued ability to work in physically or mentally arduous working conditions in particular must be considered. For both of these implications of working for longer, the importance of reducing the exposure to hazards and making work easy for all workers is clear. In 2010, of those aged 50-54 years, 33.7 % did not think that they would be able to do the same job at 60 years of age. However, this overall average masks important differences between sub-groups of the working population: both men and women in low-skilled jobs, which are likely to be more physical in nature, have considerably greater concerns than men and women in professional and managerial jobs¹ (Eurofound, 2012b).

The ageing of the working population, combined with increases in official pension ages to more than 65 years, means that more employees are likely to develop chronic health problems while still at work, as the prevalence of chronic health problems increases with age. Some of these chronic health problems will have a work-related component. However, regardless of whether work contributes to a chronic health problem or not, policies to promote working for longer and to reduce the incidence of early exit from the workforce need to focus on helping those with chronic diseases function actively at work²(Eurofound, 2014).

¹ Eurofound – European Foundation for the Improvement of Living and Working Conditions (2012b), *Sustainable work and the ageing workforce. A report based on the fifth European working conditions survey*, Luxembourg: Eurofound. Retrieved 22 January 2016 from: <http://www.eurofound.europa.eu/publications/report/2012/working-conditions-social-policies/sustainable-work-and-the-ageing-workforce>

² Eurofound – European Foundation for the Improvement of Living and Working Conditions (2014), *Employment opportunities for people with chronic diseases: Executive summary*, Dublin, Ireland: Eurofound. Retrieved 27 April 2016 from: http://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1459en1.pdf

The ageing workforce: implications for occupational safety and health – A research review – Executive summary

In order for workers to stay in work as they age, attention must be paid to creating good-quality working conditions, with an appropriate work–life balance, employment security and learning opportunities throughout the working life³(Eurofound, 2012a). This is what is meant by ‘sustainable work’.

▪ Focus of the review

Creating sustainable working conditions requires a wider understanding and appreciation of the influence of any age-related changes in work capabilities or susceptibilities and the cumulative impact of exposure to risks throughout the working life. This review has collated evidence on the current situation in relation to the challenges of an ageing workforce for OSH. The review examined the following three questions:

- ‘What changes occur in ageing individuals within the workforce, and what are the likely impacts of work along the life course on health and ability?’
- ‘What are the implications of these changes and the impacts of work along the life course in relation to OSH and sustainable work?’
- ‘What OSH measures can be considered to mitigate any potentially adverse safety and health effects and to promote sustainable work along the life course?’

The review recognises that age itself is not the most appropriate index of a person’s abilities or needs and, instead, considers ‘work ability’, which looks at an individual’s resources in relation to the demands of their work.

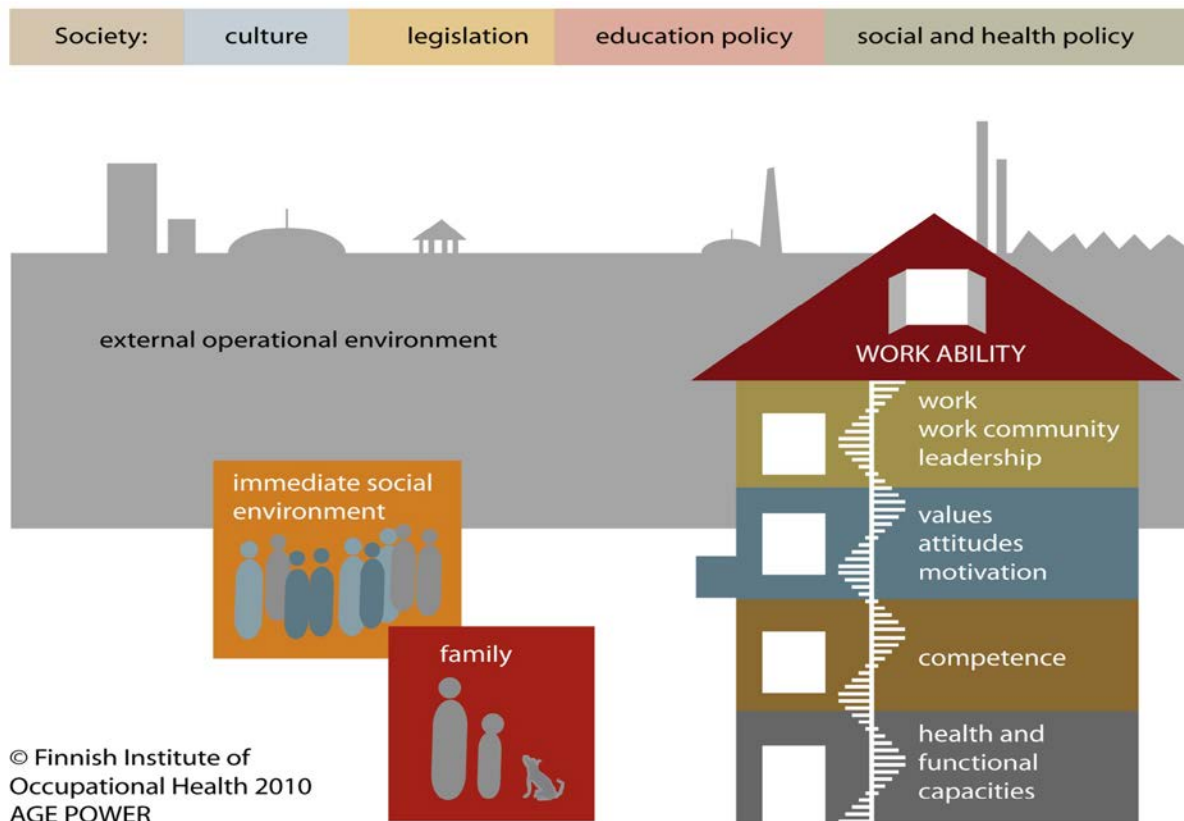
The review considers OSH factors that influence work ability and sustainable work within and outside the workplace. The report also considers measures to promote sustainable work across the life course. A ‘life-course approach’ to OSH focuses on improving prevention of risks for all workers, thereby reducing the damage to workers’ health throughout life and limiting early exit from the workforce, improving the sustainability of work with high physical demands, and, in addition, making specific accommodations for individual workers if needed. This is key to promoting a longer working life and healthy retirement.

Therefore, when addressing these questions, the report also considers the implications of the cumulative exposure to hazards over the life course, the possible implications of increased cumulative exposure due to longer working lives, and OSH challenges with regard to sustainability over the life course.

There are many different determinants of health and work ability, which are influenced by a variety of interacting factors within and outside the workplace. For example, working conditions are influenced by the culture within a workplace, national OSH policy and services, national health policy and services, and the interaction between these factors. These interactions are represented by the Work Ability House (FIOH, 2010), shown below. This report also considers OSH, work ability and sustainable work in this broader context of influences.

³ Eurofound – European Foundation for the Improvement of Living and Working Conditions (2012a), *Employment trends and policies for older workers in the recession*, Dublin.: No EF/12/35/EN. Retrieved 22 January 2016 from: <http://www.eurofound.europa.eu/publications/report/2012/labour-market-social-policies/employment-trends-and-policies-for-older-workers-in-the-recession>

Figure 1: Model of work ability (FIOH, 2010)



▪ **Changes associated with ageing, the impact of work, and the implications for occupational safety and health and sustainable work**

A number of key findings were made in response to the question ‘**What changes occur in ageing individuals within the workforce, and what are the likely impacts of work along the life course on health and ability?**’:

- There are a number of *changes to physiological systems with age*, including reductions in aerobic power, muscle strength, stature, dexterity and mobility. The age at which these changes start to take place and the extent of such changes vary widely across individuals.
- *Older workers can often compensate for losses to work-related functional capacity with strategies and skills gained through experience.*
- *Physical strength and endurance is also very specific to individuals*, such that some older workers may be stronger than their younger colleagues.
- *While some cognitive abilities decline with age*, such as memory and reaction time, according to laboratory-based studies, there is evidence that work performance is unlikely to be affected, *as older individuals can generally compensate for any decline with experience, better judgement and job-specific knowledge. Strengthening of other mental characteristics*, such as ability to reason and motivation to learn, can also help older workers to compensate for any changes and maintain work performance.
- *The key elements of cognitive performance* important for workplace safety and health, such as intelligence, knowledge and use of language, *do not generally show any marked decrease until after the age of 70 years.*

The ageing workforce: implications for occupational safety and health – A research review – Executive summary

- Statistical data show that *older workers are more likely than younger workers to suffer from chronic health problems*, such as cardiovascular disorders and musculoskeletal diseases. This does not necessarily affect their work performance and *many chronic diseases are controllable*.
- *Age itself is not the most important determinant of health*, and ageing is not inevitably accompanied by illness and disease. Health is influenced by numerous other external factors, including lifestyle, exercise and nutrition.
- *The extent of exposure to hazards throughout the working life is one external factor that can influence the health of older workers*. For example, health can be affected by long-term exposure to chemical substances or physical work. There can be a long latency period before the effects of exposure are seen, as is the case with exposure to asbestos.
- *In contrast to some stereotypical views of the abilities of older workers, they are an asset to organisations*. Older workers are often more reliable than younger workers and often show a greater level of commitment. Furthermore, turnover and (short-term) absenteeism rates are often lower among older workers than younger workers, and they have a wider diversity of expertise, knowledge and skills.

The key findings that were made in relation to the question **‘What are the implications of these changes and the impacts of work along the life course in relation to OSH and sustainable work?’** are summarised below:

- *Cumulative exposure over the course of working life to a wide variety of physical and chemical agents has implications for occupational health and, therefore, the sustainability of work*.
- *Physiological changes can lead to the deterioration of physical capabilities*. This does not necessarily affect work performance, but can result in a reduced tolerance of certain aspects of physical work. There is evidence that *long-term exposure to demanding work increases the impact of deterioration*.
- While most jobs do not require workers to work at full physical capacity, some older workers with physically demanding jobs may be working at (or close to) the limit of their capacity and may, therefore, be more at risk of musculoskeletal injuries or chronic fatigue than their younger counterparts. However, experience may protect against this to some extent. In other words, *the propensity for injury is related more to the difference between the demands of the work and the worker’s ability to work than to age*.
- In general, the *prevalence of musculoskeletal disorders (MSDs) increases with age*, probably as part of the normal ageing process; however, declining health does not necessarily mean a decline in job-related performance. *Other factors, such as work demands, may have a greater influence on the risk of developing work-related ill health than age*. The increased prevalence of MSDs with age is most pronounced in workers involved in physically demanding jobs, irrespective of age.
- *A worker’s physical capacity or ability to work should be used to determine if they are capable of performing a specific job and the associated risk of MSDs, rather than their age*. Employers may need to provide additional support, including adjustments to the work.
- *Some age-related changes could result in increased risk under certain circumstances*, for example exposure to extreme temperatures or driving at night.
- *Rates of accidents at work associated with more than three days of absence are lower among older workers than among younger workers*. However, older workers are more at risk of a severe or fatal accident. Although less likely to have an accident, older workers take longer to recover from any injury sustained. *Occupation, not age, is the dominant factor that contributes to risk of injury*.
- Generally, the evidence suggests that incidence of *work-related stress*, anxiety and depression increase with age and then decrease after the age of 55 years. The causes of work-related stress in older workers are different from those in younger workers. For instance, older workers are more likely to experience stress because of the responsibility they have for other people’s work and the workload, rather than the physical work environment.

The ageing workforce: implications for occupational safety and health – A research review – Executive summary

- There is evidence that *continuing to work in good-quality working conditions is associated with better physical health and psychological well-being* than being out of work. Good social support at work can contribute to a reduced likelihood of early retirement — workers need to be managed in an age-appropriate manner.
- There is evidence that *some older workers, but not all, have difficulties with shift work* and may need additional support or the option of non-shift work. Age is associated with changes in sleep patterns and a reduced tolerance of routine changes such as those usually associated with shift work. There is some evidence for a link between prolonged exposure to night work and breast cancer.
- The *experience of older workers* may enable them to increase their efficiency in the workplace (by learning to adopt different ways of working).
- Many age-related changes, such as hearing or vision changes, that could affect safety at work can generally be *corrected with simple aids or work adjustments*. This also applies to circumstances in which chronic disease affects performance at work.
- *Measures that make work less demanding for older workers would often benefit all workers*. For example, measures to prevent the development of MSDs as a result of manual handling, repetitive work, and static and awkward postures would benefit workers of all ages.

Chronological age is not the most important determinant of health and performance

The determinants of health status and performance, and the age-relatedness of both, are complex. There are a number of changes that occur across the life course in relation to physiology, psychology and human processing. However, it is apparent that ageing is a very individual process. Chronological age is not the most important determinant of health, and ageing is not inevitably associated with illness and disease. Furthermore, age is not the best indicator of performance or ability. Older workers are vastly different from each other because of the interaction of both external and internal factors with the ageing process. Important external factors include lifestyle, exercise and nutrition. No stereotype of older workers is likely to be true for all, even for the majority of older workers, particularly the belief that chronological age is the most important determinant of health or that older workers take more time off work⁴(Benjamin and Wilson, 2005).

Weyman et al. (2013)⁵ concluded that chronological age is unlikely to be the best predictor of work preferences or ability, and that focusing on older workers may lead to good practice relevant to employees of all ages being overlooked. These authors stated that older workers essentially exhibit the same set of vulnerabilities as workers of other ages, even if considered a relatively high-risk or vulnerable group.

As mentioned above, one external factor that can influence the health and physical capacity of older workers is the extent of exposure to hazards throughout their working life. For example, health can be affected by long-term exposure to chemical substances or physical work, and there can be a long latency period before the effects of such exposure are seen, for example in the case of exposure to asbestos. Weyman et al. quoted Dworschak et al. (2006) as saying 'If workers are required to perform work under adverse conditions on a permanent basis, they will almost inevitably encounter health and performance problems as they grow older.' Work should maintain physical and mental health, not contribute to its deterioration. However, according to the European Working Conditions Survey (EWCS), workers aged 35-44 and 45-55 years are more likely to report that their health is at risk from work than those aged over 55 years, which has implications for the future health of these workers. Those aged 55 years or over in craft and elementary occupations are more likely to report that they do not think that they will be able to work until they are 60 years old than those in managerial or professional jobs. Therefore, to

⁴ Benjamin, K. & Wilson, S. (2005), *Facts and misconceptions about age, health status and employability*, Health and Safety Laboratory, HSL/2005/20, Buxton, UK. Available at: http://www.hse.gov.uk/research/hsl_pdf/2005/hsl0520.pdf

⁵ Weyman, A., Meadows, P. & Buckingham, A. (2013), *Extending working life. Audit of research relating to impacts on NHS employees*, London, UK: NHS Employers. Retrieved 22 January 2016 from: <http://www.nhsemployers.org/~media/Employers/Documents/Pay%20and%20reward/WLR%20-%20Extending%20Working%20Life%20-%20An%20audit%20of%20research%20relating%20to%20impacts%20on%20NHS%20Employees%20May%202013.pdf>

ensure that work is sustainable, it is important that it helps to maintain physical and mental health and does not contribute to its deterioration⁶⁷ (Eurofound, 2012b, 2015).

Demands of work: work ability — an individual's resources in relation to work demands

As mentioned above, age-related changes happen to individuals at different ages and to differing degrees, and may also be compensated for at work, so may not affect work performance. It should also be recognised that age-related changes are not the only factors that affect the ability to work. Whether any such change affects work performance or not also depends on the nature of the work itself, or, in other words, the demands of the work. The concept of 'work ability' looks at an individual's resources in relation to the demands of a particular job.

It is difficult to predict the effects that age-related changes may have on the work ability of those aged over 65 years, who will now more often continue to work because of increases in official pension ages. The effects of continuing to work longer may be both positive, in terms of keeping people active, and negative, in terms of exposure to occupational hazards.

Health problems may not or need not necessarily affect work performance

An individual's health may change with age, but age is not necessarily the best determinant of health status. In addition, having an illness does not necessarily mean that an employee's work will be affected. In certain cases, adjustments to work can enable an employee with a health problem to continue working. Evidence also suggests that, in general, good work has a positive effect on both physical and mental health and well-being, while not working has been associated with poor physical and mental health. The biggest barrier to working with a health problem may be employers' attitudes, rather than the health condition itself.

Work should be made easier and healthier for all, with specific measures for individuals if needed

According to the concept of 'sustainable work', workplaces should promote the health of workers of all ages and support those who have health conditions. This suggests that the first priority should be to improve risk prevention measures and make work easier for the benefit of all workers across the work-life course, especially in the case of mentally or physical demanding work, but also with regard to work that is associated with the risk of developing MSDs, such as working in awkward postures. It would appear that the workers who are most likely to have problems later in life if their ability to work declines, because their work is particularly demanding, are also most likely to have their health compromised by their work.

Although physical capabilities may decline with age, this need not necessarily affect work performance. Many changes, such as age-related vision changes, can be corrected by either personal equipment or simple workplace adaptations. In many cases, adjustments can be made to specific tasks. However, if such adjustments are not possible, the transfer of workers to less demanding work should be considered in order to retain experienced workers. Evidence suggests that the consideration of work ability — an individual's resources in relation to the demands of the work — is the most appropriate way of determining whether or not any changes in a worker's health or capabilities puts them at an increased risk from their work.

Older workers should be viewed as an asset

Finally, older workers have been identified as a valuable asset to organisations, because they are often more reliable than younger workers and often show a greater level of commitment. Furthermore, turnover and (short-term) absenteeism rates are often lower among older workers than younger workers, and they have a wider diversity of expertise, knowledge and skills (Harrison and Higgins, 2006; cited in

⁶ Eurofound – European Foundation for the Improvement of Living and Working Conditions (2012b), *Sustainable work and the ageing workforce. A report based on the fifth European working conditions survey*, Luxembourg: Eurofound. Retrieved 22 January 2016 from: <http://www.eurofound.europa.eu/publications/report/2012/working-conditions-social-policies/sustainable-work-and-the-ageing-workforce>

⁷ Eurofound – European Foundation for the Improvement of Living and Working Conditions (2015), 'First findings: Sixth European Working Conditions Survey', Retrieved 3 May 2016 from: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1568en.pdf

Okunribido and Wynn, 2010)⁸. It is important to be objective about the performance of older workers and counteract the stereotypical views of the abilities and attitudes of older workers that some employers may have.

- **Occupational safety and health measures and systems that support sustainable work and mitigate any potentially adverse effects on safety and health**

The findings related to the question ‘**What OSH measures can be considered to mitigate any potentially adverse safety and health effects and to promote sustainable work along the life course?**’ are discussed in the following sections.

Models of sustainable work

In terms of OSH, the concepts of ‘sustainable work’ and the ‘life-course approach’ can be used to inform an integrated approach to improving working conditions for all, along with considering the individual changes that can occur with ageing and the implications of these changes for workplace safety and health. Various models have been put forward to help us understand the multifaceted nature of sustainable work. These models reflect the various influences from both within and outside the workplace and, therefore, highlight the importance of an integrated policy approach that includes an OSH component.

The four models briefly summarised in the review were selected because of their relationship to OSH, but also because they differ in their perspectives on other factors. These models are:

- the work ability concept (FIOH, 2010);
- a model to monitor sustainable employability (TNO, 2012)⁹;
- the conceptual framework on age and employment (Hasselhorn et al., 2014)¹⁰;
- the schema for understanding the domains encompassed by sustainable work (Eurofound, 2015b)¹¹

These four models of sustainable work present the various complex and interacting elements that can influence the sustainability of work and the work ability of individuals, and therefore the continuation of or early exit from work of those individuals. By improving understanding in this way, these models can help to inform improvements in policy and interventions aimed at retaining older workers in the workforce. The work ability concept (FIOH, 2010) has already been described above.

Occupational safety and health measures and systems to support sustainable work

The models described above depict influencing factors from within and outside the workplace. The report examined two important influences: the safety and health of working conditions, and the OSH systems, legislation and policy needed to ensure that safe and healthy working conditions are maintained, including the interaction between OSH and other policy areas such as health, social policy, employment and education in the context of sustainable work.

There is evidence that OSH performance needs to improve if the EU is to prolong the working life of its workforce, especially in some demanding jobs. According to the European Working Conditions Survey, significant proportions of the workforce report exposure to challenging working conditions such as

⁸ Okunribido, O. & Wynn, T. (2010), *Ageing and work-related musculoskeletal disorders: A review of the recent literature*, UK, HSE: Research Report 779. Available at: <http://www.hse.gov.uk/research/rrpdf/rr799.pdf>

⁹ TNO (2012), *Model developed to monitor sustainable employability*. Retrieved 25 January 2016 from: <http://publications.tno.nl/publication/100446/zzqzb5/kraan-2012-model.pdf>

¹⁰ Hasselhorn, H.M., Peter, R., Rauch, A., Schroder, H., Swart, E., Bender, S., du Prel, J-B, Ebener, M., March, S., Trappmann, M., Steinwede, J. & Muller, B.H. (2014), ‘Cohort profiles: The lidA cohort study – a German cohort study on work, age, health and work participation’, *International Journal of Epidemiology*, Vol. 43, No 6, pp. 1736-1749.

¹¹ Eurofound – European Foundation for the Improvement of Living and Working Conditions (2015b), *Sustainable work over the life course: Concept paper*, Publications Office of the European Union, Luxembourg. Retrieved 23 January 2016 from: <https://www.eurofound.europa.eu/fr/publications/report/2015/working-conditions/sustainable-work-over-the-life-course-concept-paper>

painful and tiring positions, working at high speed or adverse social behaviour (Eurofound, 2015¹²). Long-term exposure to such working conditions could lead to early exit from employment.

Improved risk prevention for all workers

Key finding: *In relation to OSH, sustainable work consists of two main elements, both of which are covered by the European legal framework on OSH: (1) ensuring work does not damage physical or mental health across the life course, by controlling risks to all workers (generic measures); and (2) taking additional steps if and when necessary to protect any particularly vulnerable groups or individuals.*

Therefore, the first OSH priority, in terms of sustainable work, is to ensure that working conditions do not negatively affect workers' health or their work ability, or, put another way, to ensure that work positively contributes to the maintenance of workers' physical and mental health across the work-life course. To achieve this, continued efforts are needed to improve risk prevention and make work easier and safer for the benefit of all workers. Various measures that would make work easier for all workers have been identified in this report.

Specific measures for older workers if and when necessary

In addition to good OSH management aimed at reducing risks to all workers, additional specific measures are also needed for older workers if and when necessary, depending on the type of work and the individual, so that their work can be organised in a way that allows them to continue to work in a safe and healthy manner. This needs to be done on an objective basis, in order to avoid discrimination and actions being based on stereotypes of older workers. This implies that a diversity-sensitive risk assessment approach is needed. It is proposed that the assessment of work ability of individual workers could also be used as part of an OSH management approach based on risk assessment. Work ability assessment may be especially applicable to demanding working conditions. The report has identified various, often simple, accommodations that can be made to allow those with changed abilities or health conditions to continue working.

Key finding: *'Work ability' refers to an individual's resources (for example, physical capacity, attitudes, experience) in relation to work demands (for example, work content, work environment, work culture). The work ability concept has been incorporated into a self-assessment tool, the Work Ability Index, which can assist with the early identification of risks to individual workers in order to counteract them.*

Occupational safety and health risk prevention measures and workplace accommodations

Various measures have been identified in this report that would make work easier for all workers, including changing the way tasks are carried out to avoid or reduce physically demanding work, exposure to repetitive work or dangerous substances, etc.; using equipment to make work easier; and improving career progression to avoid prolonged exposure to risks (in relation to, for example, highly repetitive work, which is often carried out in some female-dominated types of work).

In particular, measures to prevent the development of MSDs, caused by manual handling, repetitive work, or static and awkward postures, would benefit all workers and contribute to the sustainability of work. Taking frequent breaks and the use of properly adjusted ergonomic workstations is suggested for computer-based work.

The report has also identified various, often simple, accommodations that can be made, including the use of personal devices or equipment, or changes to working hours, tasks or roles, to enable individuals with reduced work ability or changes in health to remain in work.

Key finding: *OSH measures to make work easier for all and workplace accommodations to allow workers with declines in health or performance to remain in work are often very simple.*

¹² Eurofound – European Foundation for the Improvement of Living and Working Conditions (2015), 'First findings: Sixth European Working Conditions Survey', Retrieved 3 May 2016 from: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1568en.pdf

General mitigating measures

In summary, the report has identified the following **key measures that can mitigate** adverse effects on safety and health:

- *A comprehensive approach to age management in the workplace*, to promote sustainable work and counter the effects of ageing, includes OSH, health promotion and human resources measures.
- *Risk assessment can support sustainable working* by being used to identify risk prevention measures to improve working conditions for the whole workforce or identify measures for specific groups or individuals. Work ability evaluation can be used as part of risk assessment. OSH aspects of age management can be accommodated within the normal workplace risk assessment and management process.
- *Health surveillance monitoring over time and access to occupational health services* are issues that need to be addressed, particularly for temporary workers and small businesses.
- *Ergonomics has an important role to play* in reducing the demands of work for all workers and making specific adjustments for groups of workers or individuals.
- *Workplace health promotion interventions should be age appropriate, gender appropriate and inclusive of all age groups.*
- *Older workers can often benefit from appropriate flexible working arrangements*, allowing them to accommodate other activities such as responsibilities as carers or to facilitate working with health problems. Social policy also influences whether or not workers can combine caring responsibilities and work.
- *Other measures* include maintaining up-to-date skills and knowledge, with training methods adapted to different age groups; and viewing older workers as an asset and developing their roles, for example through training and mentoring of younger, less experienced workers.
- *The prevention of injury and ill health in younger workers* is an essential part of a sustainable work approach. The promotion of 'healthy schools' and risk education in schools is also part of a lifelong approach.
- *Rehabilitation* should be focused on staying in work, and early interventions are crucial. Rehabilitation programmes should be interdisciplinary. Simple workplace accommodations can often allow workers with chronic diseases to remain in work. More needs to be done to support individuals living with chronic MSDs, who are either in work, or planning to return to work in future.
- *Specific gender-related issues*, in relation to sustainable work, need to be taken into account, as in any other OSH area. Such issues include reducing the high demands of certain jobs in which women predominate, for example health care and cleaning; workplace measures to support women going through the menopause; the double workload of family carers; and equal access to rehabilitation services.
- *A sector- or job-specific approach* allows interventions to address the specific work challenges identified and takes account of the specific context. Many of the measures identified to reduce workloads in specific sectors would benefit all workers in the sector.

The figure below was produced by the Federal Institute for Occupational Safety and Health (BAuA) in Germany to depict various measures in the workplace that contribute to work ability and sustainable work.

Figure 2: How to improve work ability and promote sustainable work in the workplace (Sedlatschek, INQA project, BAuA, unpublished.)



Support of OSH systems to promote sustainable work

Key finding: As suggested by the models, an effective OSH system is needed to support the approach to sustainable work of combining improved protection for all workers with measures for individuals at greater risk as and when necessary.

Takala et al. (2009)¹³ defined elements of an effective OSH system and the tools it requires: legal measures; enforcement; services available to enterprises and organisations, such as occupational health services; incentives; awareness raising and campaigns; knowledge and solutions; networking for exchange of good practice; and cooperation between employers and workers, for example through tripartite advisory committees. All of these areas are relevant to achieving sustainable work.

As mentioned above, the European OSH legal framework is based on risk assessment and combines the collective measures of protecting all workers as the priority with work adapted to individual workers and measures to protect vulnerable groups. This framework is supportive of achieving sustainable work if effectively implemented. The promotion of well-being in addition to risk prevention requirements is likely to increase the impact of legislation with regard to supporting sustainable work. The modern labour inspectorate combines enforcement activities with the provision of support, advice and information to workplaces. To carry out these roles, a labour inspectorate needs to be equipped with the appropriate tools and expertise to apply its activities to a diverse workforce.

The importance of access to occupational health services, including health surveillance throughout the working life, has been highlighted as an issue in this report. This is a problem particularly for small businesses and temporary workers, such as construction workers or cleaners, many of whom may be migrants and perform the most demanding work. The provision of basic occupational health services linked to primary health care has been suggested as one way to greatly increase the coverage of small businesses and workers not covered by employers' occupational health systems or work insurance systems. Small businesses in particular need access to OSH support in general, for example for risk assessment, and especially with regard to assessments of individual workers and for determining risk prevention measures and suitable workplace adjustments for individuals. A sector-based approach may be most effective for small businesses and could be more easily targeted to their specific needs.

¹³ Takala J, Urrutia M, Hämäläinen P, Saarela KL. (2009), 'The global and European work environment – numbers, trends, and strategies', *Scandinavian Journal of Work, Environment and Health Suppl*, 7, pp 15–23.

Work-focused rehabilitation services are also highlighted in this report as being of key importance for workers and also small businesses. This implies the need for an integrated approach between health and social policy and employment and OSH policy, as covered by the models.

Awareness raising campaigns should be implemented to disseminate the benefits of older workers to a workplace and raise awareness of those elements of the workplace that are not suited to their needs (Okunribido and Wynn, 2010)¹⁴. However, this is likely to have a greater impact if combined with support and incentives for small and medium-sized enterprises (SMEs) to improve OSH, and to take measures to accommodate older workers or carry out workplace health promotion activities.

Continued research into OSH in general, and in relation to the ageing workforce in particular, is needed to improve knowledge and solutions. Existing OSH knowledge and best practice needs to be shared, including best practice on how to support small businesses in the context of an ageing workforce.

OSH authorities and organisations need to take a strategic approach to achieving sustainable work. The most effective way to do this is likely to be by incorporating or mainstreaming age and other areas of diversity throughout their strategy and practices. The diversity strategy of the Austrian Labour Inspectorate is a good example of how this can be done.

OSH systems can also promote a life-course approach that starts before working age, through cooperation with education policy, to embed risk education in school curriculums and promote health in schools, including through raising awareness of the ergonomics of furniture and other elements that could contribute to the development of MSDs.

Integrated policy approach

Key finding: As depicted in the conceptual models relating to sustainable work, *improving the retention of older workers is not just a function of maintaining their health and capacity and providing quality working conditions, but it is also essential to take other inter-related factors into account, including motivation, learning opportunities and broader socio-political and institutional factors, such as income distribution, and pension and tax regimes.*

There are many social and economic factors which interact to influence strongly health and wellbeing¹⁵ and also skills and motivation to work. As mentioned above with regard to rehabilitation, the models for sustainable work depict how various policy areas outside the workplace interact in the context of the sustainability of work, emphasising the importance of an integrated policy and services approach that includes OSH.

Given the evidence of persisting risks, especially in some sectors, considerable improvements to OSH are needed in many instances to prolong working lives. In cases in which work demands exceed an individual's work ability, because of the working conditions or declines in workers' health, even after accommodations have been made, there will need to be provisions for them to either change to another field of work entirely or exit from the workforce. Therefore, complementary policies and services are needed to support workers who, unavoidably, have to exit employment early. This, again, underlines the importance of an integrated policy approach.

▪ Gaps in the knowledge

Finally, the review identified a number of evidence gaps. An improved understanding is needed of how to make work sustainable for all ages and promote work ability and the needs of workers throughout the life course. More evidence is needed on the effectiveness of potential interventions on workers of any age. Furthermore, more knowledge is needed in relation to extending the working life beyond 65 years of age, for example in relation to work capacity and a potential increase in the length of exposure to work hazards.

¹⁴ Okunribido, O. & Wynn, T. (2010), *Ageing and work-related musculoskeletal disorders: A review of the recent literature*, UK, HSE: Research Report 779. Available at: <http://www.hse.gov.uk/research/rrpdf/rr799.pdf>

¹⁵ Marmot, M. (2013), *Health inequalities in the EU. Final report of a consortium*, Consortium lead: Sir Michael Marmot, European Union. Available at: http://ec.europa.eu/health/social_determinants/docs/healthinequalitiesineu_2013_en.pdf

▪ **Overall conclusions and possible policy implications**

Economic measures, such as increasing the official pension age, will be successful only if workers remain able to work and retain their physical and mental health into retirement. Work should allow the maintenance of physical and mental health, not contribute to its deterioration.

The overall aim of OSH in relation to sustainable work is to limit early exit from the workforce and ensure that working allows healthy workers to maintain their physical and mental health throughout their work-life course, and remain healthy into retirement.

While many changes in health and ability can be linked to age, ageing is not necessarily associated with ill health or declining performance. There is a huge variation in health and ability among workers of the same age. In addition, older workers can often compensate for losses to work-related functional capacity with strategies and skills gained through experience. The focus of OSH in relation to age management should be on work ability in relation to work demands, not chronological age.

Cumulative exposure to demanding work across the work-life course can have a significant impact on health and functional ability, so is a particular concern with regard to sustainable work.

There is evidence that continuing to work under good-quality working conditions is associated with better physical health and psychological well-being than being out of work.

Improved OSH management to reduce risks and make work easier for all workers could have a significant impact on the sustainability of work. A life-cycle approach to OSH and sustainable work is needed for the health of workers to be maintained.

Specific measures for older workers should be taken if and when necessary — depending on the type of work and the individual — and should avoid discrimination and not be based on stereotypes of older workers.

Measures to make work less demanding would often benefit all workers, for example measures to prevent MSDs caused by manual handling, repetitive work, and static and awkward postures.

The tool of risk assessment can support sustainable working by identifying risk prevention measures to improve working conditions for the whole workforce or identifying measures for specific groups or individuals. OSH aspects of age management can be accommodated within the normal workplace risk assessment and management process. Individual work ability assessments can be used as part of risk assessment.

Often simple workplace accommodations can allow workers with health or performance problems to remain in work. In the workplace, human resources and OSH departments should cooperate on age management and related measures.

Older workers often benefit from flexible working arrangements, allowing them to accommodate other activities such as responsibilities as carers.

Effective, robust OSH systems are needed that are equipped to support SMEs and atypical workers and that have diversity issues mainstreamed into their strategy and actions. Access to basic occupational health services is an issue for small businesses, and health surveillance across the work-life course is needed for those workers not currently covered. OSH systems should promote well-being at work, as well as improved risk prevention measures, to achieve sustainable work.

If effectively implemented, the European OSH legal framework, based on risk assessment, combining collective measures to protect all workers as the priority with work adapted to the individual worker and measures to protect vulnerable groups, is supportive of achieving sustainable work.

A sector-based approach may be most effective for small businesses and can be more easily targeted to their specific needs.

Many factors influence the sustainability of work, from both within and outside the workplace. The integration of policies and services is needed, including between OSH, employment, education, and public health and social security, both to promote sustainable work, in order to minimise early exit from employment, and to make provisions for those who, unavoidably, need to change occupations or exit the labour market.

The ageing workforce: implications for occupational safety and health – A research review – Executive summary

A comprehensive approach to age management would incorporate the fields of OSH, health promotion and human resources.

As with all areas of OSH policy, gender-related issues should be taken into account in relation to sustainable work.

Further research is needed, including in relation to demanding work and working sustainably after the age of 65 years. Sharing experiences of strategy development and the implementation of interventions should be promoted.

Older workers are valuable assets to organisations. Increased efforts are needed to counter stereotypical views and discrimination, and support organisations in prolonging the working lives of their employees.

The European Agency for Safety and Health at Work (EU-OSHA) contributes to making Europe a safer, healthier and more productive place to work. The Agency researches, develops, and distributes reliable, balanced, and impartial safety and health information and organises pan-European awareness raising campaigns. Set up by the European Union in 1994 and based in Bilbao, Spain, the Agency brings together representatives from the European Commission, Member State governments, employers' and workers' organisations, as well as leading experts in each of the EU Member States and beyond.

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