

## MANAGEMENT OF OCCUPATIONAL HEALTH AND SAFETY IN THE CONTEXT OF AN AGING WORKFORCE

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***Abstract:** In recent decades, the average age of workers has increased due to longer working lives and demographic changes. This poses specific challenges for the health, safety and productivity of older workers. This report examines the impact of an ageing workforce on working conditions, risk assessment and workplace safety management. It presents the positive and negative effects of older workers' engagement in work, as well as strategies for adapting the work environment, active working life policies and integrated health and safety measures. It highlights the importance of individual approach, social support and corporate responsibility in ensuring sustainable jobs and improving the quality of life of older workers.*

***Keywords:** aging workforce, safe working conditions, health, active working life, risk management, corporate social responsibility*

***JEL Codes:** J21, I31*

### INTRODUCTION

In recent decades, there has been a significant increase in the average age of the employed population in the European Union. According to 2023 data, the average age of the EU workforce is 55.5 years (EUROSTAT, 2023; visualisation.osha.europa.eu). This trend results from the extension of active working life and population ageing, which together contribute to a growing proportion of older employees. In Bulgaria, for example, the share of employed persons aged 55–64 is 60.1%, which is substantially higher than the EU average of 46.1% (Eurofound, 2025, *Keeping Older Workers in the Labour Force*, Publications Office of the European Union, Luxembourg, <https://www.eurofound.europa.eu/publications/-report/2023/keeping-older-workers-in-the-labour-force>).

The natural ageing process involves a gradual decline in physical abilities, cognitive functions, and adaptability. These changes inevitably affect an individual's capacity to perform work-related tasks and their overall well-being in the workplace. The concept of *active ageing* seeks to enable older employees to remain in the workforce for as long as they wish, under conditions that ensure good health, safety, and quality of life. In this context, employers are encouraged to adopt appropriate measures to guarantee safe and healthy working conditions. This includes adapting the work environment and processes to the specific needs of older workers in order to maintain their employability and prevent health and safety risks.

### DISCUSSION

In contemporary society, characterized by continuous technological advancement, rising living standards, and improved quality of healthcare and social services, an increasing number of people are reaching advanced age while maintaining the ability to lead active, healthy, dynamic, and productive lives.

Over the past few decades, humanity has undergone a profound demographic transformation, marked by a growing proportion of the population in older age groups and a declining share of younger people. This trend is directly associated with the ageing of the workforce. The ability to remain employed for a longer period, the established professional status

within an organization, the opportunity to maintain social connections, and financial necessity are among the most common factors motivating individuals to remain economically active later in life. The demographic situation also means that fewer young workers are entering the labour market. In addition, government policies in many countries that increase the statutory retirement age further contribute to the prolonged employment of older individuals. Older workers constitute a specific group whose characteristics require particular attention with regard to occupational health and safety. It is therefore essential that all stakeholders understand the physiological changes that accompany ageing - both physical and psychological - and their potential impact on the work environment in relation to health, safety, and the concept of sustainable employment. Work performed by older and elderly individuals must take into account the factors that directly affect work ability and productivity in these age groups.

Significant demographic changes are occurring worldwide. According to the World Health Organization (WHO, 2018), individuals aged 60 to 74 are classified as older adults, while those between 75 and 89 years are considered elderly. A remarkable increase in life expectancy - by approximately 30 years - has been recorded in Western European countries, the United States, Canada, Australia, New Zealand, and Japan. Population ageing has become a lasting global trend that profoundly affects societies, economies, and all spheres of life. The fact that people are now living considerably longer represents an important human achievement and a clear indicator of progress across multiple dimensions of development. It offers new opportunities for individuals to lead longer, more productive lives, enriched by accumulated experience and wisdom. At the same time, however, it presents substantial challenges - most notably, a growing demand for medical and social care services.

According to data from the European Agency for Safety and Health at Work (EU-OSHA), in 2023 the average age of the workforce in the European Union reached 55.5 years, and the share of employed persons aged 55–64 rose to 64% (EU-OSHA, 2023). In Bulgaria, this percentage is even higher: in 2023, 67.9% of individuals in this age group were employed (EU-OSHA, 2023). Raising employment levels and extending people's working lives have been key objectives of both national and European policies since the late 1990s. Employment among people aged 55–64 in the EU-27 increased from 40.5% in 2005 to 64% in 2023. In the same year, the average life expectancy across EU member states reached 81.5 years, and the employment rate among men remained higher than among women (81.1% compared to 72.5%). Countries with employment rates for people aged 55–64 above the EU average include Bulgaria (67.9%), Switzerland (75.8%), Cyprus (66.9%), the Czech Republic (71.6%),

Germany (74.1%), Denmark (75.3%), Estonia (76.6%), Finland (73.8%), Iceland (83.4%), Lithuania

(74.1%), Latvia (72.2%), the Netherlands (73.8%), Norway (75.9%), and Sweden (82.7%) (European Agency for Safety and Health at Work, 2025). These trends reflect the combined effects of extended working lives and population ageing, which contribute to the growing share of older workers in the labour market (OSHWiki, EU-OSHA, 2023). Nevertheless, older employees often face specific challenges related to occupational health and safety. According to EU-OSHA, older workers may be exposed to higher risks of occupational accidents and work-related diseases as a result of declining physical and cognitive capacities (EU-OSHA, 2023).

To ensure a safe and healthy working environment for older employees, employers must implement appropriate and effective measures. These include adapting workplaces and work processes, providing suitable training and ongoing support, and fostering a culture of safety and health within the organization.

According to EU-OSHA, effective management of occupational health and safety in the context of an ageing workforce requires an *integrated approach* that combines both organizational and individual strategies.

The opportunity to remain in employment, along with maintaining good health, allows older people to enjoy a higher quality of life for a longer period. Many EU member states have adopted policies aimed at extending the working lives of their citizens, increasing the official retirement age to 65 and above, while others are gradually moving in the same direction. Research indicates that individuals who continue working beyond retirement age demonstrate specific characteristics, such as higher levels of cognitive and physical health compared to their retired counterparts. Older workers also possess distinctive competencies - such as greater professional and life experience, reliability, and dedication to their work - which make them particularly well suited for certain positions. At the same time, they tend to experience more frequent and prolonged absences due to the exacerbation of chronic health conditions. Nevertheless, older employees generally report lower rates of occupational accidents - possibly due to their extensive experience or because they are more often employed in less hazardous roles (Cleo Varianou-Mikellidou et al., 2019). Many qualities, including wisdom, strategic thinking, holistic perception, and sound judgment, tend to improve with age. Professional experience and expertise also accumulate over time, providing a solid foundation for the positive contributions of older workers. However, certain functional capacities - primarily physical and sensory - decline as a natural consequence of ageing. These potential changes must be carefully considered during risk assessment, and work tasks and environments should be adjusted to enable older workers to perform safely and effectively. It is essential to recognize that older people are not a homogeneous group; significant individual differences exist in health status, functional capacity, and adaptability. Therefore, occupational health and safety strategies must be tailored to the specific needs and abilities of each individual.

While age is typically understood in chronological terms and expressed numerically, *ageing* is a complex, continuous, and highly individual process that manifests differently in each person. Various researchers have proposed numerous concepts and models to explain ageing and its manifestations across age groups; however, these theoretical perspectives are beyond the scope of the present study. An alternative approach to assessing age in relation to productivity and job suitability is the concept of *work ability*. This approach emphasizes the characteristics of human resources - such as physical, mental, and social capacities, health status, education, values, attitudes, and motivation - rather than merely focusing on functional decline. Occupational health and safety (OHS) play a vital role in promoting *active ageing* by supporting a longer and healthier working life. The overarching goal is to enable older employees to remain in the workforce for as long as possible while maintaining their safety and well-being. However, as the statutory retirement age increases, so too does workers' exposure to occupational hazards, thereby elevating the risk of developing work-related illnesses. Health problems tend to emerge or intensify with age and are inevitably present among older individuals; yet, they are often more pronounced and severe among those who remain engaged in active employment.

Age-related changes in functional capacity are not uniform, as they vary according to individual differences in lifestyle, nutrition, physical fitness, genetic predisposition to disease, educational level, as well as work and other environmental factors.

Older workers do not constitute a homogeneous group; there may be considerable differences among individuals of the same chronological age.

In many workplaces, older employees are valued by employers for their experience, problem-solving abilities, organizational loyalty, attention to safety, and higher levels of job satisfaction. At the same time, ageing is accompanied by increased vulnerability to environmental hazards, which is reflected in higher rates of fatal or severe injuries across many industries, as well as an elevated risk of certain non-fatal injuries (e.g., slips, trips, and falls) and a greater prevalence of chronic health conditions such as arthritis and diabetes, along with long-term disabilities. This paradox combining the positive and negative effects of prolonged

employment among older individuals creates both opportunities and challenges, particularly as the proportion of older people in the population continues to rise.

The review indicates that, to a large extent, the positive effects of employment among older individuals stem from the financial income it provides. Conversely, many of the negative effects associated with the lack of employment in later life are also related to financial insecurity. Therefore, it is essential that older people have the opportunity to remain in the workforce if they so wish and are able to do so, while ensuring that safe and healthy working conditions are guaranteed.

Table 1.

| Employment Status                     | Positive Effects   | Negative Effects   |
|---------------------------------------|--|--|
| <b>Employment (Working Life)</b>      | <ul style="list-style-type: none"> <li>• Opportunity to transfer knowledge and experience to younger colleagues.</li> <li>• Reduced need for self-assertion fosters greater commitment to work.</li> <li>• Financial independence.</li> <li>• Maintenance of social contacts.</li> <li>• Sense of purpose and personal significance.</li> <li>• Motivation to preserve good health for as long as possible.</li> </ul> | <ul style="list-style-type: none"> <li>• Limited free time.</li> <li>• Lower work productivity.</li> <li>• Greater likelihood of occupational accidents.</li> <li>• Increased fatigue.</li> <li>• Aggravation of chronic illnesses.</li> <li>• Less time for family and friends.</li> <li>• Prolonged exposure to harmful agents and occupational hazards.</li> <li>• Risk of developing occupational diseases.</li> </ul> |
| <b>Unemployment (Absence of Work)</b> | <ul style="list-style-type: none"> <li>• More personal free time.</li> <li>• Opportunity to pursue hobbies.</li> <li>• Ability to care for the household and assist family members.</li> <li>• Greater focus on personal health.</li> </ul>  | <ul style="list-style-type: none"> <li>• Reduced social interactions.</li> <li>• Heightened focus on health problems.</li> <li>• Increased risk of depression.</li> <li>• Lower income levels.</li> <li>• Reduced purchasing power for quality goods.</li> <li>• Inability to afford non-essential items.</li> </ul>   |

Working under safe and healthy conditions is one of the fundamental human rights, first established in the *Universal Declaration of Human Rights* adopted by the United Nations in 1948. The responsibility for creating a safe and healthy work environment within organizations lies primarily with employers, while governments establish regulatory frameworks and supervisory authorities impose sanctions in cases of non-compliance (European Agency for Safety and Health at Work, 2025). Directive 89/391/EEC and the *EU Strategic Framework on Health and Safety at Work 2021–2027* outline the key priorities for improving workers' safety and health in the context of rapid changes in the economy, demographics, and

working patterns. Governments develop laws, regulations, and guidelines, as well as comprehensive systems for enforcement and sanctions. However, it is ultimately the employers who bear the direct responsibility for safeguarding the health and lives of their employees. Unfortunately, this responsibility is often neglected by businesses in pursuit of short-term profits or reduced to the mere formal observance of legal requirements. In contrast, companies committed to *corporate social responsibility (CSR)* demonstrate increasing awareness and engagement with workplace health and safety issues. In the era of globalization and digitalization, society has become far more informed and demanding regarding these matters (Blagoicheva, 2019).

According to the *European Framework Directive 89/391/EEC* of 1989, employers have a legal obligation to ensure the safety and health of their employees. This includes the identification of hazards arising from work-related activities and the assessment of associated risks. The *EU Strategic Framework on Health and Safety at Work 2021–2027*, adopted by the European Commission, outlines the key priorities and actions required to improve the health and safety of workers, with particular attention to the rapid transformations taking place in the economy, demographics, and work patterns (European Agency for Safety and Health at Work, 2025). At the national level, Bulgaria has implemented the *Health and Safety at Work Act*, in force since 1997. According to this legislation, “healthy and safe working conditions are those that do not lead to occupational diseases or work-related accidents and that create the prerequisites for the full physical, mental, and social well-being of employees.” The Act further defines the organization and management of occupational health and safety activities in the Republic of Bulgaria, the role and status of the *National Council on Working Conditions*, and the establishment of the *Working Conditions Fund*, which finances projects and initiatives aimed at improving working environments. It also specifies mechanisms for monitoring compliance with the law and outlines administrative and penal responsibilities for violations (HSWA, 1997). At both European and national levels, numerous directives and regulations have been adopted to ensure healthy and safe working conditions for all individuals engaged in economic and occupational activities.

There is a complex relationship between ageing, work ability, and the Occupational Health and Safety Management System (OHSMS). Ageing brings about psychological and physical changes that may affect both job performance and the functioning of the OHSMS; however, significant individual differences exist among workers. These changes influence risk assessment processes, and employers must be aware of their presence and implications. Work-related factors that directly influence the continued participation of older employees include: the specific requirements of the job, opportunities for training and development, autonomy at work, recognition and respect, opportunities for mentoring, a supportive organizational climate, social support, flexible working hours, and fair remuneration. To retain employees from older age groups, organizations must adapt their policies and practices to meet their needs by enhancing factors that encourage participation and eliminating barriers that hinder it (Mego Kuan-Lun Chen & Elliroma Gardiner, 2019). According to the World Health Organization (WHO, 1993), individual factors that may affect one’s ability to work include age, health status, and lifestyle. The literature reveals a notable gap in integrating findings from medical research with those from occupational health and safety studies concerning the ageing workforce.

Regulations and principles governing human resource management within organizations are examined in the publication of B. Stoycheva (2024). S. Beloeva (2024) analyzes *controlled anxiety* as a stimulant for creativity and innovation among human resources. A study conducted by Brazilian researchers in 2024 presents the authors’ perspective on how strategies and initiatives aimed at attracting and retaining older workers can enable other organizations to enhance their preparedness for addressing the demographic shift toward an ageing Brazilian workforce. The findings contribute to a deeper understanding of the relationship between organizations and older employees (Aline Zanini Lima & Wilson Aparecido Costa de Amorim, 2024; Tiffany Amorim Silva et al., 2024). Furthermore, a publication by Portuguese researchers provides evidence of differing levels of motivation among various generations of employees within organizations. The authors identify practical approaches for retaining workers from diverse age groups and promoting intergenerational workforce stability.

Age-related physiological and psychological changes, along with working conditions, are the most indicative factors affecting the capacity of older individuals to remain in employment. Opportunities for creating conditions that support the extension of older adults’ active working life include:

Raising public awareness and sensitivity toward issues related to ageing and employment.

Providing counselling and mediation services to assist older individuals in finding suitable employment opportunities. Encouraging employers to emphasize the competitiveness, knowledge, experience, and skills possessed by older workers.

Adapting the work environment to meet the individual needs of older employees.

Introducing flexible and adjustable working hours.

Investing in training and requalification programs for specific categories of older workers.

Implementing social policies that promote active employment among older people and prevent discrimination based on age, gender, pay, or career development.

Promoting active and healthy lifestyles.

Encouraging regular medical examinations, treatment, and rehabilitation through financial support and additional leave days.

Introducing socially acceptable incentives for delayed retirement and for the transfer of knowledge and experience to younger or less experienced employees.

Developing models that facilitate a smooth transition from employment to retirement.

The adaptation of the labour market to population ageing and to the need to improve the quality of life of older people in the Republic of Bulgaria is being implemented through the objectives outlined in the *National Strategy for Demographic Development of the Republic of Bulgaria (2012–2030)*.

Ensuring safe and healthy working conditions within organizations provides both social and financial benefits for employees, while fostering the development of a long-term relationship between them and the company.

## **CONCLUSION**

The physiological changes associated with ageing, including reduced physical and cognitive capacity, necessitate workplace adaptation and effective risk management. Older workers demonstrate greater resilience to occupational accidents due to their experience, yet they are more susceptible to chronic illnesses and fatigue. Risk assessment should therefore take into account individual characteristics in order to ensure a safe and healthy working environment.

The ageing of the workforce necessitates a comprehensive approach to occupational health and safety management. The individual differences and specific competencies of older workers require the adaptation of the working environment, the implementation of flexible employment policies, and the introduction of targeted health and safety measures. Ensuring safe and healthy working conditions not only enhances the quality of life of older employees but also contributes to the sustainability of organizations and to the social and economic stability of society as a whole. Effective management of this process requires collaboration among employers, government institutions, and workers themselves, with the ultimate goal of creating an environment that enables individuals to remain productive and active for as long as possible, without compromising their health and safety (EU-OSHA, 2023; WHO, 2023).

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