

PSYCHOSOCIAL RISKS IN THE HEALTH AND SOCIAL CARE SECTOR

1. Introduction

The health and social care sector is one of the largest European sectors, employing around 11% of all workers in the EU (EU-OSHA, 2022a). The sector has grown steadily throughout the past decade and is likely to continue to grow in the near future, given the ageing of the EU population (Eurofound, 2020a; Smit et al., 2020). The Statistical Classification of Economic Activities in the European Community, Rev. 2 (Eurostat, 2008), divides the sector into human healthcare (e.g. hospital, medical and dental care activities), residential care (e.g. elderly, disabled, mental health and substance abuse (nursing) care activities in a residential setting), and social work activities (e.g. social work activities without accommodation for the elderly and disabled, child day-care activities). In this sector, more than three-quarters of the workforce are women and a significant proportion is employed in hospitals (EU-OSHA, 2022a; Eurofound, 2020a). Other workplaces are nursing and care homes, medical practices and patients' own homes. Occupations in this sector are very diverse, ranging from highly educated and well-paid doctors to low-wage nursing assistants.

This article concerns work-related psychosocial risk factors in relation to this group of workers. Psychosocial risks at work are factors linked to the way work is designed, organised and managed, as well as to the economic and social context of work (EU-OSHA, 2007). Examples are a high workload, third-party violence and harassment, irregular working hours, and high emotional job demands (e.g. dealing with pain and dying patients). These factors can lead to stress and serious deterioration of workers' mental and physical health. Consequently, these negative employee outcomes can result in production loss and increasing personnel costs due to absenteeism and personnel turnover at the organisational level (Niedhammer et al., 2021).

The health and social care sector is currently facing a number of challenges. First, due to the **ageing EU population**, the demand for (health) care activities is growing, whereas recruiting new staff is becoming increasingly challenging. Staff shortages are profoundly impacting health and social care organisations, leading to increased workload and financial expenditure due to stress-related employee absenteeism and turnover (Drennan & Ross, 2019; EU-OSHA, 2014a; Van den Heede et al., 2019; Yu et al., 2019). Also, the health and social care workforce itself is ageing. Attempts to extend working life of the general workforce as a solution for staff shortages (i.e. increases in official pension ages) imply extending health and social care workers' exposure to occupational risks. At the same time, in the coming years more employees (including health and social care workers) are likely to develop chronic health problems while still at work, as the prevalence of chronic health problems increases with age (EU-OSHA, 2016a).

Furthermore, as the sector is dominated by women, this brings about additional challenges in relation to occupational health and wellbeing. These include women being more impacted by having a dual role at work and at home (e.g. childcare, domestic work, informal care (EU-OSHA, 2012a)) and physiological changes that come with age (e.g. menopause) (EU-OSHA, 2016b).

Finally, the health and social care sector is recognised as a **high-risk sector** (European Commission, 2011), with workers being exposed to a very wide range of risks to their health and wellbeing. The main occupational risks are: biological risks, which include any form of exposure to biological agents such as blood-transmitted pathogens and infectious biological agents (e.g. COVID-19); chemical risks, including exposure to hazardous medicinal products (e.g. treatment of cancer) and disinfectants; physical risks, such as slips, trips and falls, exposure to noise and ionising radiation; ergonomic risks, for example lifting or static postures during patient handling; as well as psychosocial risks, which are at the core of the present article. Being exposed to physical risks is itself a risk factor for stress. For example, musculoskeletal disorders can contribute to stress and mental overload, and vice versa (EU-OSHA, 2021). This interaction is particularly relevant for the health and social care sector, given the high prevalence of both ergonomic and psychosocial risks.

There are a number of additional contextual factors that can contribute to the impact of psychosocial risks. For instance, due to the globalised economy and increased market competition, health and social care organisations have adopted new management modes to increase their profitability (ETUI, 2022). The introduction of national and organisational austerity measures (e.g. funding cuts and wage cuts for health and social care workers) and market-like mechanisms (e.g. merging healthcare organisations to accomplish volume growth) have, in turn, led to a deterioration of the working conditions in the health and social care sector. Furthermore, during the COVID-19 pandemic, many healthcare workers were required to continue their jobs on the frontline of the pandemic. As such, they were exposed to an additional and diverse set of hazards impacting their physical, psychological and social wellbeing (Franklin & Gkiouleka, 2021; Martinez et al., 2021). The pandemic also accelerated existing digitalisation trends on a global level, giving rise to changes in ways of working and exposure to psychosocial risk factors. For instance, telework and telemedicine are growing rapidly in healthcare work (e.g. Brault et al., 2023; Garavand et al., 2022) and new forms of aggression are emerging (i.e. cyberbullying (La Regina et al., 2021)).

All these characteristics of health and social care work combine to create demands and put pressure on workers. This discussion paper reviews existing literature on work-related psychosocial risk factors and effective psychosocial risk management in the health and social care sector. The literature included mainly focuses on Europe to ensure its relevance for EU working cultures and practices, although research from other parts of the world is included when necessary.

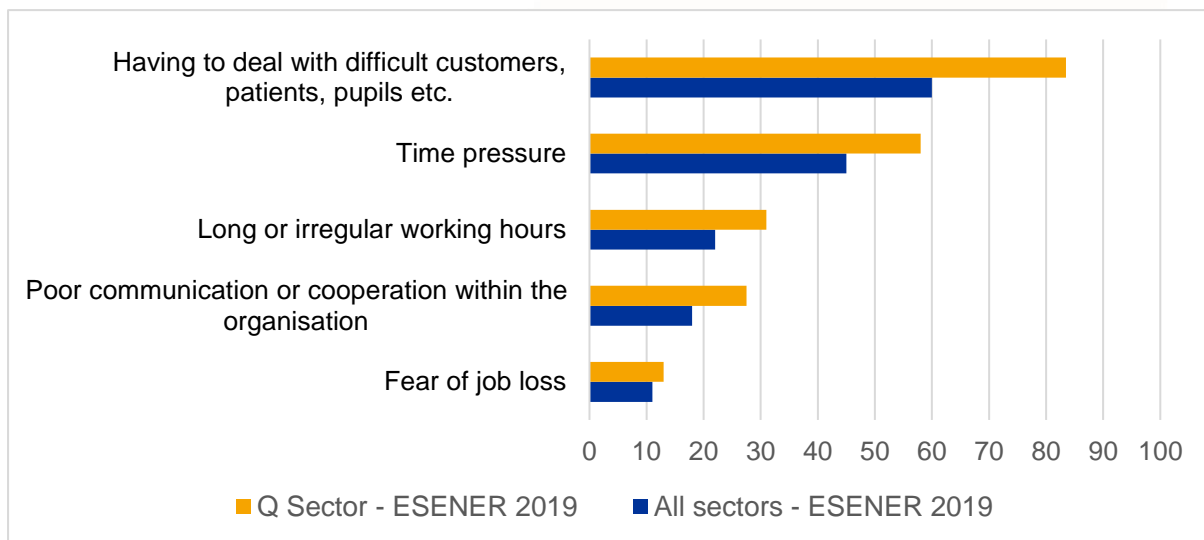
- In Chapter 2, the essence and prevalence of psychosocial risks in the health and social care sector are addressed, including the impact of psychosocial risks on the individual, organisational and societal levels. In addition, this chapter discusses psychosocial risks related to COVID-19 and the digitalisation of work.
- Chapter 3 addresses psychosocial risk management in the health and social care sector. The main focus of this chapter is on risk management at the enterprise level and specifically on measures that are taken in health and social care organisations. Furthermore, digital tools and drivers and barriers for psychosocial risk management are discussed.
- Chapter 4 presents specific examples of psychosocial risk management practices in the health and social care sector.

The article is finalised with some main conclusions on psychosocial risk factors and risk management in the health and social care sector.

2. Psychosocial risks in the health and social care sector

Employees in the health and social care sector are frequently exposed to a wide variety of psychosocial risk factors. In 2020, 58.5% of workers in this sector compared to 44.6% of all workers reported exposure to risk factors that can adversely affect their mental wellbeing, ranking highest among all sectors (Eurostat, 2021). According to the results of the Third European Survey of Enterprises on New and Emerging Risks (ESENER 2019), all the psychosocial risk factors surveyed were more commonly reported in the health and social care sector than in all sectors combined (see Figure 1 (EU-OSHA, 2022a)). One conclusion of EU-OSHA's Flash Barometer (OSH Pulse) survey carried out in early 2022 was that respondents working in services relating to health or social care appear to be most at risk of exposure to work-related psychosocial risks (EU-OSHA, 2022b (see also Appendix 1)). In addition, their reporting had increased since the previous survey in 2014, except fear of job loss. Psychosocial risk factors at work are often grouped into job demands (i.e. aspects of the job that require effort (Schaufeli et al., 2009)) and job resources (i.e. aspects of the job that can help cope with demands and achieve work goals (Schaufeli et al., 2009)). Employee health and wellbeing are at risk when workers are faced with *high* job demands and *insufficient* job resources to deal with these demands (Bakker & Demerouti, 2007; De Jonge & Dormann, 2003; Johnson & Hall, 1988; Karasek, 1979). A recent comparison between sectors shows that the combination of high demands and low resources (also called 'strained jobs') is highest in the health and social care sector (Eurofound, 2022). The next paragraphs address specific psychosocial risk factors that health and social care workers are typically exposed to, as well as their (potential) consequences. Finally, the impact of the COVID-19 pandemic and the global digitalisation transition on psychosocial risks and their consequences in the health and social care sector are discussed.

Figure 1: Reporting of psychosocial risk factors in the workplace, % establishments in the EU-27 in Q sector¹ and all sectors (ESENER 2019)



2.1 Psychosocial risks in the health and social care sector

High workload and time pressure

In the health and social care sector, the workload is generally high and increasing due to the growing needs of an ageing population and a global shortage of health and social care professionals (Drennan & Ross, 2019; EU-OSHA, 2014b; Van den Heede et al., 2019; Yu et al., 2019). As a consequence, patient–professional ratios are generally high (ETUI, 2022). In addition, health and social care workers often have to deal with time pressure. According to ESENER 2019 data, time pressure is the second most commonly reported psychosocial risk in the health and social care sector (58% (EU-OSHA, 2022a)). In response to the OSH Pulse survey (EU-OSHA, 2022b (see also Appendix 1)), those working in the health and social care sector were most likely to report exposure to severe time pressure of work overload (51.3% compared to 46% for all respondents). These results are in line with data of the European Working Conditions Telephone Survey (EWCTS), which show that working at high speed is highly prevalent in health and social care occupations (Eurofound, 2022).

Emotional demands

Health and social care work can usually be characterised as emotionally demanding (De Jonge et al., 2008; Eurofound 2020b, 2022). Emotional demands refer to the effort of workers that is required to regulate their emotions, including hiding their own feelings at work. Examples of such demands are dealing with pain and anxiety of patients, dealing with pressure from patients' relatives, and confrontation with severe and terminal illnesses, emergencies, or (other) traumatic events. Having to deal with difficult patients was the most commonly reported psychosocial risk in the health and social care sector according to ESENER 2019 data (85% (EU-OSHA, 2022a)) and caring for people at the end of their lives is often considered to be one of the more stressful aspects of nursing work (Hopkinson et al., 2005).

Cognitive demands

Health and social care work can also be cognitively demanding. Cognitive demands refer to those aspects of the job that require human information processing effort (De Jonge & Dormann, 2003). Examples are the use of (new) healthcare technologies (EU-OSHA, 2014b) and complex tasks that require full concentration (e.g. complex surgical procedures, decision-making under high time pressure). Furthermore, health and social care workers are often faced with the need to multitask (EU-OSHA, 2022a) and strict procedures that they have to follow. Especially in emergency departments, healthcare staff can experience fear of committing medical malpractice and the possible legal consequences (Stehman et al., 2019).

¹ Human health and social work activities.

Violence, harassment and bullying

Health and social care workers are also at risk of being exposed to third-party violence and harassment (i.e. caused by patients, patients' family members or other bystanders), triggered by frustration, anxiety, pain, psychiatric factors of patients or family members, and perceived lack of attention or dedication (EU-OSHA, 2014b; Eurofound, 2015). This risk is particularly present in situations in which health and social care workers are working alone or outside normal working hours, handling medication (e.g. unwillingness of patients to take prescribed medication), providing or withholding care activities, exercising authority, and working with people who are stressed, or emotionally or mentally unstable or under the influence of substances. Compared to other sectors, workers in the health and social care sector reported the highest prevalence of any type of intimidation (i.e. verbal abuse; unwanted sexual attention; and bullying, harassment or violence) in the recent EWCTS (Eurofound, 2022). The same survey shows that within this sector, women report being more exposed to intimidation and discrimination than men. Similarly, in the OSH Pulse survey, reported exposure to violence and verbal abuse from members of the public was highest for the sector (30% compared to 16% for all sectors) (EU-OSHA, 2022b). A relatively small-scale study conducted in five European countries showed that out of 260 nurses over 90% reported having experienced third-party violence in their professional career (Babiarczyk et al., 2019). Aside from third-party violence, health and social care workers also face the risk of being confronted with bullying and mobbing by co-workers (e.g. Dellasega, 2009; Zapf et al., 2011). Factors increasing the prevalence of this risk are high workloads, pressure placed on workers, high stress levels and understaffing (Pagnucci et al., 2022). According to the OSH Pulse survey, not only are health and social care workers most exposed to violence or abuse from the public, they are also most exposed to harassment and bullying from co-workers (10% compared to 7% for all sectors).

Long or irregular working hours

Since many health and social care services provide care 24 hours per day, shift work and working irregular hours is very common in the health and social care sector. According to ESENER 2019 data, almost a third of the workers in this sector report working long or irregular hours (EU-OSHA, 2022a), posing a significant threat to the work–life balance of the workers in the sector.

Precarious work

Over the past 30 years, health and social care organisations' attempts to increase their profitability have resulted in more precarious work conditions. Consequently, many health and social care workers are facing precarious contracting practices such as unpredictable incomes, working hours and work tasks. Especially low-skilled women and migrant workers experience job insecurity, since these groups are often unaware of their rights (ETUI, 2022).

Lack of organisational resources

Organisational resources that can help health and social care workers cope with high demands are generally lacking (EU-OSHA, 2014b). According to EWCTS data, having autonomy with respect to the speed of work is least reported by workers in the health and social care sector compared to other sectors (Eurofound, 2022). In the OSH Pulse survey, respondents from the sector were also most likely to report a lack of autonomy or influence over pace of work or work processes (23% compared to 18% for all sectors) (EU-OSHA 2022b). In addition, poor communication or cooperation within the organisation is a frequently reported psychosocial risk factor in this sector (28% (EU-OSHA, 2022a)). In the OSH Pulse survey, respondents from the sector were again most likely to report poor communication or cooperation within the organisation (32.5% compared to 26.5% for all sectors) (EU-OSHA, 2022b). Furthermore, some groups of health and social care personnel experience low recognition and rewards for their work (ETUI, 2022). Low resources can also further aggravate other psychosocial risks. For example, a lack of support due to understaffing can increase the risk of third-party violence towards community and hospital nurses (Khera et al., 2021; Lasater et al., 2021; Pagnucci et al., 2022).

2.3 Consequences of psychosocial risks

Individual level

At the individual level, exposure to psychosocial risk factors can lead to work stress and cause a variety of serious mental and physical health problems such as chronic fatigue, burnout, depression and

cardiovascular diseases (Niedhammer et al., 2021). According to EU-OSHA's OSH Pulse survey (2022b) (see also Appendix 1), 30% of respondents in the health and social care sector reported having experienced work-related stress, depression or anxiety in the last 12 months. In addition, in the OSH Pulse survey, 41% of respondents in the health and social care sector reported experiencing overall fatigue compared to a share of 37% for all sectors. Particularly, exposure to high emotional demands has been found to increase the risk of depressive disorders (Madsen et al., 2022) and other mental health problems (Eurofound, 2022). Workers generally experience stress when the demands of their job are excessive and greater than their capacity to cope with them (EU-OSHA, 2012b). For instance, nurses may experience the feeling of not being able to provide good care due to lack of time ('stress of conscience' (Heikkilä et al., 2022)). Workplace stress that is not successfully managed can lead to the development of burnout. Studies have shown that the prevalence of burnout is indeed high among nurses (Cañadas-De la Fuente, 2015; Woo et al., 2020) and physicians (De Hert, 2020).

In addition, by providing care to patients, health and social care professionals are likely to (indirectly or directly) be exposed to trauma, which can potentially lead to (symptomatic responses of) post-traumatic stress disorder (PTSD) (Cieslak et al., 2016; Qian, 2022). Different groups of health and social care professionals have been diagnosed with PTSD symptoms, including physicians, nurses, midwives, ambulance personnel and emergency physicians (Qian et al., 2022).

Furthermore, different studies have shown that psychosocial risk factors such as high job demands (combined with low control), demanding work schedules, and rotating and irregular shifts can also contribute to the development of musculoskeletal disorders (e.g. low back pain, shoulder pain, knee pain) for healthcare professionals (Bernal et al., 2015; Chang & Peng, 2021; Karanikas & Jani, 2022; Long et al., 2012). On top of that, an emerging body of research is indicating potential links between shift work and (breast) cancer (EU-OSHA, 2016b). In fact, the International Agency for Research on Cancer has classified shift work as a probable carcinogen (IARC, 2020) and a recent review by the United States National Toxicology Program concluded that there is 'high confidence' that persistent night shift work that results in circadian disruption can cause human cancer (NTP, 2021). Finally, next to the impact on workers' health, work stress also contributes to workers' intention to leave the healthcare sector (Halter et al., 2017; Weyman et al., 2013).

Organisational level

For health and social care organisations, workers' exposure to psychosocial risks can have a severe impact by causing productivity loss (Gates et al., 2011; Milliken et al., 2007), high levels of absenteeism (EU-OSHA, 2014a; Verhaeghe et al., 2003) and high turnover rates (EU-OSHA, 2014a; Halter et al., 2017). Consequently, the costs of psychosocial risks for such organisations are substantial. In general, over one-third of all sickness absence is (indirectly) caused by work stress (Hoel et al., 2001; NEA 2020). In addition, The Sainsbury Centre for Mental Health (2007) estimated that employers' costs of stress, anxiety and depression in Britain amount to €1,220 per employee per year. In the Netherlands, in 2020 the costs of sickness absence due to work stress were estimated at €11,000 per absent employee per year (TNO, 2022).

Societal level

Finally, at societal level work-related psychosocial risks can lead to increasing healthcare costs and straining national health services, thereby reducing economic productivity and negatively impacting a country's gross domestic product (EU-OSHA, 2014a). In 2002, the European Commission calculated the overall costs of work-related stress in the EU-15 at €20 billion a year, which have been increasing since then. The costs of work stress at national level range substantially from US \$221.13 million (Australia) to \$187 billion (United States) (Hassard et al., 2017). The majority of the costs is related to productivity losses (70-90%), whereas the remaining costs are related to healthcare and medical costs. However, as the above estimations are not specified per sector and are based on a wide range of work-related stress costs, it is difficult to get a full figure specifically for the healthcare sector.

2.4 Impact of COVID-19

The COVID-19 pandemic has had a tremendous global impact on the health and wellbeing of health and social care workers and their exposure to psychosocial risks. In response to the OSH Pulse survey, 59% of health and social care workers responded that COVID-19 had increased their work stress, the

highest share of all occupational groups and compared to a share of 44% for all EU workers responding to the survey (EU-OSHA, 2022b) (see also Appendix 1)).

According to several studies, the pandemic resulted in higher levels of anxiety, stress, depression, insomnia, burnout, sleep disturbances, psychological trauma and post-traumatic stress symptoms among both frontline and non-frontline health and social care workers, with female workers (particularly younger ones with children) and nurses reporting worst health outcomes (Franklin & Gkiouleka, 2021; Green et al., 2021; Salazar de Pablo et al., 2020; Sriharan et al., 2020). These negative effects are attributable to different psychosocial risk factors. One of the most important risk factors was the fear of getting infected themselves or transmitting the virus to family or friends. This fear was strengthened by inadequate or scarcity of protective equipment, leading to moral dilemmas (e.g. providing care to infected patients without having appropriate protective equipment). But even when available, the use of protective equipment (e.g. face masks) was associated with barriers in communication with patients (e.g. being unable to offer emotional support through facial expressions).

A report carried out in collaboration with the WHO (Abdul Rahim et al, 2022) found that that at least a quarter of health and care workers surveyed reported anxiety, depression and burnout symptoms: 23% to 46 % of health and care workers reported symptoms of anxiety during the COVID-19 pandemic and 20% to 37% experienced depressive symptoms and burnout among health and care workers during the pandemic ranged from 41% to 52% pooled estimates. Women, young people and parents of dependent children were found to be at greater risk of psychological distress. The higher risk of negative mental health outcomes among younger health workers is also a concern.

Another risk factor was the increasing level of emotional strain, caused by dealing with patients' feelings of distress, managing scarce resources, having to take difficult decisions, and being confronted with human suffering and patient death, as well as the loss of colleagues and the associated grief. Furthermore, the overall workload increased, due to higher numbers of patients combined with understaffing and sickness absence of colleagues. This resulted in long working hours, impacting the work-life balance of workers who were simultaneously faced with childcare and school closings. In certain cases, health and social care workers were also exposed to stigmatisation and violence as they were viewed as virus carriers. Some groups opposed to COVID-19 vaccines also targeted healthcare workers.

Although by now the COVID-19 restriction regimen has been relaxed, the impact of the pandemic is still present. Research shows that psychological distress from working during an infectious disease outbreak can persist for two to three years after the outbreak (Maunder et al., 2006; Preti et al., 2020; Wu et al., 2009). Moreover, new waves of COVID-19 and other communicable diseases may affect the health and social care sector in similar manners. In addition, health services are having to deal with the backlog of treatment interventions that were postponed during the pandemic, with the delay often having worsened patients' conditions. Taking into account the rising shortages of health and social care workers, it is imperative that in post-pandemic workplaces as well as during future large-scale viral outbreaks psychosocial risk management in the health and social care sector is genuinely prioritised.

2.5 Impact of digitalisation

Healthcare systems and work methods are rapidly transforming due to global digitalisation and development of healthcare information technology impacting the exposure of health and social care personnel to psychosocial risks. Whereas new technologies have many advantages (e.g. efficient healthcare provision, lightening the workload of healthcare workers), they can also create new risks among health and social care professionals (e.g. nurses (Califf et al., 2020)). For instance, new skills may be required, employee control may be reduced, and ethical questions (for instance related to the use of algorithms or AI) may arise. When technology is considered as unreliable and complex by its users and when constant changes to technologies lead to uncertainty about their use, technology-related stress reactions and feelings of insecurity and vulnerability among workers can occur. Specifically, they may fear losing their job to other workers who have a better understanding of technology. In addition, the use of (healthcare) information technology can lead to 'technostress' or 'techno-overload' (Lucena et al., 2021; Ragu-Nathan et al., 2008), a situation in which workers are forced by technology to work faster and longer. An example is nurses using their work breaks to enter required patient information into a system. In fact, data from the OSH Pulse survey (EU-OSHA, 2022b (see also Appendix 1 A3)) show that respondents working in the health and social care sector are more

inclined to say that the use of digital technologies increases their workload compared to the average of all sectors combined (38% versus 33%).

A specific technology-driven and impactful change in health and social care work methods is the rise of teleworking, accelerated by efforts to control the COVID-19 pandemic (Fang et al., 2022; Garavand et al., 2022). Telework is work performed by members of an organisation during their regular working hours away from their main workplace, using ICT (e.g. computer, email, mobile) to interact with others to perform their tasks. Examples of telework in health and social care are doctor–patient phone consultations or online staff meetings. Telework during the COVID-19 pandemic offered several benefits as well as disadvantages for health and social care workers in relation to their exposure to psychosocial risks. Important benefits of teleworking were protecting healthcare workers from (the fear of) infection, improving their work–life balance, reducing working hours, and providing the ability to provide quick and efficient care. On the other hand, teleworking during the pandemic was also associated with psychosocial risk factors such as lack of support, lack of interactions with colleagues, difficulties to (non-verbally) communicate with patients, social and professional isolation, and stress caused by technical issues or lack of technical knowledge. The hybrid model in which telework and working onsite are combined will most likely remain a standard in the health and social care sector, at least for some professionals (Oleksa-Marewska et al., 2022). As such, risks related to telework should also be taken into account in post-pandemic health and social care workplaces.

Another risk that has emerged with the advent of digitalisation is a new form of aggression, that is, cyberbullying. Cyberbullying can be classified as an intentional, aggressive act or acts over a period of time to inflict harm on the victim by utilising various electronic forms of expression (Van Hee et al., 2018). Examples are malicious or threatening text messages, tweets, emails or social media posts. Just like ordinary workplace bullying, cyberbullying can have detrimental effects on employee health and wellbeing. For instance, a study in the United Kingdom among trainee doctors (Farley et al., 2015) showed that almost half of the participants experienced acts of cyberbullying, and that these experiences were related to mental strain and job dissatisfaction.

3. Psychosocial risk management in the health and social care sector

3.1 National and intermediary level measures

Since the Framework Directive on safety and health of workers at work (89/391/EEC) was introduced in 1989, many initiatives have been undertaken to manage work-related psychosocial risks at international, national, regional/sectoral and enterprise levels. For instance, at European level the Framework Agreement on Work-Related Stress was signed by European social partners in 2004 to increase awareness and provide employers and workers with a framework for the identification, prevention and management of work-related stress. An example of a national initiative is the widespread media campaign ‘Hands off our caregivers’ that was introduced in 2012 in the Netherlands to raise awareness on the issue of violence against caregivers. An example at regional / sectoral level is that in Sweden, municipalities dealing with staff shortages directly linked to psychosocial risks are supported by the Trade Union Confederation by bringing in experts to investigate workplaces with high levels of sickness absence. In addition, the Swedish Municipal Workers’ Union (Kommunal) developed a work environment strategy covering different psychosocial risks, and provided guidelines and a toolbox, taking into account sector-specific issues (ETUI, 2022). Another example of a regional approach is the 2020-established Dutch ‘Transfer Point Care & Welfare’, a regional platform for organisations and job seekers with a focus on skills, in order to reduce staffing shortages and workload in the healthcare sector.

3.2 Psychosocial risk prevention at enterprise level

Compared to other sectors, organisations in the health and social care sector appear to be more likely to engage in psychosocial risk assessments and management. For instance, ESENER 2019 data show that 75% of health and social care organisations reported carrying out risks assessments versus 23% of organisations of all sectors combined (EU-OSHA, 2022a). Organisational psychosocial risk management can be divided into primary, secondary and tertiary risk prevention according to the preventive stage. At the primary prevention level, actions are taken to identify and address stressors at

the organisational level (e.g. workloads, lack of control over how you work or poor communication) or to promote mental health needs. At the secondary prevention level, individuals or groups are identified that need additional support and tools to help them deal more effectively with stress, for example, resilience training. At the tertiary prevention level, individuals who experience mental health problems are helped to deal with consequences of exposure to stress or to manage their symptoms, for example, access to psychological counselling. Based on the hierarchy of control principle, prevention should be directed firstly at the highest level (primary prevention), to reduce the source of the risk, although complementary actions at all three levels may be needed.

In the next paragraphs these types of psychosocial risk prevention at enterprise level in the health and social care sector are discussed. Subsequently, digital tools and drivers and barriers for psychosocial risk management are addressed.

Primary risk prevention

In European legislation on health and safety, there is an emphasis on primary risk prevention by means of interventions that target the organisation as source of the risks (EU-OSHA, 2012c). Organisation-directed interventions aim to improve employees' health and wellbeing and prevent work stress and burnout by changing the way work is designed, organised and managed (Nielsen, 2013). According to the best practice framework for psychosocial risk management (PRIMA-EF), this requires a continuous and stepwise process of systematic identification of work-related psychosocial risks, tailored intervention planning to target these risks, implementation of the action plans and evaluation (EU-OSHA, 2018; Leka et al., 2008; Leka et al., 2011). Examples of topics to cover in a risk assessment in healthcare organisations are shown in Box 1. Different studies have shown positive effects of these type of organisational-level approaches on employee health and wellbeing outcomes in (community) healthcare institutions (e.g. Havermans et al., 2018; Mikkelsen et al., 2000; Niks et al., 2018). An example can be found in Chapter 4.

Box 1. Examples of factors to cover in a risk assessment in healthcare organisations

Examples of factors to cover in a risk assessment in healthcare organisations:

- Stressors arising from working tasks (e.g. excessive rigorous qualitative and quantitative requirements; pressure of time or deadlines; information overload; contradictory work instructions; constant interruptions and disturbances)
- Stressors arising from work role (insufficient aptitude; too much responsibility; unclear task assignment; lack of support; lack of recognition)
- Stressors arising from physical environment (unfavourable environmental influences (e.g. cold, heat, draughts); toxic substances; complex technical systems; lack of aids)
- Stressors arising from social environment (poor workplace culture; poor communication; conflicts; constant changes; lack of information; inadequate consideration for home–work balance; lack of staff)
- Stressors arising from integration in workplace (being alone in the workplace; long distances)
- Stressors arising from personal factors (fear of tasks, blame or sanctions; fear of own mistakes; lack of social or communicative skills; inefficient styles of action; family conflicts)

Source: European Commission (2014)

Depending on the results of the risk assessment, tailored interventions in health and social care organisations could be targeted at *reducing high job demands*. Examples of such interventions are improving staffing levels during peak hours, reducing patient-to-staff ratios, rotating high and low emotionally demanding tasks, (further) specifying functions and responsibilities, or limiting night work for older workers who report difficulties (ETUI, 2022; EU-OSHA, 2009). To *increase job resources*, interventions could be aimed at ensuring recovery time or enhancing employee control and participation, for instance, through self-rostering practices (Barret & Holme, 2018; ETUI, 2022; EU-OSHA, 2009). An example of participatory working time scheduling can be found in Chapter 4. *Increased employee control* may be particularly beneficial to workers needing to accommodate care commitments outside work (EU-OSHA, 2016b). As there are usually multiple risk factors, a combination of interventions is usually needed that may be very diverse.

To target *third-party violence and aggression* in (health and social care) workplaces, interventions could include zero-tolerance policies on aggressive behaviour, information on necessary precautions, alarm systems, reduction of amount of money in cash, surveillance, violence incidence forms and security training (e.g. Abeyta & Welsh, 2022; EU-OSHA, 2009). Since the risk of third-party aggression is increased by understaffing, long waiting lists and high workload (Pagnucci et al., 2022), staffing interventions may decrease this risk as well. An example of interventions targeting workplace violence can be found in Chapter 4. Finally, examples of interventions to prevent *internal* violence and aggression (i.e. workplace harassment and bullying) are, among others, actions aimed at recognising and addressing the problem, zero-tolerance policies (Edmonson & Zelonka, 2019) and investing in empowerment of workers (Moura et al., 2020).

Secondary risk prevention

Fully removing the source of the risks may be challenging and sometimes impossible due to the nature of work (e.g. dealing with aggressive patients or bystanders or distressed and dying patients). That is why secondary risk prevention may be necessary too. This type of prevention focuses on identifying individuals or groups that need additional support and tools to manage (effects of) psychosocial risks or deal more efficiently with stress. This can be done through measures aimed at either increasing their skills to reduce existing risks or their capability to buffer negative mental health effects of existing risks. Examples of measures aimed at increasing skills are training programmes on time management, conflict management, and responding to violence, harassment and bullying. Examples of measures that help health and social care professionals deal with (emotional) demands or stress more effectively are different types of resilience training (Johnson et al., 2015; Rogers et al., 2016), daily mood measurements and mood broadcasts promoting positive affirmation (Cheng et al., 2020), self-feedback training, peer-group support, receptive music therapy (Bertuzzi et al., 2021) and mindfulness-based interventions (Burton et al., 2017; Kriakous et al., 2021). A meta-analysis of Ruotsalainen and Verbeek (2008) found evidence for small reductions of work stress levels among healthcare workers for this type of person-directed interventions. All the same, it is generally recommended to combine such measures with primary preventive measures (e.g. Somani et al., 2021). An example of an intervention aimed at healthcare workers' resilience can be found in Chapter 4.

Tertiary risk prevention

A situation in which workers have already been harmed by psychosocial risks calls for tertiary risk prevention. At the tertiary prevention level, individuals who experience mental health problems are helped to deal with consequences of exposure to stress or to manage their symptoms. This type of prevention focuses on limiting the negative consequences of psychosocial risks. Examples are counselling or therapy for workers suffering from psychosocial complaints, or return-to-work or rehabilitation programmes for workers who are absent from work because of ill health, to facilitate their reintegration process (Franche et al., 2005), or treatments for PTSD (Liyanaage et al., 2022). An example of interventions targeting PTSD among healthcare professionals can be found in Chapter 4.

An integrated approach to a healthy workforce and service provision

It is suggested that the interconnections between the challenges of workforce health and the challenges for achieving safe and high-quality patient care should be addressed together to create viable and effective solutions in health care. In doing so, three main pillars need to be addressed: worker health and wellbeing, organisational practice, and quality care. The premise is that interventions addressing, and therefore benefiting, all three areas are more likely to be successful – a so called 'healthy health care' approach. (EU-OSHA (2023).

3.3 Digital tools for psychosocial risk management

As discussed in Chapter 2, digitalisation does not only create new risks for health and social care workers, it can also contribute to effective psychosocial risk management. First, new technologies may be used to lighten the workload of health and social care workers (e.g. nurses (Califf et al., 2020)) or help them deal with cognitively demanding tasks. For instance, digital platforms can facilitate drug adherence, speed up diagnosis, transfer medical information and provide healthcare workers with advice (Addotey et al., 2023). Furthermore, digital interventions designed to increase workers' resilience could potentially support health and social care workers who experience prolonged work stress (WHO, 2022). Indeed, various mobile health applications (mHealth Apps) are being developed to help a wide

range of users (including healthcare workers) deal with psychosocial health issues, such as stress, anxiety and burnout (Yingta et al., 2021). These apps offer, for instance, self-monitoring of workload and stress levels, in-app counselling and peer support. Despite the potential of such apps, post-download uptake by healthcare workers remains low, due to a misfit with users' backgrounds, work contexts and dynamics (Yingta et al., 2021). For these apps to be successful, non-intrusiveness and personalisation seem to be very important indicators (Yoon et al., 2021).

3.4 Drivers and barriers for psychosocial risk management

Despite the availability of interventions and tools for psychosocial risk management, it appears that dealing with psychosocial risks in practice is generally more difficult than dealing with other types of risks for occupational safety and health (EU-OSHA, 2016c; ILO, 2016). Regardless of the sector, prerequisites that are highly important for the success of organisational psychosocial risk management interventions are, among others, commitment from (top) management to manage psychosocial risks, employee participation in selecting actions and managing risks, and clear and active communication throughout the process of psychosocial risk management (Bourbonnais et al., 2006; Dahl-Jørgensen & Saksvik, 2005; ISO 45003:2021). Another important predictor for psychosocial risk management is the social dialogue (Iavicoli et al., 2011) and the awareness and perception of different stakeholders regarding psychosocial risks. Houtman et al. (2020) showed that agreement between management and employee representatives regarding their awareness and perception of psychosocial risks appears an important predictor of psychosocial risk management.

Conversely, the main barriers for psychosocial risk management include a lack of stakeholder awareness or commitment (e.g. management, human resources professionals, employees), perceived sensitivity of psychosocial issues (e.g. stigma attached to mental health), and the perception of stakeholders that psychosocial risk management is complex, is expensive and requires high-level expertise (EU-OSHA, 2012d, 2018). Although ESENER 2019 data show that such barriers for psychosocial risk management are less frequently reported in the health and social care sector than in all sectors combined (EU-OSHA, 2022a), they are still highly present and, thus, relevant to address. For instance, reluctance to talk openly about psychosocial risks is reported by 51% of the respondents in the health and social care sector, a lack of expertise or specialist support by 34%, a lack of awareness among staff is reported by 33% and a lack of awareness among management is reported by 23%. Regarding reported major difficulties for addressing occupational safety and health in general, lack of staff time and lack of money were both more frequently reported in the sector than in all sectors combined (41% compared to 33% and 26% compared to 19%, respectively, where lack of staff time in the sector showed a 12% increase from 2014 to 2019). Having enough time is particularly important for addressing psychosocial risk factors effectively.

In short, for adequate psychosocial risk management in the health and social care sector it is important not only to focus on measures directly targeting psychosocial risks but also on creating organisational conditions for such measures to be effective.

4. Examples of psychosocial risk management interventions in the health and social care sector

When considering interventions, it is important to remember that usually a range of measures will be needed, taking into account primary, secondary and tertiary level measures. The examples of interventions given below in many cases have not been independently evaluated, which is often the case with workplace interventions. However, they are presented to illustrate the types of interventions that could be considered. Any interventions must be adapted to the specific work context.

4.1 A participatory, work stress intervention method focusing on cognitive, emotional and physical demands, job resources and recovery from work

The *DISCOVERY* method is a theory-based, participatory, stepwise organisational-level approach to improve employee health, wellbeing and performance (Niks et al., 2013). The first step entails a systematic assessment of psychosocial risk factors using the Demand-Induced Strain Compensation

Recovery (DISC-R) model (De Jonge & Dormann, 2003; De Jonge et al., 2012) as a theoretical framework. This job stress model focuses specifically on cognitive, emotional and physical dimensions of job demands, job resources and recovery from work. As health and social care work often entails a combination of these three dimensions, the model seems particularly suitable for the health and social care sector. The main theoretical principle is that *specific* types of job demands should be balanced by *matching* types of job resources and recovery from work. For instance, in a situation of high emotional demands (e.g. dealing with dying patients), it would be particularly important that workers have access to sufficient emotional resources (e.g. emotional support from colleagues) and that they can recover emotionally. In the second step of the method, suitable workplace interventions are developed and tailored in participation with the target group, based on outcomes of the DISC-R risk assessment. That is, both management and employees are actively involved in the process of interpreting the assessment results and identifying and selecting appropriate measures for improving the balance between specific job demands, job resources and recovery from work. In the third step, the selected workplace interventions are implemented and evaluated.

In a longitudinal intervention study (Niks, 2015; Niks et al., 2018), the *DISCOVERY* method was tested in a nursing department, a laboratory department and an emergency room department of a Dutch general hospital. Interventions were targeted at, for instance, increasing recovery during work, improving team processes with respect to dealing with peak workloads, and enhancing employees' capacity to improve their own job resources and recovery from work. The study showed positive results for the intervention groups in terms of specific psychosocial work characteristics and health and wellbeing outcomes, compared to organisational units that did not actively participate in the study.

4.2 Decreasing workplace violence in hospitals

An example of a specific intervention to reduce hospital violence was implemented and tested within a multi-site hospital in the mid-west United States (Arnetz et al., 2017). The intervention comprised of a worksite visit (walkthrough) during which a researcher and three to four stakeholder representatives met with unit supervisors. Supervisors were presented with a summary of the last three years of data on workplace violence (e.g. overall rates per year and injury costs) for their unit in comparison to the entire hospital. Based on these data, supervisors were asked to develop an action plan for reducing workplace violence, using a checklist of possible risk factors and evidence-based strategies for violence reduction. The intervention was evaluated in a randomised-controlled trial with 21 intervention units and 20 control units across seven hospitals. Six months after the intervention, incident rate ratios of violent events in intervention units were significantly lower in comparison to control units. Two years after the intervention, the risk for violence-related injury in intervention units was significantly lower in comparison to control units. The results of the study suggest that the intervention was effective in decreasing the risk of workplace violence in hospital settings.

Another example of an intervention on workplace violence is the so-called Yellow and Red Card policy. This policy was introduced in several hospitals in the United Kingdom to decrease healthcare workers' exposure to abusive and violent patient behaviour (e.g. Birmingham and Solihull Mental Health Foundation NHS Trust, 2020). According to this policy, unruly patients will receive a formal warning. If the unacceptable behaviour (i.e. verbal rudeness or mild abusiveness) does not improve, patients will be given a 'yellow card'. When the patient fails to comply with terms of the yellow card procedure and in situations where the patient's behaviour has been of an extreme or serious nature, a 'red card' may be invoked, which implies that they will be sent home without (further) treatment.

4.3 Participatory working time scheduling software in hospitals

Lacking control over hours and shifts to be worked is another psychosocial risk factor. For example, it restricts a worker's ability to organise their life outside work. A potentially effective intervention here is digital participatory working time scheduling (Karhula et al., 2017; Turunen et al., 2020; Turunen et al., 2022). In more traditional approaches to shift scheduling, a shift planner (e.g. head nurse) typically generates a plan for a certain period and individual employees have little opportunities to influence the scheduling of their shifts. In contrast, the use of participatory working time scheduling software provides the opportunity for both. This enables employees to have more control over their working hour characteristics, which is associated with better health and wellbeing (Nätti et al., 2015; Tucker et al., 2015).

Study results on effects of the participatory scheduling approach on health and wellbeing of hospital employees are still somewhat inconclusive though. A study among hospital employees of three districts in the Finnish public sector (Turunen et al., 2020) showed a decrease in sickness absence in nursing wards using the participatory scheduling compared to wards using traditional scheduling methods, and the effect became stronger as the wards spent more time on using the scheduling software (Turunen et al., 2020). Another study found that users of the participatory working time software, compared to users of the traditional version, reported more perceived control over shift scheduling and less excessive sleepiness related to evening shifts (Karhula et al., 2017). Nevertheless, the group using the participatory scheduling software also showed a higher proportion of long work shifts. Another recent study among hospital employees in Finland also showed an increase of compressed working hours and longer shifts after introduction of the participatory working time scheduling software, as well as a delayed increase in sickness absence (Turunen et al., 2022). As such, a potential downside of this intervention is that it may increase irregularity of working hours, which in turn could have negative effects on workers' health and wellbeing. To reduce these negative effects, participatory shift scheduling could be combined with a shift evaluation tool that offers feedback on and recommendations for the ergonomics of shift schedules (Turunen et al., 2022).

4.4 Improving resilience of healthcare professionals

There are a variety of interventions available that are aimed at improving healthcare professionals' resilience. For instance, Johnson et al. (2015) studied the effects of a mindfulness-based programme on depressive symptoms of healthcare professionals. The resilience training comprised of an eight-week group-based mindfulness-based programme combining elements of exercise, nutrition and mindfulness meditation. The aim of the programme was to support healthcare professionals with depressive symptoms in discovering and developing self-care skills and to increase personal capacities to cope with physical symptoms, difficult emotional situations and chronic mental conditions. Results of their wait-list comparison pilot study showed a decrease in depression, stress, trait anxiety and presenteeism.

A systematic review study on web-based interventions to enhance resilience in healthcare professionals found positive effects as well (Henshall et al., 2022). The review included eight studies on web-based resilience interventions with a variety of web-based formats and therapeutic approaches over variable time frames. All included studies found enhanced levels of resilience after the implementation of web-based interventions.

4.5 Reducing PTSD symptoms of healthcare professionals

Several studies have evaluated the effects of interventions aimed at reducing PTSD symptoms among healthcare professionals. A recent review identified eight studies using a variety of intervention strategies to reduce PTSD symptoms among healthcare professionals (Qian et al., 2022). Cognitive behavioural therapy was used as an intervention strategy for psychoeducation, emotion regulation training, exposure therapy and event-triggered counselling. Mindfulness-based interventions used relaxation exercises through (deep) breathing, stretching, or imagination and mindfulness exercises (e.g. meditation, body scans). Some interventions used writing therapy and written exposure, and other studies provided access of a psychological assessment from a clinical psychologist. In general, the interventions consisted of three components: 1) providing trauma-related knowledge to help healthcare professionals understand trauma reaction and management, 2) providing emotion regulation and relaxation training, and 3) providing psychological support from peers or psychologists. The number of intervention sessions varied from five to sixteen and the duration of the intervention ranged from two weeks to six months. All included studies showed positive effects in reducing PTSD symptoms.

5. Conclusions

Work-related psychosocial risks pose a threat to the health and wellbeing of the health and social care workforce. This paper reviewed existing literature and data reports on work-related psychosocial risk factors and risk management in the health and social care sector. The main conclusions are:

- The prevalence of work-related psychosocial risks and work-related mental health complaints (i.e. stress, depression or anxiety) are highest in the health and social care sector compared to other sectors (EU-OSHA, 2022a, 2022b).
- Typical psychosocial risks in the health and social care sector are high workloads, time pressure, emotional demands (e.g. exposure to traumatic events, confrontation with pain and dying persons), cognitive demands (e.g. decision-making under pressure), third-party violence, internal bullying, long working hours and shift work, often combined with a lack of time, skills, control over work and social support due to understaffing.
- In general, exposure to psychosocial risks can have severe consequences at individual (e.g. mental and physical health problems, intention to leave), organisational (e.g. productivity loss, absenteeism, turnover) and societal (e.g. healthcare costs, straining national health services) levels.
- The COVID-19 pandemic has had a major negative impact on the health and wellbeing of health and social care workers, due to an increase in psychosocial risk factors (e.g. fear of getting infected, increase of emotional strain, increase of workload).
- Increasing digitalisation in the health and social care sector creates new psychosocial risks for health and social care workers (e.g. lack of skills, lack of control, 'techno-overload'). The increase of telework offers benefits (e.g. reducing working hours, improving work–life balance), but also risks (e.g. lack of support, lack of interactions with colleagues) for health and social care workers. Another risk that has emerged due to digitalisation is cyberbullying.
- Initiatives to manage psychosocial risks in the health and social care sector can be taken at European (e.g. legislation), national (e.g. campaigns), regional/sectoral (e.g. support from trade unions) and enterprise levels (e.g. workplace interventions).
- At enterprise level, interventions should mainly be targeted at the organisational source of the risks (e.g. improving staffing levels, reducing patient-to-staff ratios, limiting night work, ensuring recovery time). When eliminating risks is not possible, interventions can also focus on providing tools to deal with psychosocial risks (e.g. training on time management or conflict management, or mindfulness-based interventions). When workers have already been harmed by psychosocial risks, interventions are needed that limit the negative effects (e.g. counselling or rehabilitation programmes). Multiple psychosocial risk factors are present in health and social care work, meaning that multi-factor, multi-level interventions are needed.
- Digitalisation does not only create new risks for health and social care workers, it can also contribute to effective psychosocial risk management. New technologies may support health and social care workers in lightening the workload or dealing with psychosocial health issues, such as stress, anxiety and burnout.
- Compared to other sectors, organisations in the health and social care sector appear to be more likely to engage in psychosocial risk management (EU-OSHA, 2022a). In addition, barriers for psychosocial risk management (e.g. reluctance to talk openly about these issues, lack of expertise, lack of awareness) are less often reported in the health and social care sector compared to other sectors (EU-OSHA, 2022a).
- For adequate psychosocial risk management in the health and social care sector it is important to (continuously) assess and monitor the prevalence and consequences of existing as well as new and emerging (technology-driven) risks. Suitable measures to target these risks should be identified or developed, implemented and evaluated.

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Appendix 1 OSH Pulse 2022 results for the health and social care sector compared to all sectors

In the OSH Pulse survey (EU-OSHA 2022b) respondents were asked whether certain health problems were caused or made worse by work and whether they were exposed to certain risk factors. They were also asked about initiatives by employers, stigma around mental health and the impact of COVID 19. The results for the health and social care sector compared to the share for all sectors are given below. See also <https://osha.europa.eu/en/facts-and-figures/osh-pulse-occupational-safety-and-health-post-pandemic-workplaces>).

A1: Health and social care workers' health problems caused or made worse by work compared to all sectors (In the last 12 months have you experienced any of the following health problems caused or made worse by work?):

- 41% overall fatigue (vs. 37% for all sectors)
- 35% headaches, eyestrain (vs. 34% for all sectors)
- 34% bone, joint or muscle problems or pain (vs. 30% for all sectors)
- 30% stress, depression or anxiety (vs. 27% all sectors)
- 28% infectious diseases (including covid-19) (vs. 21% for all sectors)
- 7% another health problem related to your work (vs. 6% for all sectors)
- 6% accident or injuries (vs. 5% for all sectors)

A2: Exposure to psychosocial risk factors in the health and social care workers sector compared to all sectors (Would you say that you are exposed to the following risk factors?):

- 51% severe time pressure or overload of work (vs. 46% for all sectors)
- 30% violence or verbal abuse from customers, patients, pupils, etc. (vs. 16% for all sectors)
- 10% harassment or bullying (vs. 7% for all sectors)
- 32% poor communication or cooperation within the organization (vs. 26% for all sectors)
- 22% lack of autonomy, or lack of influence over the work-pace or work processes (vs. 18% for all sectors)
- 35% something else that is causing stress (vs. 29% for all sectors)

A3 Exposure to psychosocial risk factors related to digitalisation in the health and social care workers sector compared to all sectors (would you say that the use of digital technologies in your workplace...)

- 37% increase their workload (vs. 33% for all sectors)
- 20% reduce their autonomy at work (vs. 19% for all sectors)
- 40% increase surveillance of their work (vs. 37% for all sectors)

A4 Health and social care workers' stigma regarding mental health in the workplace compared to other sectors

- 59% disclosing a mental health condition would have a negative impact on my career (vs. 50% for all sectors)
- 68% would feel comfortable speaking to my manager or supervisor (vs. 59% for all sectors)

A5 Impact of COVID-19 on mental health and social workers compared to other sectors

- 53% agree that the COVID-19 pandemic has made it easier to talk about stress and mental health at work (vs. 50% for all sectors)
- 59% disclose that work stress has increased as a result of the COVID-19 (vs. 44% for all sectors)

A6 Health and social care sector initiatives to address stress and mental health issues in the workplace compared to all sectors

- 62% workplaces have awareness raising or other activities to provide information on health and safety (vs. 59% for all sectors)
- 32% have access to counselling or psychological support (vs. 49% for all sectors)
- 51% give information and training on well-being and coping with stress (vs. 42% for all sectors)
- 51% consult workers about stressful aspects of work (vs. 43% for all sectors) 32% have other measures to address stress at work (vs. 26% for all sectors)