PSYR-IR

Conceptual and empirical working paper

Deliverable 2.1

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August 2024

Co-funded by the European Union

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August 2024

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Please refer to this publication as follows:
Heylen, J.; Szekér, L.; Lenaerts, K.; Ivask, M.; Järvis, M.; Hrenov, G.; & Reinhold, K. (2024) Conceptual and empirical working paper. Deliverable 2.1. PSYR-IR – The opportunities for industrial relations to prevent and manage psychosocial risks in post-pandemic workplaces.

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This publication is part of PSYR-IR – The opportunities for industrial relations to prevent and manage psycho-social risks in post-pandemic workplaces, which has received funding by the European Commission, DG Employment, Social Affairs, and Inclusion, within the EU Programme for Employment and Social Innovation (EaSI).

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PSYR-IR

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1. Introduction

Psychosocial risks (PSR) in the workplace represent a critical aspect of occupational health and safety (OSH). These risks are defined by Eurofound (2022, p. 3) as *"those aspects of the design and management of work, and its social and organisational context that have the potential for causing psychological or physical harm."* Psychosocial risks encompass a wide range of factors, including for example high work intensity, unsocial working hours, low job control, low social support, adverse social behaviours, role conflict, and risks related to the organisational culture. These risks can significantly impact employee health and wellbeing.

Given the importance of psychosocial risks in shaping the work environment, this report aims to provide a comprehensive literature review of the current scientific knowledge related to PSR and their effects on employees' health and wellbeing. Specifically, the review will explore three key areas: (i) the physical, psychological and social job characteristics that affect work-related stress, employee wellbeing and subsequent outcomes for employees and organisations, drawing from established models such as the Job Demands-Resources model, Job Demand-Control model, and Effort-Reward Imbalance model; (ii) the evolution of these characteristics in recent years due to the impact of the COVID-19 pandemic; and (iii) how differences in work design (e.g. structure, content, configuration of workers' tasks and roles) might influence the balance between job demands and resources at the workplace. Besides literature review, this report provides empirical analyses based on existing representative micro-level surveys, including the European Working Conditions Survey 2015 and 2021, the Eurofound e-survey on living, working and COVID-19 from 2020, 2021 and 2022, and the European Survey of Enterprises on New and Emerging Risks 2019, investigating the impact of COVID-19 and identifying group at-risk for high PSR. Special attention is directed towards frontline healthcare workers and production workers, where psychosocial risks specific to these groups are identified.

The remainder of this report is organised as follows. In Chapter 2, the conceptual framework for studying psychosocial risks in the work context and their subsequent outcomes for employees and organisations is presented. This chapter examines leading theories and models, integrating them into the overarching theoretical framework of the Job Demands-Resources Model (Bakker & Demerouti, 2007). The third chapter offers an extensive literature review on the state-of-the-art of the scientific knowledge surrounding psychosocial risks and their impact on employees' health and wellbeing. The chapter provides detailed definitions for each identified psychosocial risk and systematically maps their relationships with various aspects of employee health and wellbeing. The fourth chapter investigates the prevalence and/or evolution of the psychosocial risks identified in the first chapters across occupations, sectors, and socio-demographic variables (e.g., gender, age), accounting for the potential impact of the COVID-19 pandemic. The analysis also focuses on explaining differences based on group-specific risk factors arising from variations in working and employment conditions.

2. Conceptual framework

This chapter discusses the conceptual framework on occupational safety and health (OSH), and more specifically on psychosocial risks, that is guiding our analyses. To this end, first, an overview of leading theories and models is presented linking the work context and workers' wellbeing and health outcomes. The chapter then introduces the Job Demands-Resources (JD-R) model, and it explains how the former models can be related or integrated within the JD-R model. Lastly, the chapter presents the conceptual model used this study and details how PSR are conceptualised.

2.1 Brief overview of leading theories and models

Leading models from psychology, sociology, organisational studies, and related disciplines, such as the Job Demand-Control Model of Karasek (1979), have tried to fully explain the relationship between characteristics of the work context and health and wellbeing outcomes for an employee. In light of the broad definition of psychosocial risks used in this study (see above), many work characteristics have the potential to be a psychosocial risk. As these models discuss the relations between work characteristics and workers' health and wellbeing outcomes, they can help to both identify potential psychosocial risk and to better understand why and how these risks threaten the health and wellbeing of workers. In general, two groups of models can be distinguished: (i) models where wellbeing results from the balance between beneficial and detrimental work characteristics, and (ii) models that explain the influence of broader characteristics, like organisational or personal characteristics, on both work characteristics and wellbeing. These models are further elaborated on below.

2.1.1 Balance models

The balance models encompass, among others, the **Job Demand-Control Model** (DCM) of Karasek (1979), **Effort-Reward Imbalance Model** (ERI) of Siegrist (1996), the **Conservation of Resources Theory** (COR) of Hobfoll (1989), and the **Transactional Model of Stress and Coping** (TSC) of Lazarus & Folkman (1984). Each of these models is briefly explained below.

2.1.1.1 Job Demand-Control Model (DCM)

The Job Demand-Control Model refers to job demand as psychological stressors that workers are confronted with, such as work pressure, tight deadlines, high work speed, or mentally demanding work (Karasek,1979). Job control refers to the discretion or decision latitude that workers have regarding the timing and methods of their tasks (e.g. job autonomy) (Huth & Chung-Yan, 2022). The DCM states that the combination of job demand and job control in a job will affect the amount of strain and stress a worker experiences. The DMC assumes that job strain (an antecedent of stress) occurs in a situation with a combination of high job demand and low job control, which are called high-strain jobs. High-strain jobs are seen as detrimental for workers health and wellbeing.

2.1.1.2 Effort-Reward Imbalance Model (ERI)

The notion of reciprocity is central in the Effort-Reward Imbalance Model: employees deliver the efforts and expect in exchange rewards provided by their employer (Siegrist, 1996; 2016). There are three central concepts in the ERI model: (i) extrinsic demands (demands, obligations), (ii) overcommitment (consciously or unconsciously striving toward high achievement, beyond the expected achievement), and (iii) rewards (money, control). An imbalance or lack of reciprocity between extrinsic demands, overcommitment, and rewards received may lead to adverse health and wellbeing outcomes.

2.1.1.3 Conservation of Resources Theory (COR)

The Conservation of Resources Theory postulates that the resources of employees are limited, and their potential or actual loss increases stress and reduces performance. People strive to retain and protect their resources when confronted with stress. Additionally, when not confronted with stress, people strive to build, invest in, and enrich themselves with new resources. Resources are not distributed equally: those without a pool of resources are more prone for further loss ('loss spirals'), whilst those with sufficient resources are more likely to invest in new resources ('gain spirals') (Hobfoll, 1989; 2001).

2.1.1.4 Transactional Model of Stress and Coping (TMSC)

The Transactional Model of Stress and Coping depicts three types of appraisals of individuals on events in their work environment: primary, secondary, and reappraisal. Primary appraisal concerns the content: an event can be appraised as irrelevant, positive, or stressful for the individual's resources. When an event is appraised as stressful, a secondary appraisal takes place, appraising it as either controllable or uncontrollable. Subsequently, individuals cope with such events respectively problem-focused (change or adjust their harmful situation) or emotion-focused (change the way individuals perceive their harmful situation). The reappraisal refers to a change in primary or secondary appraisal due to changes in the environment or the individuals' responses. TMSC states that the events in the work environment cause stress (and consequently detrimental influence on health and wellbeing) when the events are appraised as stressful or exceeding the coping resources (Lazarus & Folkman, 1984).

2.1.2 Models looking at the relations with personal or organisational characteristics

While the models discussed above focus on the characteristics of the job itself, there are also models that take elements of a broader context into account, such as the personal characteristics of an employee (e.g. gender, age, education, personality, goals), organisational characteristics (e.g. company size, organisational culture), and higher-level characteristics (e.g. sector). Two prominent models that include the broader context with regard to psychosocial risk and wellbeing are the **Person-Organisation Fit Model** (P-O fit) of Kristof (1996) and the **Psychological Safety Climate (PSC)** of Hall et al. (2010).

2.1.2.1 Person-Organisation Fit Model (P-O fit)

The Person-Organisation Fit Model describes the fit between organisational characteristics (e.g. culture, values, goals, norms) and personal characteristics (e.g. personality, values, goals, attitudes). P-O fit occurs when at least one party provides what the other needs (complementary

fit), or they share similar characteristics (supplementary fit), or both. P-O fit may lead to beneficial health and wellbeing outcomes, while P-O misfit may lead to adverse health and wellbeing outcomes (Kristof, 1996).

2.1.2.2 Psychological Safety Climate (PSC)

Psychological Safety Climate is an organisational health framework that emphasises the influence of the perceptions of employees of organisational characteristics on the psychosocial risks that they are confronted with on their health and wellbeing (Dollard & Bakker, 2010). The PSC focuses on policies, practices, and procedures for the protection of employees' psychological health and safety. Hence the PSC includes four domains of management practices: (i) managerial support and commitment for stress prevention, (ii) management priority to psychosocial risks (over productivity), (iii) organisational communication providing safe channels for the concerns of employees, and (iv) organisational participation including all levels of the organisation (employees, management, but also representatives and unions), with consultations with regard to the psychological health and safety of staff (Hall et al., 2010). The psychosocial safety climate is related to psychosocial risks in the workplace and health and wellbeing outcomes (Dollard & Bakker, 2010; Becher & Dollard, 2016).

2.2 Job Demands-Resources Model

The Job Demands-Resources Model (JD-R) is inspired by several of the models discussed above and manages to capture the complexity of the contemporary work environment. It assumes that each job has its own specific job characteristics which influence employees' health and wellbeing (mental, physical, attitudinal, and behavioural) via motivation and strain. These job characteristics can be classified in two general and meaningful categories: job demands and job resources (Bakker & Demerouti, 2007).

2.2.1.1 Job demands

Job demands refer to those *"physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort and skills, and are therefore associated with certain physiological and/or psychological costs"* (Bakker & Demerouti, 2007, p. 312). However, some job demands may also play a motivational role next to a health-impairing one (LePine et al., 2005; Van den Broeck et al, 2010). We therefore make a distinction between job hindrances and job challenges.

Job hindrances: Job hindrances are considered detrimental for the employee's wellbeing. They are defined as "*job demands or work circumstances that involve excessive or undesirable constraints that interfere with or inhibit an individual's ability to achieve goals"* (Bakker & Demerouti, 2017, p. 277). These demands are primarily appraised as threats to one's wellbeing and secondarily as uncontrollable due to a sense of lacking control. As a result, the coping strategy for these demands tends to be emotion-focused (Lazarus & Folkman, 1984). Examples of job hindrances are adverse social behaviours (e.g. bullying and violence at work) and role conflict and work-life interference.

Job challenges: In contrast, job challenges can be both motivating and energy-depleting (demanding) at the same time. They are defined as job demands *"that cost effort but that potentially promote personal growth and achievement of the employee"* (Bakker & Demerouti,

2017, p. 277). These demands are considered 'good demands' because they have the potential to be perceived as rewarding work experiences despite the discomfort involved. Rather than being seen as uncontrollable, they are perceived as controllable demands, leading to a problem-focused coping strategy instead of emotion-focused (Lazarus & Folkman, 1984). Thus, job challenges are likely to contribute to the achievement of work goals and, as such, they yield opportunities for growth and development (LePine et al., 2005). Examples of job challenges are work intensity and unsocial working hours.

2.2.1.2 Job resources

Job resources refer to those physical, psychological, social, or organisational aspects of the job that (i) are functional in achieving work goals, (ii) reduce job demands and the associated physiological and psychological costs, and/or (iii) stimulate personal growth, learning, and development (Bakker & Demerouti, 2007, p. 312). Examples of job resources are job control and social support.

In addition, the relationships between job demands/job resources and their health and wellbeing outcomes are influenced by employees' personal characteristics, namely personal demands, and personal resources. **Personal demands** refer to the self-induced force by employees to invest effort in their work, such as workaholism. **Personal resources** refer to the beliefs that employees hold regarding their control over the environment, e.g. self-efficacy, or optimism (Bakker & Demerouti, 2017).

2.2.1.3 Relation between job demands, job resources and health and wellbeing of workers

The JD-R model explains the relationships between job characteristics and employee health and wellbeing through two different underlying psychological processes (Bakker & Demerouti, 2007).

Health impairment process: Job demands exhaust employees' mental and physical resources as they strive to maintain their performance levels. Employees increase their subjective effort to compensate for these job demands. However, the long-term consequence of such a compensatory strategy may lead to energy depletion, eventually resulting in health and wellbeing problems (Maslach et al., 2001).

Motivational process: Job resources have motivational potential and lead to high work engagement, low cynicism, and excellent performance. Following the definition, job resources may play an intrinsic motivational role because they foster personal growth, learning, and development, or they may play an extrinsic motivational role because they are instrumental in achieving work goals.

In addition to the main effects of job demands and resources, the JD-R model further proposes that the **interaction between job demands and job resources is important for their impact on employees' health and wellbeing** (Bakker & Demerouti, 2007). More specifically and also consistent with the Karasek (1979) model, job resources may buffer the health-impairing process of job demands. On the other hand, job demands may boost the motivational process: during challenging times, employees may be more aware of job resources and utilise them more efficiently, resulting in increased levels of work engagement (Bakker & Demerouti, 2007).

2.3 Overarching conceptual framework on psychosocial risks

The JD-R model is a good starting point for our conceptual framework to investigate psychosocial risks in the work context. The JD-R model is highly applicable for comprehending the relationships among modern risks of prolonged high job demands and lack of job resources, and employees' health and wellbeing. In doing so, the model further builds upon and integrates previous theories and models to explain these relationships.

The JD-R model expands the scope of job characteristics

The JD-R model extends beyond the job characteristics utilised in the Job Demand-Control model and the Effort-Reward Imbalance model by including a wide array of additional job demands and job resources. The JD-R model examines the impact of these characteristics on employees' health and wellbeing as well as their balance and interrelations.

The JD-R model considers the role of personal and organisational characteristics

The JD-R model incorporates personal characteristics (personal demands and resources), which alter the impact of job demands and job resources on employees' health and wellbeing. In addition, also the insights of the P-O fit model can be integrated. Additionally, given the broad scope of job demands and job resources that can be encompassed in the JD-R model, resources pertaining to the psychosocial safety climate can also integrated. The Psychosocial Safety Climate model (Dollard & Bakker, 2010) extends the JD-R model as it postulates how the practices and values of management influence workers' wellbeing and health in three ways. (i) The psychosocial safety climate directly influences workers' job demands and job resources. (ii) The psychosocial safety climate moderates the relation between job demands and workers' mental and physical health (Dollard et al., 2012). (iii) The psychosocial safety climate furthermore plays a moderating role in the relation between the health of an employee and behaviour outcomes such as absenteeism or turnover intentions (Huyghebaert et al., 2018).

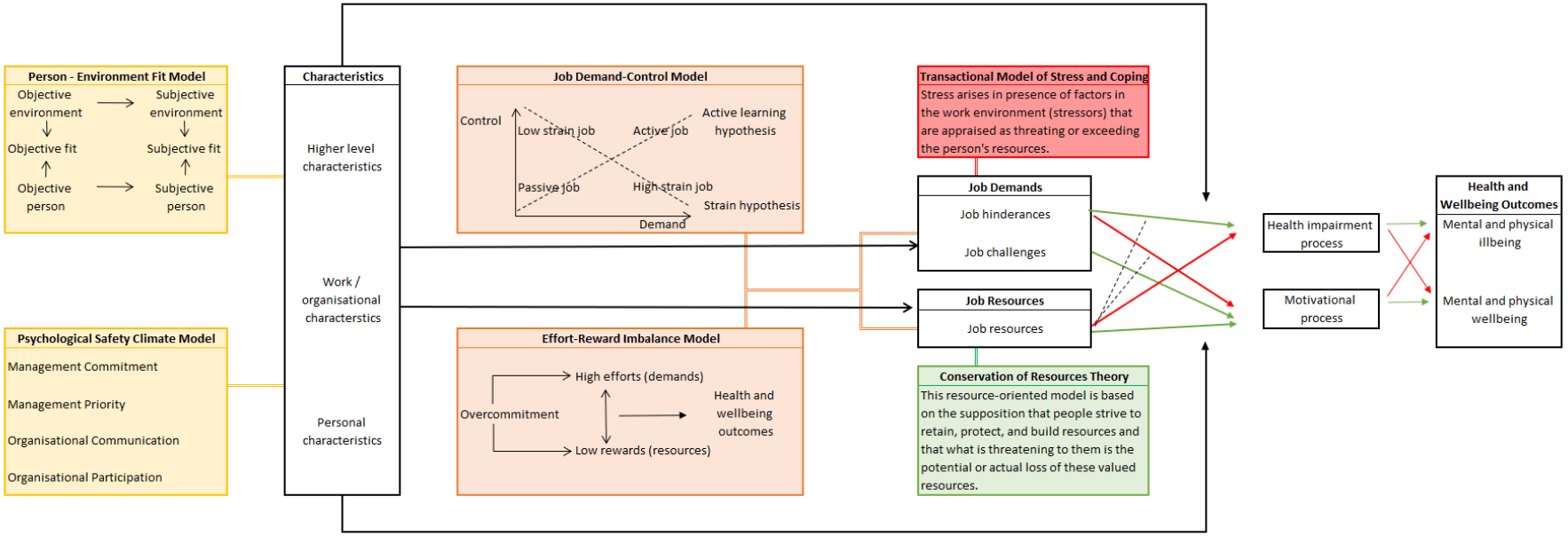
The JD-R model differentiates within job demands

Building upon the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), the JD-R model distinguishes between job hindrances and job challenges. This differentiation makes the model more realistic and could offer explanations for the mixed evidence regarding job demands, which can be either detrimental or motivational for employees' health and wellbeing (Van den Broeck et al., 2010).

Integrated framework on psychosocial risks

Figure 1 presents the integrated and overarching conceptual framework used in the PSYR-IR project. The figure displays how previous theories (DCM, ERI, COR, TMSC) are incorporated in the JD-R model. Next to that it depicts how theories like the P-O fit and PSC can complement the JD-R model in better understanding the complexity of psychosocial risks and workers' wellbeing.

Figure 1. Overarching integrated conceptual framework on psychosocial risks

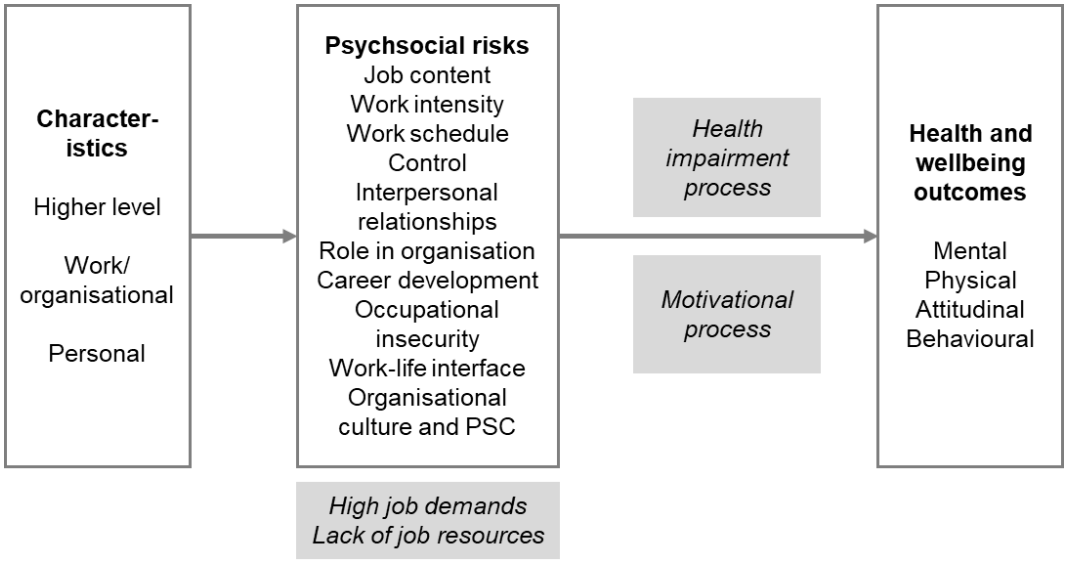


Source: Developed by the authors

2.4 Conceptualising psychosocial risks for workers' health and wellbeing

Utilising the overarching integrated framework on psychosocial risks (see Figure 2), we now try to conceptualise psychosocial risks. Psychosocial risks, on the one hand, can be high levels of job demands, such as work intensity, unsocial working hours, or asocial behaviours. On the other hand, a lack of job resources can likewise threaten the health and wellbeing of employees, hence be considered psychosocial risks.

Figure 2. Overarching integrated framework on psychosocial risks



Source: Developed by the authors

Research using the JD-R model has nominated a wide range of job demands and job resources that can be relevant in this regard. Similarly, research on psychosocial risks lists many potential risks. Hence, it seems relevant to try to organise this long list of PSR into meaningful categories. We propose an adapted classification based on the ILO & WHO (2016) work[1], in which occupational (in)security is discerned from career development, as the original category was too broad focused for our purposes. Secondly, we propose to broaden the category of organisational culture and function to the Psychological Safety Climate (PSC), as to include the organisational culture and the impact of social partners and policy (Hall et al., 2010). Finally, we will not include the category of environment and equipment within our study as it mainly includes physical and environmental conditions.

Hence the following categories of psychosocial risks will be considered in this report:

1. Job content
2. Work intensity
3. Work schedule
4. Control
5. Interpersonal relationships at work

1 10 categories: organisational culture and function, job content, workload and work pace, work schedule, control, environment and equipment, interpersonal relationships at work, role in organisation, career development, and home-work interface.

6. Role in organisation
7. Career development
8. Occupational (in)security
9. Work-life interface
10. Organisational culture and psychosocial safety climate

Below, we further define each of these categories and summarise the main insights from research on the relationships of these psychosocial risks with health and wellbeing of workers.

2.4.1 Indicators of employees' health and wellbeing

Wellbeing can be defined in a broad sense, as "*the state of individual's mental, physical, and general health, as well as their experiences of satisfaction both at work and outside of work"* (Nielsen et al., 2017 p.104). This definition allows us to include four categories of wellbeing: mental outcomes, physical outcomes, attitudinal outcomes, and behaviour outcomes:

Mental outcomes: Mental outcomes reflect the state of mental wellbeing that enables workers to cope with the stress of work and life, realise their goals, learn, and work well and contribute to their organisation (WHO, 2022). Positive mental outcomes encompass general wellbeing and psychological meaningfulness. Negative mental outcomes comprise anxiety, depressive symptoms, stress, burn-out, mental exhaustion, and depersonalisation.

Physical outcomes: Physical outcomes help or deteriorate a health quality of life that allows employees to get the most of their daily work activities without physical stress (Australian National University, 2020). Physical outcomes encompass both positive and negative outcomes. The positive outcome relates to general health, while the negative outcomes are fatigue, (long term) sickness absence, musculoskeletal disorders (MSD), headaches and eyestrain, cardiovascular diseases, tension, and morbidity.

Attitudinal outcomes: Attitudinal outcomes refer to the *"evaluations that employees have of their job that express their feelings towards, beliefs about, and attachment to their job"* (Judge & Kammeyer-Mueller, 2012, p. 344). Positive attitudinal outcomes encompass motivation, job satisfaction, job/organisational commitment, and work engagement. On the other hand, the negative outcome considered in this report is turnover intention.

Behavioural outcomes: Behavioural outcomes refer to *"(un)intentional employee behaviour that is either helpful or harmful to the legitimate interests of the organisation"* (Dalal, 2005, p. 1241). Positive behavioural outcomes are job performance and organisational citizenship behaviour (OCB), while negative outcomes comprise counterproductive work behaviour, presenteeism, absenteeism, sleep problems, and alcohol use.

3. State-of-the-art of literature on psychosocial risks

This chapter summarises insights from an extensive literature review on the most recent scientific knowledge on psychosocial risks and their impact on workers' health and wellbeing. The chapter, first, provides detailed definitions for prominent psychosocial risks in each of the categories of risks defined in Chapter 2. In a following part, the relationships between these psychosocial risks and various aspects of workers' health and wellbeing are systematically mapped (see Table 11).

3.1 Identification of the broad range of psychosocial risks

As discussed above, psychosocial risks can be categorised in to ten meaningful categories. Each of these categories covers a set of characteristics of the individual job, the social context in which the employee works, the leader or manager of the employee or characteristics at organisational level (Nielsen et al., 2017). Based on literature review, we identified and defined the psychosocial risks in each of the ten categories that are often studied.

3.1.1 Job content

Psychosocial risks related to the job content can encompass several aspects linked to the content and nature of the job: These are risks such as emotional demands, cognitive demands, lack of task variety, and lack of task significance. The definitions of these constructs are presented below. In general, psychosocial risks concerning the job content are related with more negative mental outcomes, Furthermore, less positive, and more negative physical, less positive attitudinal, and less positive and more negative behavioural outcomes (Table 11). Especially, emotional, and cognitive job demands are mostly related with these outcomes, while job content on task-level is less associated.

Table 1. Overview of psychosocial risks related to job content and their definitions

Psychosocial risk	Definition
Emotional demands	Emotional demands refer to those social aspects of the job that require "handling clients (patients, customers, etc.) and emotionally disturbing situations" (Eurofound, 2023, p. 10).
Cognitive demands	Cognitive demands refer to those cognitive aspects of the job that require "confrontation with new tasks, unpredictable developments, and solving routine problems" (Meyer & Hünefeld, 2018, p. 2).
Lack of task variety	Task variety refers to "the degree to which a job requires a variety of different activities in carrying out the work, which involves the use of a number of different skills and talents of the person" (Hackman & Oldham, 1976, p. 257).
Lack of task significance	Task significance refers to "the degree to which the job has a substantial impact on the lives or work of other people, whether in the immediate organisation or in the external environment" (Hackman & Oldham, 1976, p. 257).

3.1.2 Work intensity

The dimension 'work intensity' includes psychosocial risks that focus on the workload and overload that employees experience from certain aspects of their job (e.g. technology overload). Both a too high work intensity and a work underload can be considered psychosocial risks (ILO & WHO, 2016). This workload can be related to the work pace, for example a high speed of work as well as the control someone has over the work pace, but also (too) tight deadlines, having too much work to do within the foreseen time, and so on (ILO & WHO, 2016). The definitions of these constructs are presented in Table 2. In general, work intensity is related to less positive mental and physical outcomes and more negative mental, physical, and behavioural outcomes (Table 11).

Table 2. Overview of psychosocial risks related to work intensity and their definitions

Psychosocial risk	Definition
Work intensity	Work intensity refers to the degree to which a job involves a high intensity of the work that has to be done, namely "having to work at high speed or to tight deadlines" (Eurofound, 2023, p. 10)
Technology overload	Technology overload refers to "the degree to which a job involves high usage of technology to a point where technology users feel the physical and mental burden to use a technology during their everyday life" (Rasool et al., 2022, p. 2).

3.1.3 Work schedule

The dimension 'work schedule' includes a range of psychosocial risks related to the number and type working hours and the (lack of) flexibility with regard to the planning of these working hours. These psychosocial risks include, among others, unsocial working hours, atypical employment, late notice work. In addition, lack of flexibility in working hours, for instance to deal with childcare or issues in the personal live, can be regarded as psychosocial risks. The definitions of these constructs are presented in Table 3. In general, the category work schedule is associated with less positive mental, physical, and attitudinal outcomes and more negative mental, physical,

attitudinal, and behavioural outcomes. Unsocial working hours and atypical employment were mostly related to the mental and physical outcomes flexible working hours with attitudinal outcomes (Table 11).

Table 3. Overview of psychosocial risks related to work schedule and their definitions

Psychosocial risk	Definition
Atypical employment	Atypical employment refers to paid employment relations other than those with unlimited duration, including part-time, temporary, fixed-term, casual, seasonal, independent and homework (Sanwald & Engelbert, 2014). Also, more recent trends such as the rise of digital platform work could be considered here.
Unsocial working hours	Unsocial working hours refer to *"the extension of work hours through overtime, working at 'unusual' times beyond traditional societal standards such as the '9 to 5' norm, and varying time schedules resulting in 'changing' working hours"* (Eurofound, 2008, p. 1).
Late notice work	Working at late notice refers to be requested to come into work at short notice (Eurofound, 2023).
Lack of flexible working hours	Flexible working hours refer to *"being able to take time off during working hours to deal with personal affairs and catch up on it later"* (Eurofound, 2023, p. 17).

3.1.4 Control

The category of control includes psychosocial risk related to control a worker has over the specific tasks, order of tasks, specific content of the task, … that she has to perform. A lack of control (or autonomy) can be considered a psychosocial risk. This concept has been included already in the earliest models related to employee wellbeing, e.g. the model of Karasek (1979). Hence, a broad range of labels is used for this concept throughout literature, sometimes with small nuances: task discretion, job control, task autonomy, job autonomy, decision latitude, etc. (Karasek, 1979; Huth & Chung-Yan, 2022). We choose to bring them together here under the label 'lack of autonomy'. The definition of this construct is presented in Table 4. In general, the category control is associated with less positive mental and attitudinal outcomes and more negative attitudinal and behavioural outcomes.

Table 4. Overview of psychosocial risks related to control and their definitions

Psychosocial risk	Definition
Lack of autonomy	(Task) autonomy or job control refers to the extent to which employees can *"structure and control their work, namely the timing, methods, and decision-making involved in their work"* (Huth & Chung-Yan, 2022, p. 1061).

3.1.5 Interpersonal relationships at work

The dimension 'interpersonal relationships at work' contains psychosocial risks related to the social relations of workers with colleagues and managers. These risks include negative social relations and behaviours such as adverse social behaviours and discrimination. In addition, a lack of positive relations and interactions, for instance a lack of social support, lack of co-worker and supervisor support can be identified as psychosocial risks. All definitions of these constructs are

presented in Table 5. In general, the category interpersonal relationships at work is associated with less positive mental, physical, attitudinal, and behavioural outcomes and more negative mental, physical, attitudinal and behavioural outcomes. Adverse social behaviours and discrimination were related to all types of outcomes, while social support was mostly related to mental outcomes (Table 11).

Table 5. Overview of psychosocial risks related to interpersonal relationships at work and their definitions

Psychosocial risk	Definition
Adverse social behaviours	Adverse social behaviours (ASB) refer to a variety of abusive behaviours experienced by employees in their relationships at work. These abusive behaviours include verbal abuse or threats; bullying, harassment, violence; unwanted sexual attention (Eurofound, 2023).
Discrimination	Discrimination refers to *"a person being treated less favourably than another person in a similar situation based on certain personal characteristics, such as ethnicity, race, age, religion or beliefs, disability, or sexual orientation"* (Eurofound, 2023, p. 43).
Influence of others	Influence of others refers to *"the degree management, customers or suppliers have on one's work"* (Eurofound, 2023, p. 10).
Lack of social support	Workplace social support refers to "*the degree to which employees perceive that their wellbeing is valued by workplace sources, and the perception that these sources provide help to support this wellbeing"* (Kossek et al., 2011, p. 292).
Lack of co-worker support	Co-worker support refers to the degree employees perceive *"that their coworkers are willing to assist them to deal with work-related issues"* (Nguyen & Tuan, 2022, p. 138).
Lack of supervisor support	Supervisor support refers to the degree employees perceive that their supervisor provides assistance and care for them (Nguyen & Tuan, 2022)

3.1.6 Role in organisation

This dimension focuses on psychosocial risks that follow from an employee's role within the organisation. Experiencing conflicting role demand or a lack of clarity about one's role, can put the wellbeing and health of employees under pressure. These risks include role conflict, role ambiguity, and overload. The definitions of these constructs are presented in Table 6. The category role in organisation is associated with less positive attitudinal and behavioural outcomes and more negative mental, physical, and attitudinal outcomes.

Table 6. Overview of psychosocial risks related to the role in the organisation and their definitions

Psychosocial risk	Definition
Role conflict	Role conflict refers to the confrontation *"with two or more conflicting or opposing role expectations and the corresponding role demands of others"* (Schmidt et al., 2014, p. 91).
Role ambiguity	Role ambiguity *"results from a lack of information and therefore missing clarity in a specific job position. This leads employees to be uncertain about their role, job objectives, and associated responsibilities"* (Schmidt et al., 2014, p. 91).

Role overload	Role overload refers to *"the extent to which time and resources prove inadequate to meet expectations of commitments and obligations to fulfil a role"* (Örtqvist & Wincent, 2006, p. 400).

3.1.7 Career development

The dimension 'career development' includes a range of psychosocial risks that concern skill use and possibilities to grow and develop in one's job, future career prospects, …. These risks include a lack of career opportunities, a lack of recognition, limited skill utilisation, and a lack of training opportunities. Table 7 presents definitions for these constructs. The category career development is associated with less positive and more negative attitudinal outcomes (Table 11).

Table 7. Overview of psychosocial risks related to career development and their definitions

Psychosocial risk	Definition
Lack of career opportunities	Career opportunities refer to *"having good prospects for career advancement"* (Eurofound, 2023, p.17).
Lack of recognition	Recognition refers to a "*constructive response and judgement reflecting someone's work performance, personal dedication and engagement"* (Brun & Dugas, 2008, p. 727).
Lack of skill utilisation	Skill utilisation refers to "*the degree to which jobs offer enough opportunities to use one's knowledge, skills and talents"* (Eurofound, 2023, p. 17)
Lack of training opportunities	Training opportunities refers to *"the degree to which jobs offer on-the-job training, or paid or provided training"* (Eurofound, 2023, p. 17)

3.1.8 Occupational (in)security

The dimension 'occupational (in)security' comprises psychosocial risks that bring along insecurity for the employee at a certain level. This can be related to the (subjective) feeling one might lose their job, but also experiences of inappropriate financial reward for the work done, that influence employees' work experience. These risks include job insecurity, financial worries, and a lack of appropriate pay. Definitions of these constructs are shown in Table 8. The category occupational (in)security is associated with less positive mental, physical, and attitudinal outcomes and more negative mental, physical, attitudinal, and behavioural outcomes (Table 11).

Table 8. Overview of psychosocial risks related to occupational insecurity and their definitions

Psychosocial factor	Definition
Job insecurity	Job insecurity refers to a subjective feeling of uncertainty for one's future work. It has a cognitive component – "*the perceived threat to the continuity of one's employment and/or to features of the job";* as well as an affective component – "*the emotional reaction to the potential change"* (Jiang & Lavaysse, 2018, p. 2308).
Financial worries	Financial worries refer to the subjective feeling of having difficulties making ends meet with one's total household income (Eurofound, 2023).
Lack of appropriate pay	Appropriate pay refers to a payment that is appropriate, suitable, or acceptable for the delivered work.

3.1.9 Work-life interface

The dimension 'work-life interface' looks at psychosocial risks concerning the balance between expectations and responsibilities at work and in the private life. Risks include work-life interference and a lack of work-life balance. These unbalances can be two-sided: work can interfere in the private life, but the private live likewise can interfere in the work context. The definitions of these constructs are shown in Table 9. The category work-life interface is associated with less positive attitudinal outcomes and more negative mental, physical, attitudinal, and behavioural outcomes (Table 11).

Table 9. Overview of psychosocial risks related to work-life interface and their definitions

Psychosocial risks	Definition
Lack of work-life balance	Work–life balance refers to the achieved balance when an individual's right to a fulfilled life inside and outside paid work is accepted and respected as the norm (Eurofound, 2023).
Work-life interference	Work-life interference refers to *"worrying about work when not working, feeling too tired after work to do some household jobs or finding it difficult to concentrate on one's job because of family responsibilities"* (Eurofound, 2023, p. 10).

3.1.10 Organisational culture and psychological safety climate

This dimension includes psychosocial risks related to the culture and interactions that take place within an organisation. This can also be considered the psychosocial safety climate (Hall et al., 2010). It comprises risks related to participation of workers in the team or organisation, in a formal or informal manner: a lack of organisational participation, a lack of voice. Furthermore, it covers aspects of information sharing (lack of organisational communication) in the organisation and experiences of justice and trust by employees: lack of procedural, distributive, relational justice, lack of trust. Next to that, this category brings together psychosocial risks related to the leadership of managers (negative leadership behaviours), and the lack of elements that ensure a psychosocial safety climate. The definitions of all these constructs are presented in Table 10. The category is associated with less positive mental, attitudinal, and behavioural outcomes and more negative mental and attitudinal outcomes (Table 11).

Table 10. Overview of psychosocial risks related to organisational culture and PSC and their definitions

Psychosocial risks	Definition
Lack of organisational participation	Organisational participation refers to the degree to which jobs offer *"formal employee representation within the organisation with regular meetings"* (Eurofound, 2023, p. 17).
Lack of organisational communication	Organisational communication refers to the degree to which an organisation attentively hears and values the contributions of its employees (Hall et al., 2010).
Negative leadership	Leadership refers to *"the ability to influence a group towards the achievement of a vision or a set of goals"* (Robbins & Judge, 2019, p. 394).
Lack of organisational justice	Organisational justice refers to the degree to which employees perceive fairness in the organisation (Özkan, 2023)
Lack of procedural justice	Procedural justice refers to the *"fairness of the process by which outcomes are determined within the organisation"* (Cohen-Charash & Spector, 2001, p. 280).
Lack of relational justice	Relational justice refers to the *"aspects of the communication process between the management and employees of justice, such as politeness, honesty, and respect"* (Cohen-Charash & Spector, 2001, p. 281).
Lack of distributive justice	Distributive justice refers to *"the fairness employees perceive on the amount and form of compensation they receive"* (Haar & Spell, 2009, p. 1828).
Lack of trust	Trust refers to *"the willingness to be vulnerable to the actions of another employee or supervisor, regardless of whether one has the ability to monitor or control"* (Chiaburu et al., 2013, p. 183).
Lack of voice	Voice refers to employees *"being consulted about objectives and work organisation, including how to improve it"* (Eurofound, 2023, p. 17)

3.2 Impact of psychosocial risks on the health and wellbeing of workers

The impact of specific psychosocial risks on the health or the wellbeing of employees has been the subject of a multitude of studies in the past decades. In this context, often a small selection of psychosocial risks is investigated with the focus on specific outcomes or specific groups of workers, countries, or sectors. Consequently, it is easy to lose track along the multitude of these findings. Table 11 brings together findings on the relationships between the ten categories of psychosocial risks and different aspects of health and wellbeing. In this light, both positive outcomes and negative outcomes are considered: mental outcomes (e.g. wellbeing; stress, anxiety); physical outcomes (e.g. MSD, headaches), attitudinal outcomes (e.g. motivation, work engagement) and behaviour outcomes (e.g. absenteeism, productive work behaviour).

Table 11. Overview of the relationships between psychosocial risk factors and mental, physical, attitudinal and behaviour outcomes related to the health and wellbeing of workers, based on literature review

	Mental outcomes		Physical outcomes		Attitudinal outcomes		Behavioural outcomes	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Job content								
Emotional demands	o	+	o	+	-	o	o	o
Cognitive demands	o	o	-	+	o	o	o	o
Lack of task variety	o	o	o	o	o	o	o	+
Lack of task significance	o	o	o	o	-	o	-	o
Work intensity								
Work intensity	-	+	-	+	o	o	o	+
Technology overload	o	o	o	o	o	o	o	o
Work schedule								
Unsocial working hours	-	+	-	+	o	o	o	+
Atypical employment	o	+	-	+/-	o	o	o	+
Late notice work	o	o	o	o	o	o	o	o
Lack of flexible working hours	o	o	-	o	-	+	o	+
Job control								
Lack of autonomy	-	+	o	o	-	o	o	o
Interpersonal relationships at work							o	o
Adverse social behaviours	-	+	-	+	-	o	o	+
Discrimination	-	+	-	+	-	+	o	+/-
Influence of others	o	o	o	o	o	o	-	o
Lack of social support	o	+	o	o	-	o	o	o
Lack of co-worker support	o	+	o	o	o	o	o	o
Lack of supervisor support	o	+	o	o	o	o	o	o
Role in organisation								
Role conflict	o	+	o	o	-	+	-	o
Role ambiguity	o	+	o	+	-	+	-	o
Role overload	o	+	o	o	-	+	o	o

	Mental outcomes		Physical outcomes		Attitudinal outcomes		Behavioural outcomes	
	Positive	Negative	Positive	Negative	Positive	Negative	Positive	Negative
Career development								
Lack of career opportunities	o	o	o	o	o	o	o	o
Lack of recognition	o	o	o	o	o	o	o	o
Lack of skill utilisation	o	o	o	o	-	+	o	o
Lack of training opportunities	o	o	o	o	o	o	-	o
Occupational (in)security								
Job insecurity	-	+	-	+	-	+	o	+
Financial worries	-	+	-	+	o	o	o	o
Lack of appropriate pay	o	o	o	o	o	o	o	o
Work-life interface							o	o
Lack of work-life balance	o	o	o	o	o	o	o	o
Work-life interference	o	+	o	+	-	+	o	+
Psychological safety climate								
Lack of organisational participation	-	o	o	o	-	+	-	o
Lack of organisational communication	o	o	o	o	o	o	o	o
Lack of leadership	o	o	o	o	o	o	o	o
Lack of organisational justice	o	+	o	o	o	+	o	o
Lack of procedural justice	o	+	o	o	o	+	o	o
Lack of relational justice	o	+	o	o	o	+	o	o
Lack of distributive justice	o	o	o	o	o	o	o	o
Lack of trust	o	o	o	o	-	o	-	o
Lack of voice	o	+	o	o	o	o	-	o

* +: positive relationship, -: negative relationship, +/-: both positive and negative relationship is found in literature, o: not discussed in literature or no relationship found

Source: Based on the literature review

Looking at the summary of findings for the literature review, a first observation is that for each category of psychosocial risks relations with wellbeing outcomes are found and that these relations consequently point out the negative impact of all categories of psychosocial risks for the wellbeing of employees in its different aspects. Psychosocial risks are associated with lower mental wellbeing and more mental problems such as anxiety, depressive symptoms, stress, burn-out, exhaustion and depersonalisation (Theorell et al., 2015; Niedhammer et al., 2021; De Witte et al., 2016). Likewise psychosocial risks relate to lower general physical health and more physical health issues such as fatigue, tension, long-term sickness absence, musculoskeletal disorders, cardiovascular diseases, headaches (Framke et al., 2023; Eurofound, 2023; Niedhammer et al., 2021; Hagqvist et al., 2022). This shows again that the impact of psychosocial risks goes beyond the mental wellbeing of the employee and also affects their physical health (Vandekerckhove et al., 2021). Next to the impact on mental and physical wellbeing, our literature review also shows how psychosocial risks weigh on the positive attitudes of employees (e.g. work engagement, job satisfaction, organisational commitment) and strengthen negative attitudes such as turnover intentions (Fischer et al., 2020; Yildiz et al., 2021; Chen et al., 2012; Morrissette & Kisamore, 2020). Finally psychosocial risks also negatively influence the employee's performance (including organisational citizen behaviour) (Morf et al., 2017; Eatough et al., 2011; Chamberlin et al., 2018) and are related directly to behaviours that threaten the organisation's performance such as absenteeism or presenteeism (Li et al., 2021; Eurofound, 2023) or the employee's health, such as alcohol use (Virtanen et al., 2015).

However, we can observe some differences across categories and psychosocial risks. First, for some psychosocial risks, there is little attention in the literature or no significant relationships were found with physical health outcomes. Our literature review found no support for a relation between lack of social support and physical outcomes. Likewise, no relations were found or investigated for psychosocial risks related to career development or to psychosocial safety climate. Secondly, we notice that for psychosocial risk related to career development our literature review provides only support for a relation with attitudinal and behavioural outcomes. Boxall and colleagues (2019) found that a lack of skill utilisation can be related with higher turnover intentions as well as lower job satisfaction and less organisational commitment.

3.3 Conclusions

The previous chapters presented the integrated theoretical framework and conceptualisation of psychosocial risks guiding our study, providing an in-depth examination of the relations between various psychosocial risks and employees' health and wellbeing. These chapters explored a wide range of outcomes, including mental, physical, attitudinal, and behavioural aspects.

Despite the extensive overview, several elements within the framework remain unexplored due to limitations in the existing literature, thus revealing knowledge gaps. In order to address these gaps, this report carries out empirical analyses to identify which specific psychosocial risks are particularly pronounced. The findings of these analyses are presented in the next chapter.

4. Empirical findings on psychosocial risks and the measures to deal with such risks

Existing European surveys such as the European Survey of Enterprises on New and Emerging Risks (ESENER), the European Working Conditions Telephone Survey (EWC(t)S), the Living, Working, and COVID-19 e-survey (e-COVID surveys) or the Occupational Safety and Health in Post-Pandemic Workplaces survey (OSH-Pulse Eurobarometer) allow us to get some insights on the prevalence of psychosocial risks and measures taken by organisations to prevent or deal with these psychosocial risks in the EU27. These surveys allow us to dig into differences key between countries, and more specifically the countries that are part of the scope of this project: Austria, Belgium, Denmark, Estonia, and Italy. The data further enable us to look at the specific challenges for two sectors: the health and social care sector on the one hand, and industrial sectors, including manufacturing, construction, … on the other hand. Furthermore, we can investigate whether there are differences in exposure to psychosocial risks between employees in terms of gender and age. To analyse this, we will discuss the empirical findings for different psychosocial risks in from the ten categories we distinguished before. Empirical analyses included calculating prevalence rates of and identifying groups at-risk for high PSR.

4.1 Data

4.1.1 ESENER

The ESENER survey of EU-OSHA investigates occupational health and safety practices within organisations, with employers serving as respondents, thereby offering insights predominantly from the employer perspective on occupational health and safety matters. Conducted in 2019, ESENER's data predates the COVID-19 pandemic, thus providing a foundational dataset that precedes the pandemic's effects. Nonetheless, this information from ESENER 2019 serves as a valuable baseline for understanding occupational health and safety dynamics, albeit without direct consideration of post-COVID circumstances.

This report incorporates data from the ESENER survey, encompassing responses from 37,460 establishments across the EU-27 Member States. Emphasis is put on the countries participating in the PSYR-IR project, specifically Austria (1,503 respondents), Belgium (1,506 respondents), Denmark (1,513 respondents), Estonia (758 respondents), and Italy (2,251 respondents). Additionally, the report highlights significant and noteworthy trends related to psychosocial risk factors in other EU countries. This report places a sector-specific focus on the ESENER data related to "Human Health and Social Work Activities," "Manufacturing," and "Construction, Waste Management, and Water and Electricity Supply."

A noteworthy aspect of ESENER is its respondent's profile. In small- and medium-sized enterprises (SMEs), respondents often include the managers themselves, whereas in larger companies, respondents are more likely to be occupational safety and health specialists. The

ESENER survey addresses the challenges associated with psychosocial risk assessment and the potential lack of expertise in this domain. The survey report indicates that respondents may not always critically evaluate their knowledge of psychosocial risks. Interestingly, responses from larger organisations, where OSH specialists are more prevalent, tend to be more critical in evaluating their knowledge of psychosocial risks compared to SMEs, where the respondent is typically the manager directly (EU-OSHA, 2022a).

Another significant aspect concerning ESENER is the limited information and understanding concerning employers' assessments of psychosocial risks. When addressing psychosocial risks, it is crucial to involve employees in the risk assessment process, as they possess first-hand experience and can identify hidden risks (ILO & WHO, 2016). However, ESENER investigated the involvement of employees in psychosocial risk assessments and found that on average, less than half of establishments in the EU included employees in this process. In sectoral terms, employee involvement was highest in the Human Health and Social Work activities (63%) and significantly lower in manual sectors such as Manufacturing and Construction (EU-OSHA, 2022a). Therefore, it is possible that there is some subjectivity present in the survey data, necessitating further investigation to grasp the employees' perspectives and extent of psychosocial risk factors more comprehensively within the workplace.

4.1.2 Living, Working and COVID e-survey

The Living, Working, and COVID-19 e-survey of Eurofound (the European Foundation for the Improvement of Living and Working Conditions) was initiated in response to the onset of the COVID-19 pandemic with the primary objective of assessing its impact on individuals' lives and employment in EU. This survey, comprising six rounds, provides comprehensive insights into various aspects affected by the pandemic. The COVID e-survey has gathered data from over 200,000 respondents, primarily from the 27 EU Member States, with some rounds including additional countries. This report particularly focuses on the COVID-19 e-survey data from the countries participating in the PSYR-IR project — Austria, Belgium, Denmark, Estonia, and Italy. The COVID e-survey, focused on assessing employees' perspectives on diverse topics, includes participants from varied professional backgrounds without specific ties to employment sectors.

The e-survey was conducted across multiple rounds, each with specific focuses and timelines:

1. Round 1 (spring 2020): Emphasised quality of life, societal impacts, and work situations such as work-life balance and teleworking usage.
2. Round 2 (summer 2020): Focused on job quality, health and safety at work, usage of online services, and online schooling.
3. Round 3 (spring 2021): Expanded to include attitudes towards vaccination and public services.
4. Round 4 (autumn 2021): Designed as a panel survey to monitor developments since the beginning of the pandemic among previous respondents.
5. Round 5 (spring 2022): Focused on aspects related to housing, living conditions, financial circumstances, and reflections on teleworking and work-life balance.
6. Round 6 (spring 2023): Added a focus on young people in addition to previous survey themes.

This present report utilises data from various rounds of the COVID e-survey, accompanied by corresponding references, to provide insights into the post-COVID pandemic situation and trends.

4.1.3 MPSR report - Managing psychosocial risks in European micro and small enterprises

MPSR report is a qualitative study on managing psychosocial risks in European micro and small enterprises supplementing the findings of the ESENER 2019 survey by providing insights into how these enterprises organise and implement psychosocial risk management. It explores the motivations and reasons behind their approaches, as well as effective strategies and successful practices. The MPSR report, commissioned by EU-OSHA, was primarily aimed at investigating how companies manage psychosocial risks and it complements the findings of the ESENER 2019 survey by providing additional perspectives into how these organisations address psychosocial risk management. The qualitative study for the MPSR report was conducted in six EU countries: Denmark, Germany, Spain, Croatia, the Netherlands, and Poland. The study involved a comprehensive analysis of the national contexts in these countries and included interviews conducted with organisational managers and employees. Each country conducted 40 or more interviews. The study took place in the aftermath of the COVID-19 pandemic, spanning from November 2020 to April 2021, thus incorporating its influence on the research topic.

4.1.4 EWCS 2015 and EWCTS 2021

The European Working Conditions Survey (EWCS) is a survey conducted by the European Foundation for the Improvement of Living and Working Conditions. It provides comparable and reliable data on working conditions for the EU and associated countries. Data collection started in 1990 and is executed every five years. Due to the COVID-19 crisis, the EWCS data collection planned for 2020 was postponed with one year and the traditional face-to-face methodology had to be dropped in favour of telephone interviewing, resulting in the European Working Conditions Telephone Survey (EWCTS) 2021.

This report uses the data of the EWCS 2015 and the EWCTS 2021. The EWCS 2015 data include almost 43,850 employees and self-employed from 35 European countries and the EWCTS 2021 data covers 36 European countries with a total sample of 71,758 employees and self-employed. The focus of this analysis is on employees (excluding the self-employed) in the EU27 in general, and more specifically in the health and social care sector and in industry sectors. This results in a total sample size for this study of 28,217 employees in the EWCS 2015 and 51,111 employees in the EWCTS 2021 (Eurofound, 2022). In the healthcare sector, the sample sizes were 3,101 in 2015 and 5,716 in 2021. In the industry sector, the sample sizes were 6,406 in 2015 and 11,202 in 2021.

The EWC(T)S dataset for this study was developed by aligning variables across EWC(T)S waves of 2015 and 2021 by reassigning values to correspond with consistent item categories. Furthermore, the EWC(T)S dataset was weighted using weight variables[2] provided in the dataset to enable representative conclusions (UK Data Service). Demographic variables, including sector, gender, age, and country, were identified. The healthcare and industry sectors were classified according to the NACE level 1 classification: code Q for healthcare and codes C, D, E, F for industry. Gender was categorised as either men or women, missing and other options were recoded as missing; age was delineated into three age categories: 16-24 years, 25-54 years, or +55 years. Further this study focusses on the EU27 level and five specific countries which are the focus of this project: Austria, Belgium, Denmark, Estonia, and Italy. PSR and demographic variables have been constructed through item matching procedures across EWC(T)S waves. For

2 Weighting variables 'w5_EU27' and 'weight_core' were used for EWCS 2015 and EWCTS 2021, respectively.

the PSR variables, items underwent inversion and recoding to establish a standardised scale ranging from 0 to 100, where 0 represented low risk and 100 indicated high risk. Specifically, items pertaining to the PSR from EWCS 2015 were reversed to match with the scale of EWCTS 2021. Subsequently, the scales were adjusted using the formula (x- 1)*25, resulting in a scale ranging from 0 - 100. Additionally, PSR variables were recoded as dichotomous for calculating prevalence rates and identifying groups at-risk. Values below 66.66 (two-thirds of 100) were categorised as '0 = low risk' and values exceeding 66.66 categorised as '100 = high risk'.

4.1.5 OSH Pulse Survey

In 2022 the European Agency for Safety and Health at Work (EU-OSHA) organised the Flash Eurobarometer which focused on data regarding the OSH situation in post-pandemic workplaces in Europe. The focus of this survey, conducted among employees in EU Member States, was on both physical stressors and psychosocial risks, measures taken to address these risks and employee's views about OSH management in their workplace. This survey had additional attention for the impact of digital technologies on employee's health (EU OSHA, 2022). Data were collected in April and May 2022 through telephone interviews, resulting in a sample of 25,683 employees across the EU Member states, with about 1,000 respondents per country[3]. Data were weighted to population proportions (EU OSHA, 2022).

For this report we brought together and reanalysed the data reported in the general report of EU-OSHA on the Flash Eurobarometer (EU-OSHA, 2022) as well as data presented in the infographics and on the EU-OSHA website regarding the OSH Pulse. We selected and brought together figures regarding the EU27 average, and focused on the countries included in this project. Further, were possible, more detailed data for gender, age, or sector (broken down to manufacturing and engineering, building and construction, and health and social care services), were included for analyses.

4.2 Psychosocial risks related to job content

4.2.1 Emotional demands

The EWCS data from 2015 and 2021 allow us to look at the prevalence of emotional demands and the evolution over time (Figure 3). A first observation is that there are very large differences between sectors, although they are not surprising given the nature of the work. Employees in the health and social care sector report more often high levels of emotional demands, while only a small share of the employees in industry is confronted with this. We also notice a strong increase in the share of employees confronted with high emotional demands between 2015 and 2021.

In the health and social care sector this evolution can be partly explained by the COVID-19 pandemic. Here, more than half of the employees are confronted with extensive emotional demands during their work. These emotional demands pose considerable risks for the health and wellbeing of employees in the health and social care sector. Differences between countries and groups are rather limited in health and social care: somewhat more women tend to report high emotional demands (53%) compared to men (47%), and emotional demands weigh most on workers aged 25-54 years. However, we see the larges increase in employees reporting emotional demands among older workers, from 18% in 2015 to 48% in 2021. Furthermore, we

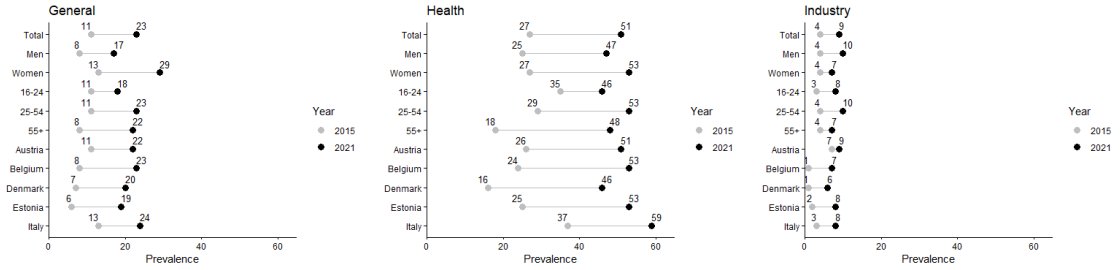
3 At country level, there sample sizes are 1,008 for Austria, 1,000 for Belgium, 1,006 for Denmark, 1,002 for Estonia and 1,000 for Italy.

observe some differences between countries, where emotional demands are most often reported in Italy (59%), and least in Denmark (46%).

Across all sectors, the share of employees reporting high job demands increased from around 11% in 2015 to nearly a quarter of the employees in 2021 (23%). Women tend to experience emotional demands more often (29%) than men (17%) both in 2015 and 2021. This difference is probably related to the nature of the jobs in more female-dominated sectors (such as health and social care). Employees in Italy report somewhat more often to be confronted with emotional demands, compared with the other countries that are in the scope of the PSYR-IR project.

Finally, we can conclude that employees in Industry are not often confronted with high emotional demands, although there is also and increase over time, from 4% to 9%. Differences between groups of workers and countries are negligible.

Figure 3. Percentages of workers (EU27) confronted with emotional demands, in general, in health and social care sector and in industry and split up for gender, age and country



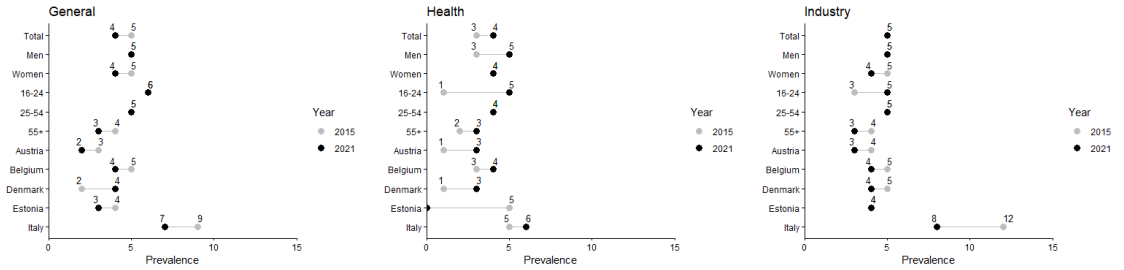
Source: Own calculations using EWCS2015 & EWCTS2021

4.2.2 Lack of task significance

The EWCS asks employees 'how often their job gives them the feeling of work well done', which provides us with in indication of the percentages of employees who experience a lack of task significance in their work. The results are summarised in Figure 4. A first and positive finding is that we can conclude that only a small share (on average 5%) of the employees experiences a lack of task significance and this didn't change much over time (from 4% to 5%). Differences across sectors are very small.

Compared to the other countries in the scope of this project, Italy stands out with higher shares of employees reporting a lack of task significance (up to 9% in 2021). Especially in die Industrial sectors, employees in Italy report more often a lack of task significance, and there was also a clear increase between 2015 and 2021. In the health and social care sector in Italy, on the other hand, there was not much change over time. Although the prevalence of a lack of task significance was closer to the overall EU27 average, Italian employees in the health and social care also more often experience a lack of task significance compared to their colleagues in other countries. Furthermore, we can observe that older employees less often experience a lack of task significance, an observation which stands across sectors.

Figure 4. Percentages of workers (EU27) confronted with a lack of task significance, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

4.2.3 Strategies of organisations

The ESENER survey examined the strategies employed by organisations to mitigate psychosocial risk factors, including the reorganisation of work to reduce job demands and work pressure. On average across the EU, 44% of organisations implemented this measure, ranking it as the second most utilised approach. Denmark reported the highest percentage of organisations adopting this strategy (58%), while the lowest usage was observed in the Czech Republic (24%). In the countries participating in the PSYR-IR project, the lowest results were observed in Italy (41%) and Estonia (42%).

In terms of sectors, the measure was most utilised in Human Health and Social Work Activities, with 57%. However, when examining the aspect of job demands and the pressure stemming from time constraints, these sectors also face challenges in this regard. This measure was notably less utilised in the sectors of Construction, Waste Management, Water, and Electricity Supply (38%) and Manufacturing (40%). Overall, upon comparing results across different survey periods, there has been a general increase in the adoption of measures to prevent psychosocial risks (EU-OSHA, 2022a). This positive trend is noteworthy, considering that work demands are among the most recognised psychosocial risk factors in the workplace.

4.3 Psychosocial risks related to work intensity

4.3.1 Work intensity

Work intensity emerged as one of the two psychosocial risk factors widely acknowledged in the ESENER survey, with approximately 45% of organisations across the EU recognising it as a psychosocial risk within their establishments. Notably, the highest recognition rates were observed in Finland, Sweden (both 74%), and Denmark (73%), while the lowest was noted in Italy (19%). Sector-wise, the highest recognition of job demands was observed within the Human Health and Social Work Activities sectors, with 58%. Recognition was higher as well in the sectors of Construction, Waste Management, Water, and Electricity Supply (46%) compared to the manufacturing sector (36%) (EU-OSHA, 2022a).

Additionally, the ESENER report highlights that the reporting of psychosocial risk factors tends to increase with establishment size. For instance, large organisations were significantly more inclined to report time pressure (69%) compared to microenterprises (39%). These findings may imply potential underreporting of the true prevalence of such risks, which is concerning, particularly considering the substantial employment contribution of micro, small, and medium-

sized enterprises. Furthermore, it is widely acknowledged that employees of small and micro firms are exposed to greater OSH risks, such as resource limitations and unpredictable workloads (EU-OSHA, 2022a).

The MPSR report indicates that in smaller organisations across all participating countries and sectors, the most commonly reported psychosocial risks were high workload, time pressure, and dealing with demanding clients. Notably, high workload emerged as a primary barrier to establishing policies or action plans for managing psychosocial risks, primarily due to constraints in time and staff availability. Managers expressed concerns about their own workload, feeling they lacked adequate time to effectively address psychosocial risks (EU-OSHA, 2022b).

Data from the MPSR report suggest that several psychosocial risks have emerged or intensified due to the COVID-19 pandemic, including excessive workloads and time pressure. Employees predominantly highlighted specific psychosocial risks such as time pressure and high workload, whereas managers and highly qualified experts more frequently reported experiencing stress related to company performance, market competition, and meeting targets. Additionally, managers highlighted the added burden of reorganising work during the pandemic, considering factors such as individual worker vulnerability, family responsibilities (such as caring for small children when schools and kindergartens were closed), and a prevailing sense of insecurity (EU-OSHA, 2022b).

Based on EWCS 2015 and EWCTS 2021 data, changes in prevalence rates of employees at-risk across sectors are presented in Figure 5. The overall prevalence of at-risk employees in the EU27 has increased from 28% in 2015 to 38% in 2021. Sector-wise, both the health and social care (27% to 41%) and industry sectors (34% to 39%) saw a rise from 2015 to 2021, with the health and social care sector experiencing the most significant increase. This trend is consistent across demographic variables such as gender and age, although notable disparities exist.

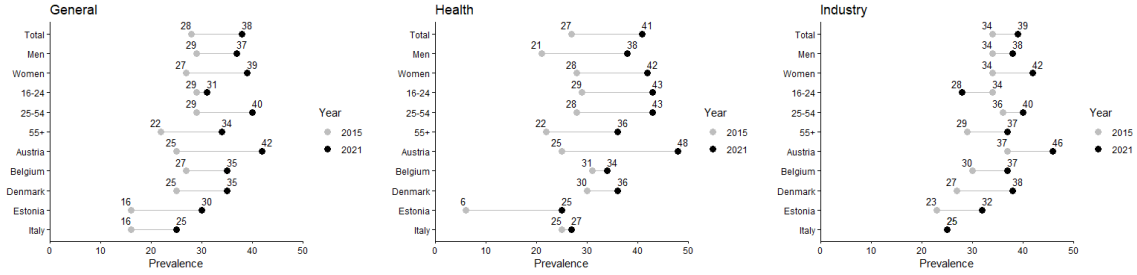
In general, for the EU27, more men (29%) than women (27%) were at-risk for high work intensity in 2015. However, by 2021, this pattern reversed with 37% of men and 39% of women at-risk. In the health and social care sector, more women were at-risk than men in both 2015 (21% men vs. 28% women) and 2021 (38% men vs. 42% women). In the industry sector, the difference in men and women at-risk was negligible in 2015 (both 34%), but by 2021, the gap widened (38% men vs. 42% women).

Regarding age, in the EU27, employees over 55 years old had the lowest risk of high work intensity in 2015 (22%), while those aged 16 to 54 had the highest (29%). By 2021, the employees aged 25-54 had the highest prevalence of at-risk individuals (40%), followed by older employees (34%) and younger employees (31%). This trend was also observed in the industry sector. In 2015, the industry employees aged 25-54 were the most at-risk, followed by those aged 16-24 (34%) and those over 55 (29%). By 2021, the prevalence of at-risk employees decreased for the younger group but increased for the older group, with middle-aged employees remaining the most at-risk (40%), followed by the older (37%) and younger employees (28%). In the healthcare sector, younger employees were the most at risk in both 2015 (29%) and in 2021 (43%), followed by middle-aged (28% in 2015 & 43% in 2021), and older employees (22% in 2015 & 36% in 2021).

Lastly, on a country level, Belgium (27% in 2015 & 35% in 2021), Denmark (25% in 2015 & 35% in 2021), and Austria (25% in 2015 & 42% in 2021) had the highest prevalence of at-risk employees in both 2015 and 2021. Estonia (16% in 2015 & 30% in 2021) and Italy (16% in 2015 & 25% in 2021) had significantly fewer at-risk employees. In the healthcare sector in 2015,

Belgium (31%), Denmark (30%), Austria (25%), and Italy (25%) had the most at-risk employees, while Estonia had the fewest (6%). By 2021, the gap between Estonia and the other countries closed, while Austria's rate increased significantly (48%), followed by Denmark (36%), Belgium (34%), with Italy (27%) and Estonia (25%) still having the fewest at-risk employees. In the industry sector, Austria had the highest prevalence in both 2015 (37%) and 2021 (46%), while Belgium (30% in 2015 & 37% in 2021), Denmark (27% in 2015 & 38% in 2021), Estonia (23% in 2015 & 32% in 2021), and Italy (25% in both years) had the lowest.

Figure 5. Percentages of workers (EU27) confronted with high work intensity, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

There is also a concern regarding work demands, leading employees to work during their free time to meet job requirements. Analysis of the COVID e-survey results reveals a significant portion of employees reporting the need to work outside of regular hours. In April 2020, across the EU, approximately 34% of employees reported having to work in their free time at least once a week, with responses ranging from once or twice a week to every day. This figure slightly decreased to 33% by May 2022. However, it is noteworthy that the percentage of employees who reported never having to work during their free time to meet work demands also decreased during the post-COVID pandemic period (Eurofound, 2020; 2022). This trend suggests a persistent challenge in achieving a healthy work-life balance.

According to the OSH Pulse data from 2022, nearly half of the employees is expose at severe time pressure or an overload of work (Table 12). These shares are highest among women and workers between 25 and 54 years old. Further country differences can be observed, with higher shares of employees reporting exposure to work overload and time pressure in Austria (48%) and Belgium (47%) compared to Italy (40%). In the health and social care sector, work overload and time pressure are more prevalent (51%) compared with manufacturing (43%) and construction (46%).

Table 12. Would you say that at work you are exposed to the following factors? (% 'yes')

Country	Severe time pressure or overload of work
EU27	46
Men	44
Women	48
16-24 years	38
25-39 years	46
40-54 years	47
55+ years	45
Austria	48
Belgium	47
Denmark	43
Estonia	42
Italy	40
Manufacturing or engineering sector	43
Construction or building sector	46
Health and social care sector	51

* OSH Pulse all respondents, EU27, n=25683

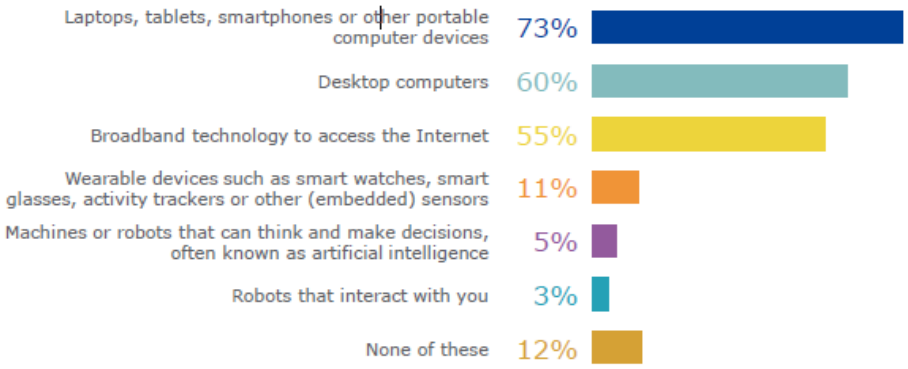
Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

4.3.2 Technology overload

Connected to digitalisation, ESENER investigated the potential impacts of technology development on employees' health and safety. Although only a relatively small share of organisations (24% of the EU average) engaged in discussions about the potential impacts of digital technologies, a notable 59% of these organisations across the EU contemplated the possibility that technology use might be associated with increased work intensity or time pressure. Additionally, information overload was another concern raised, with an average of 53% of these organisations across the EU discussing this aspect in relation to technology use (EU-OSHA, 2022a).

The OSH Pulse (2022) inquires employees about the use of digital devices in their job (Figure 6), discerning different types of digital devices. About three quarter of the employees indicate using a laptop, tabled or smartphone in their main job, a finding which stands across all types of businesses or sectors. Other digital devices are used less frequently. Only one of of ten employees never uses a digital device. Differences between countries in the share of employees using one or more digital devices in their main job are minimal (EU27: 89%). Comparing the countries involved in the scope of this project, the highest share is found in Belgium (91%), followed by Denmark (90%), Austria and Estonia (both 89) and Italy (86%) (EU-OSHA, 2022).

Figure 6. Use of digital devices in main job



* OSH Pulse, all respondents, EU27, n=25683

Source: Report Flash Eurobarometer (EU-OSHA, 2022)

Workers further indicate that the use of these digital technologies has an impact on their work in several ways (Table 13) (EU-OSHA, 2022). They report most often an impact speed and pace of work (52%). This is experience more often in Denmark (72%) and Estonia (67%), and somewhat more in the manufacturing sector. Further about 44% of the employees indicate that the use of these digital technologies results in them working alone. This is reported more often in Austria (48%), Estonia (46%) and Italy (46%). Hence, as workers work more alone, this increased risk of social isolation and a lack of support from colleagues and supervisors. Further about one third of workers indicate that the use of the digital technologies has increase the surveillance of their work, which can bring along other psychosocial risks such as a decrease of autonomy or loss of trust or task significance. Further 33% experiences and increase in the workload. Workers from Belgium and Austria (39%) report this more often than worker from Estonia (17%). In health and social care (37%) workers experience this impact on their workload more extensively that in industry and construction. Finally, also about 20% indicates the use of digital technologies reduces their autonomy at work. This is more profound in Austria (22%), while less reported in Belgium (14%). Consequently, we can conclude that the use of digital technologies is ubiquitous and that these technologies can impact on workers, their exposure to psychosocial risks and thus their wellbeing in many ways.

Table 13. Would you say that the use of digital technologies in your workplace…? (% 'yes')

Country	Determine the speed or pace of your work	Resulting in you working alone	Increase surveillance of you at work	Increase your workload	Reduce your autonomy at work
EU27	52	44	37	33	19
Austria	55	48	36	39	22
Belgium	55	34	37	39	14
Denmark	72	31	26	23	16
Estonia	67	46	42	17	17
Italy	27	46	38	32	16
Manufacturing or engineering	53	45	40	31	20
Construction or building	47	39	34	30	21
Health and social care	49	38	40	37	20

* all respondents, EU27, n=25683

Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

4.4 Psychosocial risks related to work schedule

According to ESENER, in the period before COVID-19, organisations did not perceive long or irregular working hours as a significant psychosocial risk in their working environment. In 2019, only 21% of organisations in the EU average acknowledged long and irregular working hours as a psychosocial risk within their organisation. The ESENER report also notes that this issue was reported less extensively, despite the expectation that it might be quite common, suggesting a potential underreporting phenomenon (EU-OSHA, 2022a).

Country-based analysis reveals that long and irregular working hours were most widely recognised as a psychosocial risk within organisations in Denmark, with 44% acknowledging this concern, while it was least recognised in Italy, where only 8% of organisations identified it as a psychosocial risk. Moreover, sector-based analysis indicates that this issue was more prominently recognised in the Human Health and Social Work Activities sector (31%), compared to the Manufacturing sector (13%) and the Construction, Waste Management, Water and Electricity Supply sectors (18%) (EU-OSHA, 2022a).

4.4.1 Working hours

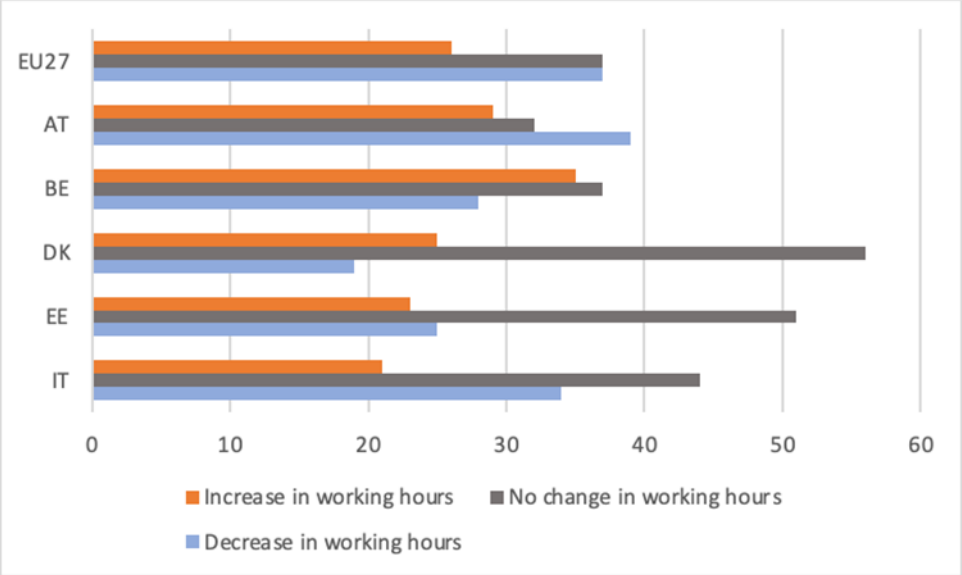
Regarding working hours, there has been an observable increase following the onset of the COVID-19 pandemic. This rise was particularly notable after the pandemic began in 2020. The EU average working hours increased to 41 hours per week, with some countries experiencing substantial spikes. For instance, in Italy it reached to 60 hours per week, in Denmark 50 hours per week and in Estonia 46 hours per week (Eurofound, 2020).

The COVID e-survey conducted in 2020 also examined the variation in employees' working hours during the pandemic period. Findings indicated that in April 2020, there was a noticeable fluctuation in working hours, with some experiencing increases while others observed decreases. Specifically, across the European Union, approximately 19% of employees reported an increase in their working hours to some degree (whether slight or substantial), whereas 49% noted a decrease in their working hours to some extent (Eurofound, 2020). This variation is linked to temporary unemployment in some sectors due to lockdown restrictions, which limited their activities, while other sectors, particularly Health Care, experienced overload, leading to increased working hours due to heightened demands and pressure on care services.

The onset of the pandemic was characterised by significant uncertainty, given its unprecedented nature, encouraging individuals to expect a swift resolution and a return to a state of normality instead of adapting to the circumstances. Initially, in many cases various support systems and financial aids were instituted to assist companies in managing the situation more effectively and retaining their workforce, even if not fully engaged in regular duties.

By July 2020, noticeable shifts occurred, with 26% of employees reporting an increase in their working hours to some extent and 37% indicating a decrease in their working hours to some extent. This suggests a trend toward increased stability as both individuals and companies adapted and resumed more operational activities. Furthermore, the proportion of employees experiencing increased working hours surpassed those experiencing decreases, indicating a positive trend in labour engagement as the situation evolved. When examining the country level data, it is evident that Belgium and Austria demonstrated a significant trend of increased working hours (Eurofound, 2020) (Figure 8).

Figure 7. Change in working hours during COVID-19 pandemic (July 2020)



Source: Living, working and COVID-19 e-survey data from 2020

Although there has been a stabilisation of working hours over time, it is important to note that as of 2022, some cases still reported working hours that exceeded the established weekly norm. For example, in Belgium and Estonia, there were reports of exceeding the norm by 2 hours, while in Italy, the excess was 4 hours beyond the weekly norm (Eurofound, 2022).

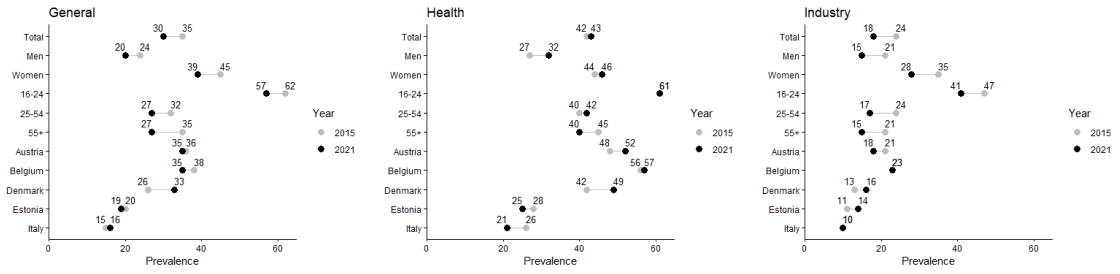
4.4.2 Atypical working hours

Figure 7 shows the share of workers working in atypical working hours. This can be very diverse, with employees working during the evening or night, on Saturdays or Sundays, doing shift work. In general, there was a small decrease of workers working at atypical working hours in 2021 (from 35% to 30%). However, this evolution can be partially attributed to to temporary lockdown in 2021, especially in sectors where atypical working hours were more common as these are jobs that often have to take place at the employer's premises (e.g. hospitality). Women more often report atypical working hours (39%) than men (20%). Young employees aged 16 – 24 years are more frequently working at atypical working hours, a difference which stands across sectors and can hence not be contributed to an overrepresentation of young workers in sectors with much atypical working hours. In Italy (16%) and Estonia (19%) atypical working hours are less common than in the other countries in the scope of this project.

In the health and social care sector we can see similar trends, although the share of workers confronted with atypical working hours is much higher (43% on average in 2021) and did not really change over time. This is of course related to the nature of the work in this sector, where the need for care does not stop in the evening or during weekends. Consequently, shift work is also very common in health and social care, to ensure continuity of care. However, even within the health and social care sector, we can notice that men less often (32%) work in jobs with atypical working hours, compared to women (46%). Unlike the whole economy and the industrial sector, the share of workers between 25 and 54 years old in health and social care confronted with atypical working hours increased between 2015 and 2021. Comparing countries, we see the general differences also translated in the health and social care sector, with lower shares of workers with atypical working hours in Italy (21%) and Estonia (25%) compared with Denmark (49%), Austria (52%) and the highest share in Belgium (57%).

In the industrial sectors these atypical working hours are less common (18%), and show an overall decrease between 2015 and 2021. Again, age and gender differences and country differences are in line with the general trend: lowest levels in Italy (10%) and Estonia (14%), while the highest levels are found in Belgium (23%).

Figure 8. Percentages of workers (EU27) confronted with atypical working hours, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

4.4.3 Measures

Regarding interventions addressing excessively long or irregular working hours, findings from the ESENER survey indicate a lack of widespread implementation. On average across the EU, only 30% of organisations intervened when employees worked extended or irregular hours. The survey report highlights this as the least utilised measure in managing psychosocial risks. There

are notable variations by country in implementing these interventions: Austria (41%), Belgium (20%), Denmark (44%), Estonia (18%), and Italy (24%) illustrate differing levels of action taken in this regard. There are also sector-specific differences in the implementation of interventions targeting excessively long or irregular working hours. This intervention is most commonly utilised in the sectors of Human Health and Social Work Activities (38%), and less frequently in Manufacturing (23%) and Construction, Waste Management, Water, and Electricity Supply (28%) sectors (EU-OSHA, 2022a). This corresponds with data regarding the recognition of long and irregular working hours as a psychosocial risk factor in organisations, where the issue is most pronounced in the Healthcare and Social Work Activities sector.

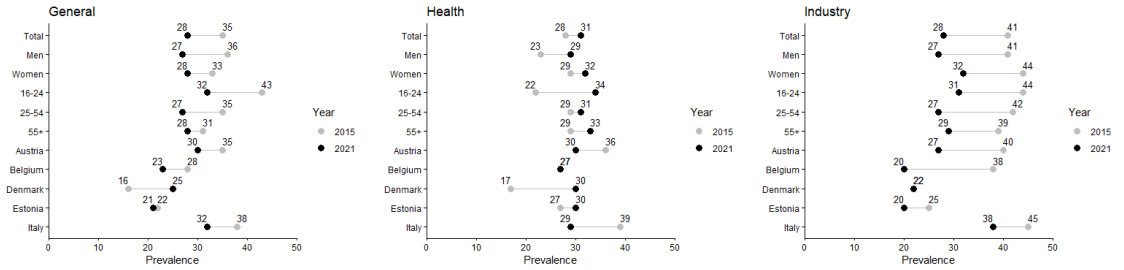
4.5 Psychosocial risks related to control and autonomy

ESENER explored whether the measures implemented by organisations to mitigate psychosocial risk factors are associated with increased job control and autonomy. It emerged that enabling employees to make more decisions about how they perform their tasks was the most commonly implemented measure. On average across the EU, 68% of organisations utilise this approach to reduce psychosocial risk factors in the workplace. In most sectors, approximately two-thirds of organisations reported implementing measures aimed at granting workers more autonomy. However, there are still significant variations observed at the country level. The usage of such measures is highest in Finland (91%), and relatively high in Denmark (80%) and Belgium (77%), while it is lowest in Italy (49%) (EU-OSHA, 2022a).

When comparing the implementation of measures aimed at providing employees with greater job control and autonomy across different organisation sizes, a contrasting trend emerges compared to the general pattern. In this scenario, small and micro firms appear to utilise this measure more frequently than large organisations. Specifically, 70% of micro and small firms reported adopting measures to empower employees to make decisions about their job tasks, compared to 58% of large companies (EU-OSHA, 2022a). Considering the inherent operational dynamics and flexibility associated with organisations of different sizes, it is reasonable to expect that smaller companies may be slightly more inclined to afford and implement such measures compared to larger organisations.

The data of the EWCS (2015 and 2021) show that the share of workers that experience a lack of autonomy has decreased over time (Figure 9). Especially young workers show a strong decrease and hence improvement of their autonomy during their work. Notably, in Denmark the share of workers experiencing a lack of job autonomy increased from 16% to 25%. Within the health and social care sector and opposite trend is observed, with and increase of the share of workers experiencing a lack of autonomy in most groups. This increase was most profound among young workers (from 22% to 34%) and again in Denmark (from 17% to 30%). In Italy on the other hand, workers experience an improvement of their autonomy. In the industrial sector, on the other hand, a clear trend of decrease of workers with a lack of autonomy can be seen, for both men and women, all age groups, and countries. Only in Denmark, no change is observed.

Figure 9. Percentages of workers (EU27) confronted with a lack of job autonomy, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

Table 14. Would you say that at work you are exposed to the following factors? (% 'yes')

Country	Lack of autonomy, lack of influence over the work-pace or work processes
EU27	18
Men	16
Women	19
16-24	14
25-39	17
40-54	19
55+	17
Austria	32
Belgium	17
Denmark	20
Estonia	14
Italy	13
Manufacturing or engineering	17
Construction or building	16
Health and social care	22

* OSH Pulse, all respondents, EU27, n=25683

Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

The OSH Pulse data look at the share of workers reporting a lack of autonomy, influence over the work pace or work processes (EU-OSHA, 2022) (Table 14). In 2022, 18% of the European workers experienced a lack of autonomy, again with higher shares of women (19%) than men (16%). Especially workers between 40 and 54 years stand out. The OSH Pulse shows similar country differences, compared with the findings of the EWCS. In the OSH Pulse, the share of workers experiencing a lack of autonomy is highest in Austria (32%) Followed by Denmark (20%), Belgium (17%), Estonia (14%) and Italy (13%). Also in 2022, in the aftermath of the COVID-19 pandemic, workers in the health and social care sector more often report a lack of autonomy or influence over their work pace and work processes than workers in manufacturing or construction.

4.6 Psychosocial risks related to interpersonal relationships at work

4.6.1 Difficult customers, patients, pupils

As per ESENER data, the most recognised psychosocial risk factor in workplaces is the necessity to handle challenging customers, patients, pupils, etc. Across the EU, an average of 59% of establishments acknowledged this as a psychosocial factor within their workplace. This share was highest in Portugal and Malta, both at 75%, and relatively high in Denmark (68%) and Belgium (67%), while it was lowest in Italy, at 36% (EU-OSHA, 2022a). When examining sectors, human health and social work activities were particularly notable for their recognition of this psychosocial risk in the workplace, with 83 % reporting the challenge of dealing with difficult customers, patients, and pupils. This is likely attributable to various factors inherent in such roles, including ongoing communication challenges with elderly individuals, the potential for intimidation, violence, or sexual harassment, as well as a demanding working environment characterised by limited control over care or support provision, heavy workloads, and irregular working hours (EU-OSHA, 2022a).

Given the significant prevalence of the psychosocial risks associated with dealing with difficult customers or patients prior to the COVID-19 pandemic, it is conceivable that this risk has become even more pronounced in the aftermath of the pandemic. The findings from the COVID e-survey underscore the immense strain placed on Europe's healthcare systems during the pandemic, with many non-essential healthcare services being halted, postponed, or substantially modified. The crisis intensified the already stressful nature of healthcare occupations, with healthcare workers facing extraordinary pressure due to the relentless influx of cases.

In spring 2022, a considerable proportion of respondents (18%) in EU reported having medical issues for which they had not yet received treatment. Moreover, by this time, healthcare systems across the EU had not effectively resolved the backlog of cases that had accumulated during the pandemic (Eurofound, 2022). Given these circumstances, it is crucial to conduct additional research on the psychosocial risks associated with managing difficult customers or patients in the post-pandemic period considering health care sector. The overall deterioration within the healthcare sector likely influenced the attitudes towards employees, underscoring the need for a more comprehensive investigation into this matter.

The OSH Pulse supports this importance of exposure to unsocial behaviours from patients, clients, … in the health hand social care sector, as the share of workers of this sector exposed to this is almost double (30%) compared to the EU total (16%) and more than three times the share in manufacturing (7%) or construction (9%). Women (19%) report more often to be expose to this PSR than men (13%). Further younger employees experience this more often, and these inappropriate behaviours of patients, clients, … are more often reported in Austria and Belgium, and least in Estonia (EU-OSHA, 2022).

Table 15. Would you say that at work you are exposed to the following factors? (% 'yes')

Country	Violence or verbal abuse from customers, patients, or pupils	Harassment or bullying
EU27	16	7
Men	13	6
Women	19	8
16-24	18	7
25-39	17	7
40-54	15	8
55+	14	8
Austria	21	9
Belgium	20	8
Denmark	14	7
Estonia	8	3
Italy	12	4
Manufacturing or engineering	7	6
Construction or building	9	6
Health and social care	30	10

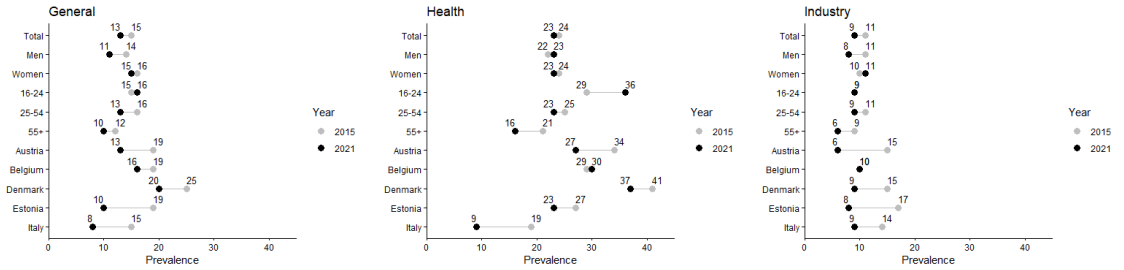
* OSH Pulse, all respondents, EU27, n=25683

Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

4.6.2 Asocial or inappropriate behaviours

Between 2015 and 2021, we can observe a small decrease in the exposure to asocial behaviours (such as bullying, violence, (sexual) harassment) from 15% to 13% in general (Figure 10). However, large country differences can be seen, with the highest prevalence in Denmark (20%) and lowest in Italy (8%). Furthermore, the differences between the health and social care sector and industry are large although they can be linked to the type of the work done in these sectors. In health and social care, about one in four employees is confronted with asocial behaviours, with is a considerable share that should not be neglected. Young employees are more at risk and also experienced an increase in their exposure between 2015 (29%) and 2021 (36%), while older employees aged 55+, experienced a decrease in their exposure (from 21% to 15%). Considerable country differences can be noted, with the highest shares in Denmark (37%) and Belgium (30% - even a small increase from 2015) and the lowest in Italy (9%). Within the industry sector, asocial behaviours are reported less often, by about 9% of the employees. Differences between gender and age groups are limited. Most countries report a clear decrease of the exposure to asocial behaviours, with Belgium as exception (no change).

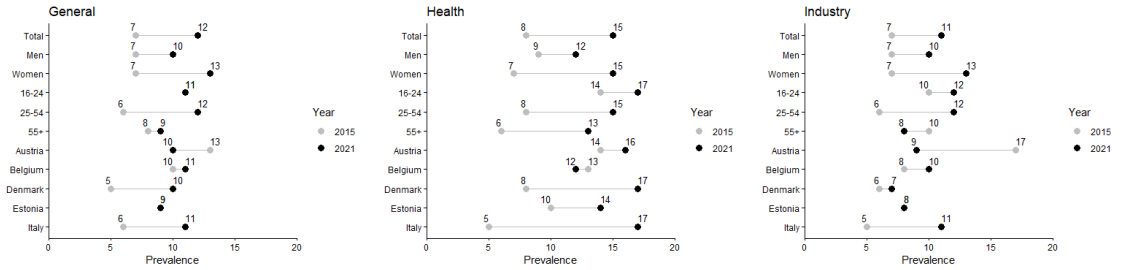
Figure 10. Percentages of workers (EU27) confronted with asocial behaviours, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

On the other hand, all groups of employees in both sectors reported a strong increase of the exposure to discrimination between 2015 (7% at EU27 level) and 2021 (12%) (Figure 11). Women more often report discrimination. In Austria – in contrary to other countries – a decrease is noted in general and especially in the industry sector from 17% in 2015 to 9% in 2021.

Figure 11. Percentages of workers (EU27) confronted with discrimination, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

The OSH Pulse also provides insights on the share of employees exposed to harassment or bullying in 2022. Overall, about 7% of the employees report they have been exposed to this, wit a higher share of women (8%) and older employees. Further, harassment and bullying are reported more often in the health and social care sector (10%) compared to manufacturing and construction (6%). Next to that, country differences can again be observed. In countries such as Estonia (3%) and Italy (4%) these asocial behaviours are less reported than in for example Austria (9%) (Table 14) (EU-OSHA, 2022).

4.6.3 Poor communication and cooperation

ESENER also explored communication and cooperation within organisations and discovered that this was the least acknowledged psychosocial risk factor among establishments. On average across the EU, only 17% of establishments recognised poor communication or cooperation within the organisation as a psychosocial risk in their workplace. The percentage was higher in Sweden (41%), Denmark (37%), and Belgium (29%), while it was lowest in Lithuania and Bulgaria (both 4%), and relatively low in Italy (8%) (EU-OSHA, 2022a).

When discussing adverse social behaviours, it is relevant to address workplace bullying and harassment, along with organisational approaches to prevention and resolution. According to the ESENER data, on average across the EU, 46% of organisations have established procedures to address bullying and harassment. However, these figures vary significantly by country, ranging

from 10% in Hungary to 95% in Ireland. Among the countries participating in the PSYR-IR project, the percentages were as follows: Belgium (83%), Denmark (64%), Austria (33%), Italy (33%) and Estonia (21%). On a sectoral level, the disparity is less pronounced. The higher rate was observed in the sector of Human Health and Social Work Activities (60%), while it was lower in the sectors of Manufacturing (38%) and Construction, Waste Management, Water, and Electricity Supply (39%). Additionally, data indicates that larger companies are more inclined to implement procedures. In 2019, 70% of large companies reported having such measures in place, compared to 41% of small firms (EU-OSHA, 2022a).

ESENER also examines whether organisations have established procedures to address cases of threats, abuse, and assault. On average, 52% of organisations in the EU have implemented such procedures. However, there are notable differences between countries, ranging from 18% in Hungary to 89 % in Ireland. Among the countries participating in the PSYR-IR project, the percentages were as follows: Denmark (78%), Belgium (71%), Estonia (43%), Austria (44%), and Italy (39%). In contrast, variations across sectors were less pronounced than those across countries. The sector most frequently reporting the use of procedures to address potential cases of abuse or assault was Human health and social work activities (75%) while it was lower in the sectors of Manufacturing (27%) and Construction, Waste Management, Water, and Electricity Supply (33%). Again, it was predominantly larger firms (73%) that reported utilising such procedures, compared to small firms (48%) (EU-OSHA, 2022a).

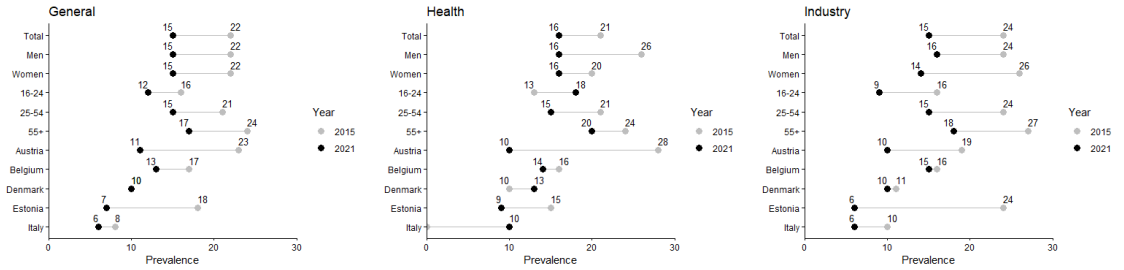
4.6.4 Supervisor-employee relationship

In the context of relationships and management, the ESENER survey also examined whether organisations routinely evaluate supervisor-employee relationships within their structures. Across the EU, an average of 56% of organisations had conducted evaluations of supervisor-employee relationships. The highest percentage was observed in Finland (81%) and the lowest shares were recorded in the Czech Republic and Greece (both at 37%). Among the countries participating in the PSYR-IR project, the percentages were as follows: Denmark (76%), Austria (66%), Estonia (62%), Belgium (53%) and Italy (42%). Sector-wise, the percentage was higher in the Human Health and Social Work Activities sector (66%) and lower in the Manufacturing (51%) and Construction, Waste Management, Water, and Electricity Supply (56%) sectors. Additionally, larger organisations (69%) assess supervisor-employee relationships more frequently than smaller companies (53%) (EU-OSHA, 2022a).

The manager plays a crucial role in psychosocial risk management. According to the MPSR report, it is often the manager's personality and leadership style that determines an organisation's approach to psychosocial risks, including their identification and awareness. Managers commonly report that they address issues by maintaining regular communication with workers, conducting team meetings, and encouraging open dialogue. The MPSR report further suggests that the effectiveness of this “human dimension” largely depends on the individual in charge rather than the systems in place. Regarding to that training managers on psychosocial risks is vital. It equips them to implement effective strategies, fostering a healthier work environment and boosting productivity (EU-OSHA, 2022b).

Based on the data of the EWCS 2015 and EWCTS 2021 we can observe an improvement of the supervisor support. The share of employees reporting a lack of support from their supervisor decreased from 22% to 15 %. This decrease can be observed for different groups and across countries and sectors. In 2015 similar shares of exposure to a lack of supervisor support can be seen in general and in the health and social care sector and industry (Figure 12).

Figure 12. Percentages of workers (EU27) confronted with a lack of supervisor support, in general, in health and social care sector and in industry

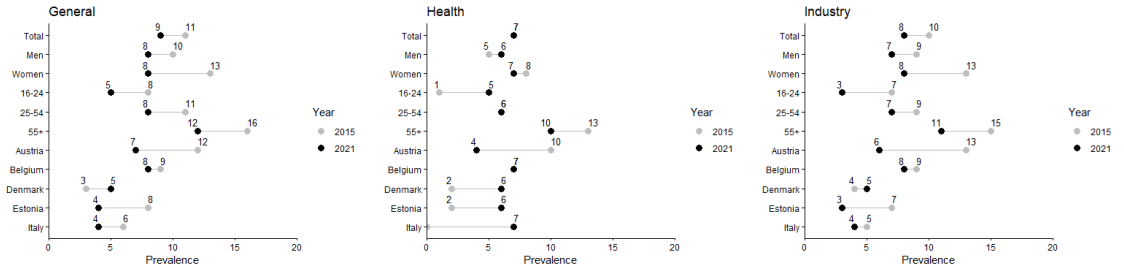


Source: Own calculations using EWCS2015 & EWCTS2021

4.6.5 Social support colleagues

The EWCS data show a similar evolution for the social support from colleagues. In general, the share of employees that experience a lack of support from their colleagues has decreased between 2015 (11%) and 2021 (9%). Older employees feel less supported by their colleagues than younger employees. Some country differences can be noted, with higher shares of employees reporting a lack of social support in Belgium (8%) and Austria (7%) (Figure 13). Within the health and social care sector there are strong country differences. While Austria reports a decrease in employees that experience a lack of social support (from 10% to 4%), the share of employees that experience a lack of social support from their colleagues has increased in Denmark, Estonia, and Italy.

Figure 13. Percentages of workers (EU27) confronted with a lack of support from colleagues, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

4.7 Psychosocial risks related to the role in the organisation

The surveys that were explored in this report did not provide usable figures on the prevalence or evolution of psychosocial risks related to one's role in the organisation, such as role conflict, role overload or role ambiguity. This is surprising and certainly a deficiency in the existing European surveys related to psychosocial risks and wellbeing, as the literature suggests that role conflict or role overload can be an important stressor or mediator between other job characteristics and the wellbeing and health of workers (Maden-Eyiusta, 2021; Rukundo et al., 2020).

4.8 Psychosocial risks related to career development

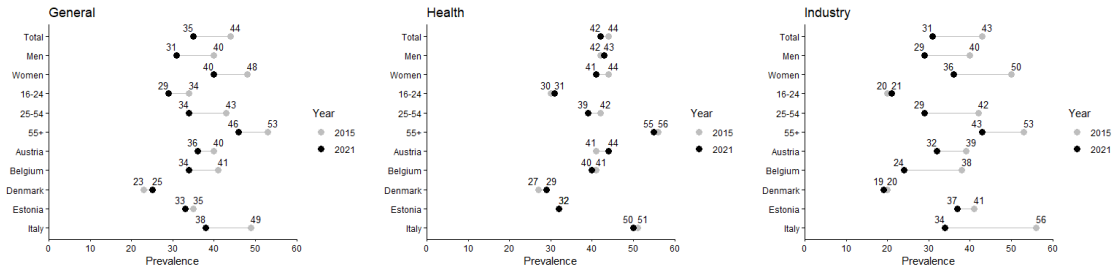
Digitalisation represents a significant and ongoing trend that continues to rapidly transform the work environment. While its impact has been evident for some time, the past few years have seen a notable acceleration in its adoption. ESENER's investigation into digital usage at work revealed personal computers to be the most widely adopted technology, with an EU average of 86% of organisations employing them. Following closely behind are laptops, tablets, and smartphones, with a slightly lower yet still significant adoption rate of 76% across the EU (EU-OSHA, 2022a).

However, the adoption rates for machinery and robotics were notably lower during the 2019 period when ESENER was conducted. On average across the EU, only 11% of organisations utilised machines that determined the content or pace of work, with this technology being more prevalent in the manufacturing sector. Additionally, machinery monitoring workers' performance was employed by 8% of organisations, while wearable devices such as smartwatches, data glasses, or embedded sensors were utilised by only 4% of organisations on average across the EU. Moreover, robots interacting with workers were utilised by only 3% of organisations on average across the EU (EU-OSHA, 2022a).

Digitalisation and the identification of training needs and opportunities are closely linked aspects. As revealed by ESENER, this recognition is widespread among organisations that discussed the possible impacts of digitalisation, with an average of 77% across the EU acknowledging the necessity for continuous training to ensure skills remain updated. (EU-OSHA, 2022a). Examining the swift advancement of technology and artificial intelligence (AI), an increasing number of enterprises are incorporating these innovations into their operations. Such integration demands the cultivation of new skill sets while concurrently giving rise to psychosocial risks. However, due to the rapid pace of technological development, there is a lack of comprehensive data for analysing the impacts of these advancements. Following the COVID-19 crisis, surveys related to digitalisation have primarily emphasised teleworking, rather than encompassing broader discussions on technology development and AI. Nevertheless, this matter is of considerable importance and thus demands thorough further discussion and investigation.

Data from the EWCS (2015 and 2021) show that the share of workers confronted with a lack of career opportunities has decreased between 2015 and 2021, from 44% to 35% (Figure 14). This decrease is noticeable among both men and women. Looking at workers by age category, especially workers of ages 25 to 54 years old record a big decline for this risk, from 43% in 2015 to 34% in 2021. For workers of ages fifty-five and up, the percentage of workers facing limited career opportunities dropped from 53% to 46%. Zooming in on the five countries in scope of the PSYR-IR project, the largest improvements are recorded in Belgium and Italy.

Figure 14. Percentages of workers (EU27) confronted with a lack of career opportunities, in general, in health and social care sector and in industry

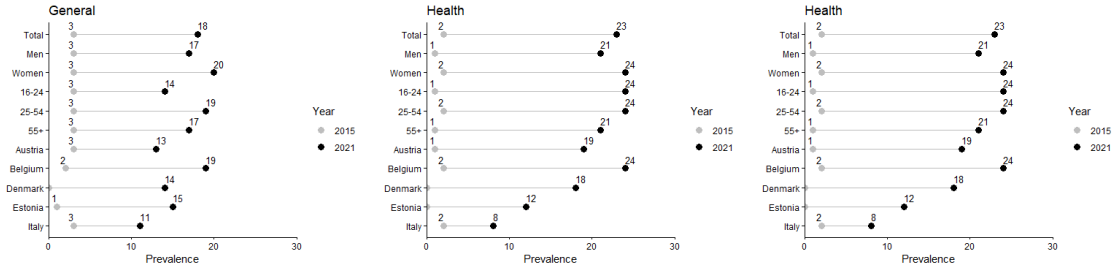


Source: Own calculations using EWCS2015 & EWCTS2021

Figure 14 further reveals that these improvements are particularly noticeable in industry, whereas the percentages of workers confronted with a lack of career opportunities has remained stable in the health sector, and this across gender, age, and country.

A different picture emerges when the percentage of workers who encounter a lack of recognition is analysed (see Figure 15). In this case, there is a clear increase of workers who recorded facing a lack of recognition, across gender, age, sector (looking at health and industry in particular) and country. Whereas in 2015 only 3% of workers said to experience a lack of recognition, this share stood at 18% in 2021. Slightly more women than men report a lack of recognition.

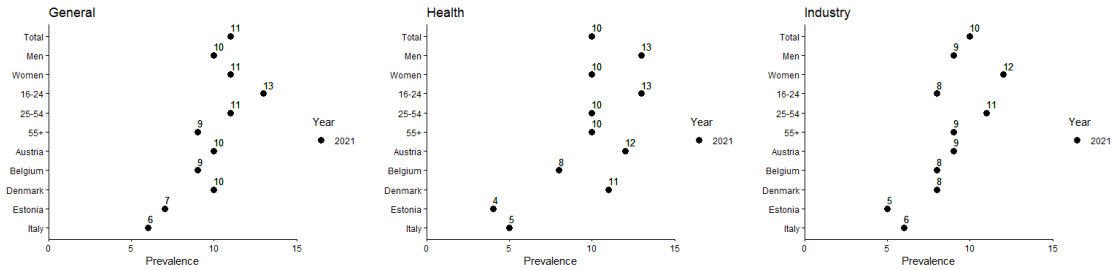
Figure 15. Percentages of workers (EU27) confronted with a lack of recognition, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

EWCS data for 2021 allow to assess the lack of skill utilisation as reported by workers completing the survey. Unfortunately, this information is not available for 2015. Across the EU27, on average, 11% of workers report being faced with a lack of skill utilisation. Especially young workers report finding themselves in this situation (13% among those of ages 16-24, versus 11% among workers of ages 25-54 and 9% among workers of ages fifty-five and up). Few differences are noticeable across the sectors in scope of the PSYR-IR project.

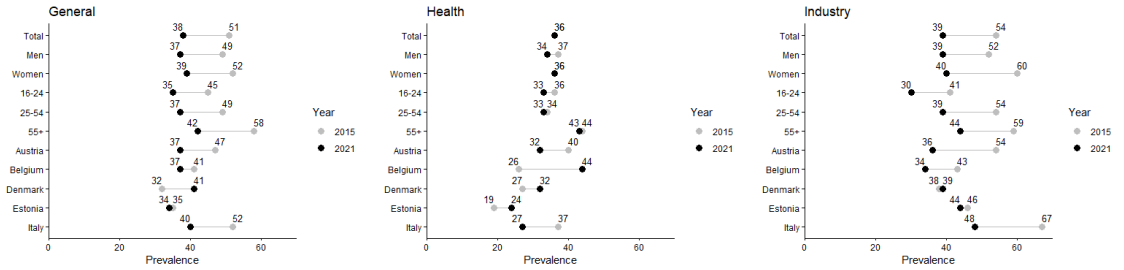
Figure 16. Percentages of workers (EU27) confronted with a lack of skill utilisation, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

In addition to skill utilisation, the EWCS data contain information on workers' training opportunities (Figure 17). In general, fewer workers report being confronted with a lack of training opportunities in 2021 (38%) compared to 2015 (51%). This change is recorded across gender and age groups, with the largest difference for workers of ages fifty-five and older (58% of workers were confronted with a lack of training opportunities in 2015 compared to 42% in 2021). Also in this case, large changes are recorded especially in industry in comparison to health care.

Figure 17. Percentages of workers (EU27) confronted with a lack of training opportunities, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

4.9 Psychosocial risks related to occupational (in)security

4.9.1 Job insecurity

The recognition of job insecurity as a psychosocial risk within organisations varied significantly across countries (in light of their prevailing economic conditions), as well as the activity sectors facing particular challenges. However, prior to the COVID-19 pandemic, the acknowledgment of job insecurity as a psychosocial risk was relatively low. According to ESENER, the EU average was 11%, with the highest recognition of the fear of job loss observed in Denmark at 23%, and the lowest in Malta at 6%. Additionally, there were notable differences observed within individual countries across various sectors (EU-OSHA, 2022a).

The MPSR report highlights that the impacts of inadequate work organisation and communication were particularly pronounced due to the COVID-19 pandemic. Many sectors shifted to teleworking either partially or entirely, while others experienced significantly reduced interaction with clients. This transition was especially stressful in private enterprises, where fears of business closure or layoffs heightened existing stress levels. Despite some managers' efforts to shield the employees from these pressures, the challenging circumstances were widely felt and reported across companies (EU-OSHA, 2022b).

Examining the unemployment rate, it is evident that the onset of the COVID-19 pandemic led to an increase. However, with the lifting of restrictions on economic activity in nearly all EU Member States by spring 2022, unemployment decreased across the EU. From a pandemic peak of 7.8% EU average in late 2020, it declined to 6.2% in spring 2022, lower than the unemployment rate at the beginning of the pandemic, which stood at 6.5% (Eurofound, 2022).

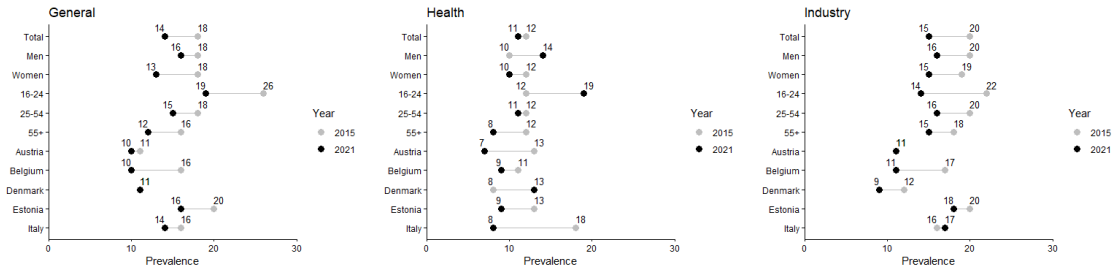
Regarding job insecurity, as indicated by the COVID e-survey, in April 2020, the EU average showed that 14% of employees expressed fear of job loss (considering it rather likely or very likely). By May 2022, this figure decreased to 10% of employees expressing fear of job loss. However, significant differences existed among countries. For instance, in 2022 the share of those fearing job loss was low in Austria, Belgium, and Estonia, but higher in Italy (Eurofound, 2022).

Job insecurity and the fear of job loss have traditionally been associated with economic conditions and various crises. However, it is important to recognise that job insecurity may also be influenced by workplace changes, including the ongoing process of digitalisation. ESENER underscores the limited attention given to the discussion of psychosocial risks associated with digitalisation. In 2019, across the EU, only 24% of establishments that reported having discussed the potential

OSH impacts of using digital technologies in the workplace. Moreover, the survey report highlights that psychosocial risks were among the least prioritised concerns in relation to the impact of digital technologies. The main concerns that were discussed were the need for continuous training to keep skills updated and the issue of prolonged sitting (EU-OSHA, 2022a).

In this regard, it is interesting to consider the findings based on EWCS data from 2015 and 2021. As is clear from Figure 18, the percentage of workers across the EU27 reporting being faced with job insecurity has declined between 2015 and 2021, from 18% to 14%. This decline is especially noticeable in industry (from 20% in 2015 to 15% in 2021), compared to health (from 12% to 11%). Also, among young workers, large differences are recorded (26% faced job insecurity in 2015 vs. 19% in 2021). These findings could perhaps be explained by the introduction of a wide range of temporary measures to alleviate the impact of the COVID-19 pandemic, e.g. the use of temporary unemployment for workers, subsidies targeting companies and sectors, etc. which could provide more security than in normal circumstances. Looking at sectors, it is interesting to note that while industry shows an overall improvement, in health increases in the share of workers faced with in job insecurity are reported for some categories: men (10% in 2015 versus 14% in 2021) and in Denmark (8% in 2015 versus 13% in 2021).

Figure 18. Percentages of workers (EU27) confronted with job insecurity, in general, in health and social care sector and in industry



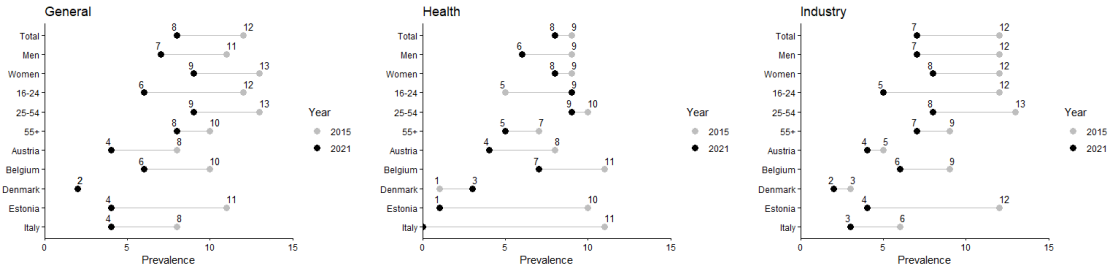
Source: Own calculations using EWCS2015 & EWCTS2021

ESENER investigated whether organisations are engaging in discussions regarding the potential threat of job displacement due to the adoption of digital technologies. This inquiry was directed exclusively to organisations that affirmed having discussed the potential impacts of digital technology deployment on the health and safety of their workforce. Across the EU, the average proportion of such organisations discussing the prospect of job loss stood at 21% (EU-OSHA, 2022a). This relatively modest percentage underscores the need for further research, especially considering the rapid evolution of technology, notably the escalating integration of artificial intelligence (AI) in workplaces. As more work processes transition to AI-driven systems, wherein employees may find themselves in roles overseeing automated processes, the implications for job security warrant comprehensive investigation.

4.9.2 Financial worries

Figure 19 shows the share of workers in the EU27 who reports experiencing financial worries. In the figure, it is clear that the percentage of workers with financial worries has declined between 2015 and 2021 (from 12% to 8%, across the EU27 and across all workers). This trend is visible for both men and women, though slightly more women than men report being confronted with financial worries (9% versus 7% in the year 2021). As before, the largest changes are noticeable in industry (from 12% of workers reporting financial worries in 2015 to 7% in 2021).

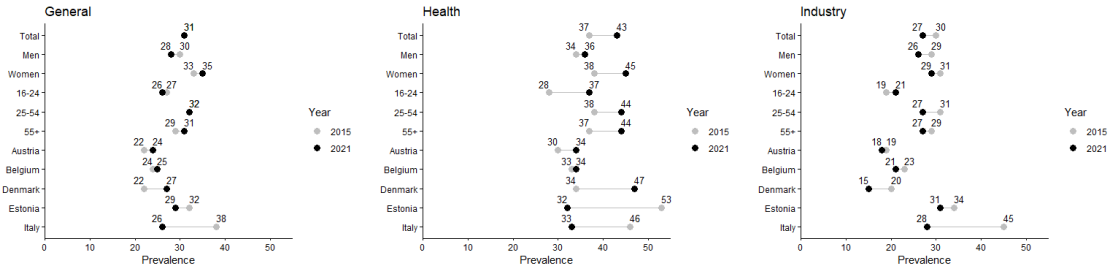
Figure 19. Percentages of workers (EU27) confronted with financial worries, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

The EWCS data for 2015 and 2021 additionally contain information on how workers perceive their pay and whether they perceive it as appropriate. Across the EU27, the percentage of workers that reports being confronted with a lack of appropriate pay stood at 31% in 2021. For this risk, different dynamics are recorded across gender, age groups, sectors, and countries, but overall, the changes over time are quite limited. One exception is the health sector, in which more workers report being confronted with a lack of appropriate pay in 2021 compared to 2015 (43% in 2021 versus 37% in 2015). Especially women workers in the health sector report this risk; the percentage even stood at 45% in 2021.

Figure 20. Percentages of workers (EU27) confronted with a lack of appropriate pay, in general, in health and social care sector and in industry

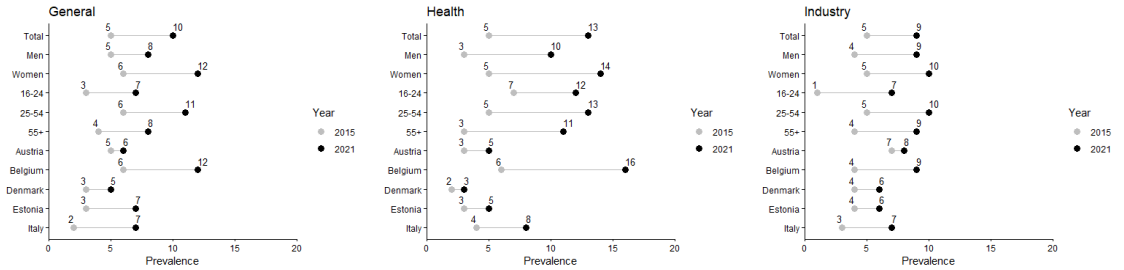


Source: Own calculations using EWCS2015 & EWCTS2021

4.10 Psychosocial risks related to work-life interface

The EWCS data for 2015 and 2021 also provide information on work-life interference. As is shown in Figure 21, 5% of workers reported experiencing work-life interference in 2015. This percentage doubled by 2021, which could be related to the COVID-19 pandemic. Whereas in 2021 12% of women report being confronted with work-life interference, for men the share stood at 8%. Looking at age groups, especially workers of ages 25 to 54 years old report work-life interference (11% of workers in this age group, versus 7% among those of ages 16-24 and 8% among those of ages fifty-five and up). Of the five countries that the PSYR-IR project zooms in on, the share of workers who report work-life interference is highest in Belgium (12%, versus 6% in Austria, 5% in Denmark, 7% in Estonia and 7% in Italy). In both health and industry, there is an increase in the percentage of workers reporting work-life interference. In health, there is an increase from 5% to 13%, while in industry, the share increased from 5% to 9%.

Figure 21. Percentages of workers (EU27) confronted with a work-life interference, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

4.11 Psychosocial risks related to organisational culture and PSC

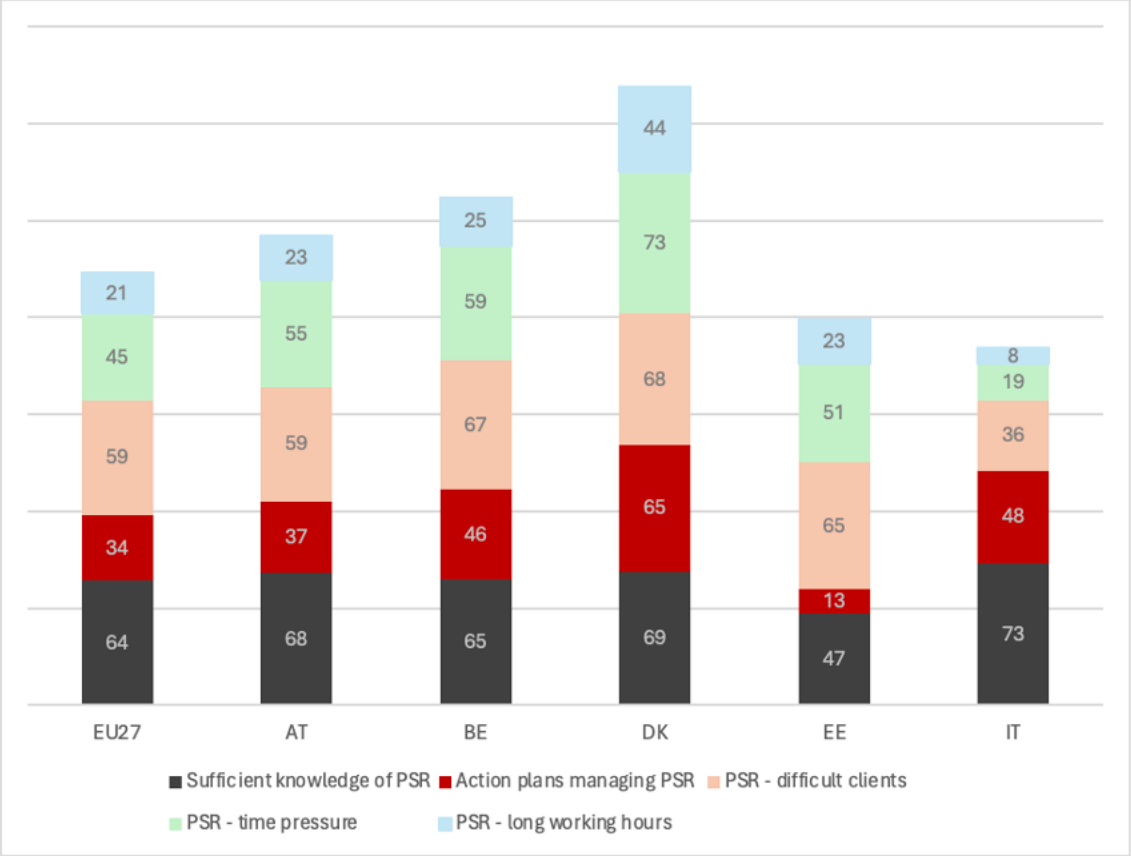
4.11.1 Knowledge of psychosocial risk factors

Employers' understanding of psychosocial risk factors influences work practices and contributes to the formation of organisational culture. The MPSR report underscores that while legal OSH requirements are crucial, they are insufficient when addressing psychosocial risk factors. The organisation culture significantly influences whether discussions about psychosocial risks can occur in the organisation (EU-OSHA, 2022b).

With the 2019 ESENER survey, EU-OSHA carried out an investigation to determine whether organisations possess the necessary knowledge to understand and identify psychosocial risk factors. The survey asked organisations whether they have sufficient information on how to incorporate psychosocial risks into risk assessments. The results revealed relatively high percentages, with an EU average of 64% of organisations reporting adequate knowledge. Italy reported the highest percentage at 73%, followed closely by the Netherlands and Sweden at 72%, and Denmark at 69%. Conversely, Malta reported the lowest percentage at 38%, followed by Lithuania at 40% (EU-OSHA, 2022a).

Interestingly, at the country level, Italy reported the highest numbers of organisations claiming knowledge of including psychosocial risk factors. However, when considering recognised psychosocial risk factors in the workplace, Italy often ranks among the lowest percentages. Conversely, Denmark reported a relatively high number of organisations claiming knowledge of including psychosocial risk factors, and they tend to report higher numbers of recognised psychosocial risk factors in the workplace. This disparity warrants further investigation to understand the underlying reasons for these differences.

Figure 22. Comparison: sufficient knowledge for assessing psychosocial risk factors, action plans to manage psychosocial risk factors and recognition of psychosocial risk factors



Source: ESENER data from 2019

Across all sectors, more than half of establishments indicated that they possessed adequate information on how to integrate psychosocial risks into risk assessment. The proportion was notably highest within the Health and Social Work Activities sector, with 75% of establishments reporting sufficient knowledge. It was lower in Manufacturing (60%) and in the Construction, Waste Management, Water, and Electricity Supply sectors (61%). Furthermore, the data revealed that the availability of adequate information varies according to company size, with 78% of large firms and 62% of micro firms affirming they had enough information (EU-OSHA, 2022a).

ESENER also examined whether organisations find it easier or more challenging to address psychosocial risks compared to other types of risks. The survey revealed higher percentages of respondents indicating that psychosocial risks were more difficult to address in Sweden (43%), Denmark (38%), and Finland (34%). Conversely, higher percentages of respondents in Croatia (43%) and Romania (28%) stated that psychosocial risks were easier to address (EU-OSHA, 2022a).

Additionally, the ESENER data indicated that establishments implementing measures to address psychosocial risks often found them more challenging to manage compared to other types of risks. Notably, these countries, acknowledging the complexity of addressing psychosocial risks, also demonstrated higher rates of recognising psychosocial risk factors and undertaking preventive actions (for example Sweden, Denmark, Finland).

At the establishment level, the size of the organisation significantly impacts the management of psychosocial risks. Micro firms, for instance, tended to have fewer measures in place to address psychosocial risks and more often reported insufficient information to include psychosocial risks in risk assessments. Yet, they also indicated that addressing these risks was easier than addressing others, in higher proportions compared to other business size categories (EU-OSHA, 2022a).

The MPSR report further highlights a significant disparity between smaller and larger companies regarding their approaches to managing psychosocial risks. Smaller companies tend to adopt informal actions aimed at fostering open communication with their employees, while larger organisations often adopt a structured approach involving various presentations and training events. This underscores the significant influence of workplace culture on organisations' strategies for psychosocial risk management (EU-OSHA, 2022b). For instance, in the Netherlands, regardless of company size, the culture tends to be relatively flat, characterised by a low level of hierarchy and an informal working environment. This cultural aspect translates into a preference for informal methods of addressing psychosocial risks, such as regular team discussions, social gatherings, and informal meetings, rather than relying heavily on formalised policies and procedures. The MPSR report suggests a correlation between smaller company size and a positive organisational culture that facilitates informal approaches to managing psychosocial risks (EU-OSHA, 2022b).

However, the report also states that it is not clear whether a smaller organisation size does in fact lead to an effective approach to psychosocial risk management. According to ESENER data, smaller organisations tend to report less frequently that they have psychosocial risks. The report suggests that therefore it could be that smaller organisations do not in fact have fewer risks that can be dealt with through informal approaches but actually underestimate the frequency and prevalence of these risks, hence believing that an informal approach is enough to address them effectively (EU-OSHA, 2022b).

The MPSR report further highlights a significant finding that an open and informal organisation culture, by itself, does not ensure an effective approach to addressing psychosocial risks. Despite the culture being described as 'open', discussions among staff members about their mental and physical wellbeing are not prevalent. Additionally, within smaller companies, a sense of solidarity among staff members can sometimes hinder the approach to addressing psychosocial risks. Employees may hesitate to voice concerns about their workload, fearing that any problems raised will simply be shifted to another colleague, thereby increasing the burden on them (EU-OSHA, 2022b).

4.11.2 Challenges in addressing psychosocial risks

ESENER additionally explored the specific challenges in addressing psychosocial risks by investigating various aspects. The most commonly reported difficulty in addressing psychosocial risk factors was **reluctance to openly discuss these issues**. Across the EU, an average of 60% of organisations acknowledged this challenge. Notably, 'reluctance to talk openly about these issues' emerged as the most frequently reported obstacle across all countries. Among the countries participating in the PSYR-IR project, the percentages were as follows: Belgium (62%), Austria (61%), Estonia (55%), Denmark (53%) and Italy (53%) (EU-OSHA, 2022a). Regarding sectors, the results revealed that 'reluctance to talk openly about these issues' was also the most frequently reported obstacle to managing psychosocial risks in all sectors. It was particularly prevalent in Construction, Waste Management, Water, and Electricity Supply sectors (72%) and

in Manufacturing (69%), while being less common in Human health and social work (51%) (EU-OSHA, 2022a). The MPSR report highlights this as a critical barrier: employees often feel constrained in expressing concerns about psychosocial issues due to stigma and the perceived shame associated with addressing mental health matters. Notably, despite the presence of open and informal organisational cultures, psychosocial risks still carry with them a significant sense of stigma and shame. Furthermore, the study emphasises that lack of trust within the company prevents people from speaking up about problems (EU-OSHA, 2022b).

Another challenge in addressing psychosocial risks is connected to **a lack of expertise or specialised support**. Across the EU, an average of 46% of organisations reported this as a difficulty. Country-specific differences are observed. Among the countries participating in the PSYR-IR project, the percentages were: Denmark (51%), Estonia (43%), Austria (36%), Belgium (34%) and Italy (35%). Sector-wise, there are also notable differences. The percentage was lower in the Human Health and Social Work Activities sector (34%) and higher in the Construction, Waste Management, Water, and Electricity Supply (46%) and Manufacturing (48%) sectors (EU-OSHA, 2022a). The ESENER report also highlights a negative trend indicating a decline in companies seeking advice from Labour inspectorates regarding psychosocial risk factors, despite the availability of relevant support (EU-OSHA, 2022a). Related to this, the MPSR report underscores an interesting finding: organisations often reported a lack of awareness regarding national or sectoral public campaigns addressing psychosocial risks, and they did not recall public campaigns related to occupational safety and health. Yet, the campaigns targeting psychosocial risk factors have been conducted in most countries. This suggests a gap in disseminating campaign information to organisations (EU-OSHA, 2022b).

An additional aspect concerning the challenges involved in addressing psychosocial risks was **the lack of awareness among staff**, which averaged at 44% across the EU. Once more, overall notable differences are observed across countries. Among the countries participating in the PSYR-IR project, the percentages were: Estonia (50%), Austria (49%), Denmark (48%), Italy (43%) and Belgium (42%). Across sectors, "Lack of awareness among staff" was commonly reported by industries with more traditional safety risks, for example Construction, waste management, water and electricity supply (63%) and Manufacturing (57%) sectors. This trend may be linked to the pronounced emphasis on reducing safety risks within these sectors. Conversely, Human health and social work sector demonstrated a notably lower degree (33%) of "Lack of awareness among staff" (EU-OSHA, 2022a).

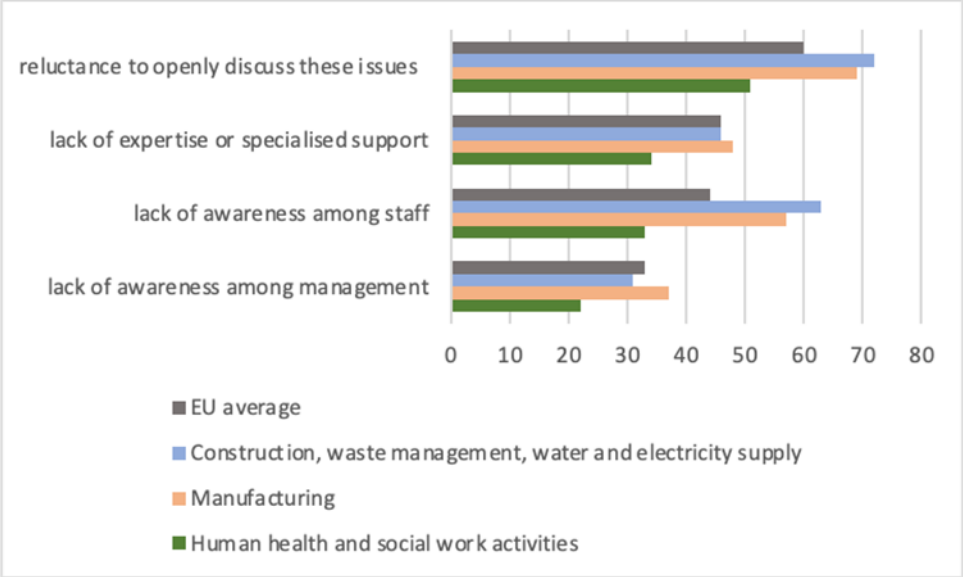
Regarding difficulties in addressing psychosocial risks, the last aspect indicated was the **lack of awareness among management**, which averaged at 33% of organisations across the EU. Among the countries participating in the PSYR-IR project, the percentages were: Denmark (45%), Italy (38%), Belgium (35%), Austria (27%) and Estonia (20%) (EU-OSHA, 2022a).

The prevalence of "Lack of awareness among management" appears to rise with establishment size, as indicated by the results for large (42%) and micro establishments (31%). ESENER brings out that these responses may be influenced by the types of respondents answering the questions. For instance, in large organisations, the respondent is more likely to be a health and safety officer, who may adopt a more critical stance compared to a manager in a small company responding to survey questions on psychosocial risk management (EU-OSHA, 2022a).

The MPSR report also highlighted a lack of awareness among management as one barrier in managing psychosocial risks, especially in sectors where physical safety is a significant concern, such as the construction industry. Research within this sector revealed that psychosocial risks

are not given priority compared to the ongoing and demanding task of ensuring employees' physical safety and preventing injuries. Furthermore, the MPSR report highlighted an interesting disparity between the perceptions of managers and employees. Interestingly, the study found that managers tended to provide more positive responses regarding their organisation's psychosocial risk management compared to employees. Thus, it appears that managers hold more optimistic views about their psychosocial working environment than workers do (EU-OSHA, 2022b).

Figure 23. Challenges in addressing psychosocial risks across sectors



Source: ESENER data from 2019

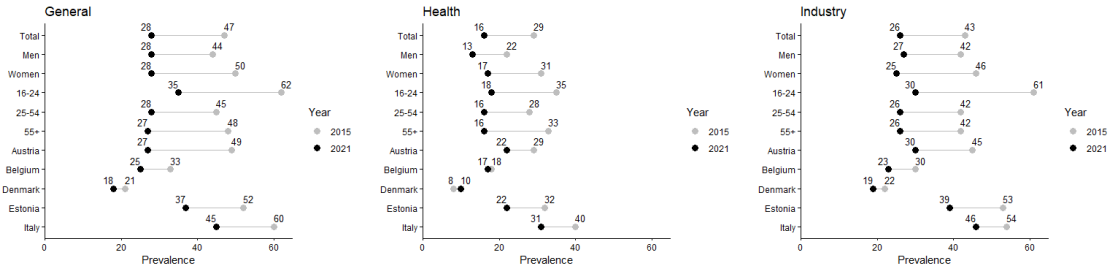
4.11.3 Employee involvement

As indicated in the data introduction, according to ESENER, **employee involvement in the risk assessment process** occurs in less than half of the cases within organisations in the EU. However, when considering the understanding of psychosocial risk factors, it becomes challenging to identify or measure them without input from employees. ESENER also explored whether employees are **involved in designing and implementing measures to address psychosocial risks**. Interestingly, this percentage was slightly higher than involvement in risk assessment. The EU average was 58%. The highest rates were observed in Sweden (80%) and Denmark (76%), as well as in Austria and Finland (69%). Conversely, the lowest rates were reported in Lithuania (26%), Poland (33%), and Estonia (40%), (EU-OSHA, 2022a).

Connected to informal organisation cultures, the MPSR report emphasises a potential risk: the absence of formal organisation regarding worker involvement in psychosocial risk identification may lead to insufficient consultation with employees. Consequently, there is a chance that input from workers may not be fully considered when assessing psychosocial risk factors (EU-OSHA, 2022b).

Turning to the EWCS data available for 2015 and 2021, 28% of workers across the EU reported a lack of organisational participation in 2021 (Figure 24). This percentage stood at 47% in 2015, which does correspond to a big improvement in this area. This trend is recoded for both men and women, for all age groups, for both the health and industry sectors and for all five EU Member States covered in the PSYR-IR project.

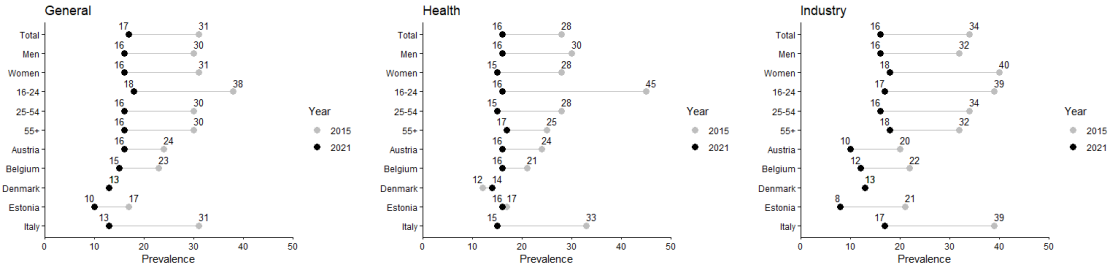
Figure 24. Percentages of workers (EU27) confronted with a lack of organisational participation, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

When examining the share of workers reporting a lack of voice (Figure 25), similar dynamics are uncovered as for lack of organisational participation. Between 2015 and 2021, the percentage of workers reporting a lack of voice went down from 31% in 2015 to 17% in 2021, again across all countries, sectors, age groups and for both men and women. For this psychosocial risk factor, substantial differences are noted between the five EU Member States at the heart of the PSYR-IR project. Italy and Estonia were lagging behind in 2015 but are now catching up with the other three countries. Similarly, especially in industry, large improvements are recorded.

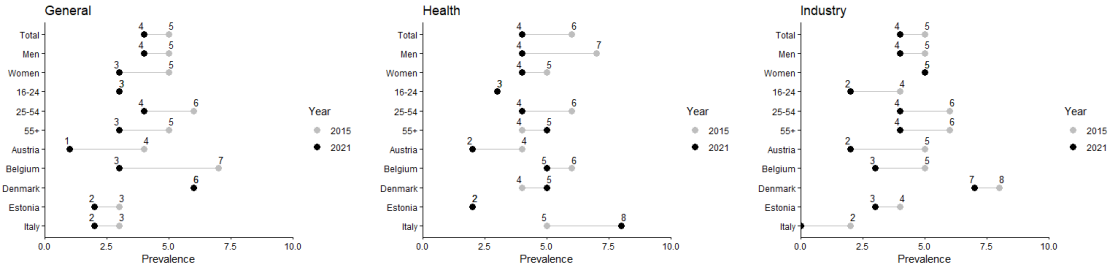
Figure 25. Percentages of workers (EU27) confronted with a lack of voice, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

The EWCS 2015 and 2021 data further reveal that only a small share (4% in 2021) of workers in the EU27 report experiencing a lack of trust in the workplace, with also rather small differences across gender, age, sector and country groups (see Figure 26).

Figure 26. Percentages of workers (EU27) confronted with a lack of trust, in general, in health and social care sector and in industry



Source: Own calculations using EWCS2015 & EWCTS2021

The OSH Pulse data complement this view by offering insight into the percentage of workers who are exposed to poor communication or cooperation in their organisation, or to something else that

is causing them stress (Table 16). 26% of workers in the EU27 indicated being confronted with poor communication or cooperation. This issue was reported especially by workers of ages 25-39 and 40-54 years old (28% and 27% respectively), by workers in Belgium, Austria, and Denmark (34%, 29% and 28% respectively), and by workers in the health and social care sector (32%) and in the manufacturing or engineering sector (29%). Across all EU Member States, 29% of workers answered yes when asked about being exposed to something else that is causing them stress. In this case, especially workers older than 55 years old stand out, along with workers in Belgium, Italy, and Austria, and again the health and social care sector.

Table 16. Would you say that at work you are exposed to the following factors? (% 'yes' by country)

Country	Poor communication or cooperation within the organisation	Something else that is causing you stress
EU27	26	29
Men	25	28
Women	27	29
16-24	22	20
25-39	28	28
40-54	27	29
55+	23	31
Austria	29	35
Belgium	34	32
Denmark	28	27
Estonia	26	27
Italy	20	34
Manufacturing or engineering	29	26
Construction or building	25	29
Health and social care	32	35

* OSH Pulse, all respondents, EU27, n=25683

Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

4.11.4 Psychological safety climate

ESENER findings indicate that the level of risk identification within organisations has not undergone significant changes compared to previous surveys. Generally, establishments exhibit a greater emphasis on safety risk management (for instance, loud noise, accident risks, chemical hazards) than on psychosocial risks. Larger organisations tend to report OSH risk factors more frequently compared to smaller organisations, particularly micro-establishments, which is concerning given the significant employment contribution of SMEs. Consequently, these results reinforce previous research findings that underscore the challenges faced by SMEs, attributed to

factors such as limited resources and less structured allocation of responsibilities (EU-OSHA, 2022a).

ESENER determined that increased levels of risk reporting typically correlate with the completion of risk assessments. However, this correlation does not extend to psychosocial risks. This implies that there is a lack of alignment between conducting risk assessments and addressing psychosocial risks, despite the acknowledgment of their existence (EU-OSHA, 2022a). The MPSR report reveals a similar finding: while organisations acknowledge the significance of a company culture that addresses psychosocial risks to enhance productivity, this area is rarely prioritised in their organisation strategies (EU-OSHA, 2022b).

These results are further corroborated by the OSH Pulse survey (see Table 17). More specifically, the OSH Pulse survey contains questions on how stress and mental health are managed in the workplace. According to the OSH Pulse survey, in the EU27, 50% of workers report that disclosing a mental health condition would have a negative impact on their career. It is interesting to note here that of the five countries covered in the PSYR-IR project, especially in Italy respondents tend to agree with this statement. 64% of workers in Italy fear that disclosing a mental health condition would negatively affect their career. In Austria, Estonia, Denmark and Belgium, this share stands at 30%, 31%, 37% and 47% respectively. Turning to the issue of whether workers feel comfortable in addressing stress and mental health issues with their manager or supervisor, 59% of workers in the EU27 indicate that they would indeed feel comfortable to do so. Especially younger workers agree with this statement: among those of ages 16-24 years old, 62% indicates to feel comfortable whereas this percentage declines to 55% among workers aged 55 and up. As before, substantial differences are noted across countries: in Austria, Belgium, and Estonia, over 70% of workers are comfortable to speak to their manager or supervisor. In Italy, this share drops to 56%.

Table 17. Do you agree or disagree with the following statements on stress and mental health in your workplace? (% Total 'Agree' by socio-demographics)

	Disclosing a mental health condition would have a negative impact on my career	I would feel comfortable speaking to my manager or supervisor
EU27	50	59
16-24	47	62
25-39	50	61
40-54	52	58
55+	47	55
Austria	30	78
Belgium	47	72
Denmark	37	69
Estonia	31	72
Italy	64	56

* OSH Pulse, all respondents, EU27, n=25683

Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

4.11.4.1 Action plans

The ESENER survey also investigated whether organisations have implemented action plans to prevent work-related stress and found that the percentage of those with such plans was relatively low. On average across the EU, only 34% of organisations had an action plan in place to address work-related stress. The percentage was notably higher in Sweden (71%) and Denmark (65%). Interestingly, Italy also exhibited a relatively high percentage (48%), despite the low recognition of psychosocial risk factors in the country. Conversely, the lowest percentages of having action plans were observed in the Czech Republic (9%) and Estonia (13%) (EU-OSHA, 2022a).

The ESENER report also underscores that the presence of action plans is closely tied to the policies and cultural background in different countries, with their implementation largely dependent upon regulatory frameworks. For instance, in Lithuania, where regulations regarding psychosocial risk management are brief and provided in general terms without specific mandates, the number of establishments with action plans is low. Similarly, in Estonia, cultural factors contribute to the relatively low adoption of action plans to manage work-related stress (EU-OSHA, 2022a).

In contrast, Sweden has seen an increase in the number of organisations implementing action plans to manage work-related stress, attributed to new legal provisions introduced in 2015. A similar trend is observed in Austria, where the percentage of action plans has risen compared to previous studies, likely due to legislation obligating enterprises to incorporate psychosocial risk factors into their risk assessments. Italy stands out with approximately half of the companies reporting the use of action plans, which is a comparatively strong result. Italian authorities attribute this to legislation mandating the assessment and management of psychosocial risks for all companies (EU-OSHA, 2022a).

The MPSR report suggests the significant role of national legislation and its development in shaping the management of psychosocial risks. However, it also highlights a decline in the number of inspections conducted by Labour Inspectorate, with a predominant focus on larger companies rather than smaller ones. Moreover, the study indicates that labour inspections tend to prioritise formalities such as work contracts and tax payments, as well as physical safety aspects like ergonomics and machine safety, over the psychosocial work environment. Dealing with psychosocial risks receives less attention compared to other areas (EU-OSHA, 2022b).

Sector-wise, the disparities were less pronounced but still indicative of varying levels of attention given to psychosocial risk management approaches. The Human Health and Social Work sector exhibited higher activity in implementing such measures, while industries exposed to safety risks such as Manufacturing and Construction, waste management, water and electricity supply sectors were less inclined to introduce action plans. Moreover, distinct differences were observed between establishment sizes, with larger organisations (57%) more likely to have action plans compared to smaller ones (35%) (EU-OSHA, 2022a).

4.11.4.2 Preventing measures

Within the scope of ESENER's investigation, one of the measures explored for preventing psychosocial risks was training on conflict resolution. However, this approach was not extensively implemented. On average across the EU, only 34% of organisations utilised this measure to prevent psychosocial risks. The utilisation rate varied across countries. Among the countries participating in the PSYR-IR project, the percentages were: Denmark (42%), Belgium (39%),

Austria (36%), Italy (26%) and Estonia (24%). Sector-wise, training on conflict resolution was more commonly utilised in the fields of education and Human health and social work activities (EU-OSHA, 2022a).

Additional strategies employed by employers to mitigate psychosocial risk factors include the provision of confidential counselling services for employees. As per data from the ESENER, the utilisation of confidential counselling is notably prevalent, with 42% of establishments across the EU having implemented such measures. The highest adoption rates are observed in Finland (75%) and the lowest in Bulgaria and Czech Republic (18%). Among the countries participating in the PSYR-IR project, the percentages were: Denmark (58%), Belgium (52%), Austria (50%), Estonia (47%) and Italy (21%) (EU-OSHA, 2022a).

Moreover, ESENER findings reveals a consistent upward trend in the utilisation of confidential counselling services over time. Regarding sector-specific trends, industries such as Human health, and social work services exhibit a greater tendency to implement measures addressing psychosocial risks, including confidential counselling, compared to sectors traditionally focused more on safety risks. Furthermore, disparities based on company size are apparent, with large companies reporting the highest provision of confidential counselling for employees (70%), in contrast to micro firms, where the adoption rate stands at 36% (EU-OSHA, 2022a).

Nonetheless, the provision of confidential counselling may imply a reactive approach, wherein employees receive necessary assistance mainly after psychosocial issues have arisen and require resolution. This approach may not be primarily focused on prevention but rather on problem-solving. However, ESENER data reveals a positive indication, with 82% of establishments in the EU reporting that the implemented measures were not prompted by specific issues. This suggests that, in general, measures were introduced preventatively, indicating a proactive stance toward prevention (EU-OSHA, 2022a).

Across sectors, establishments in Human Health and Social Work frequently reported implementing measures in response to specific issues. This observation is interesting, especially when compared with other findings indicating that establishments in this sector are notably proactive in identifying and addressing psychosocial risks. In contrast, companies predominantly focused on safety risks reported less frequent implementation of measures triggered by concrete problems. For instance, only 10% of establishments in construction indicated that measures were initiated in response to specific issues. Overall, sectors with a primary focus on safety risks reported a lower utilisation of measures to manage psychosocial risks (EU-OSHA, 2022a).

The OSH Pulse survey also provides key insights into whether a range of initiatives are available at the workplace. In the EU27, 43% of workers indicate that they are consulted about stressful aspects of work, 38% reports having access to counselling or psychological support, 59% states that there is awareness raising or other initiatives to provide information on health and safety, and 26% reports the availability of other measures to address stress at work. Moreover, of the workers participating in the survey in the EU27, 42% agreed or strongly agreed with the statement that in their workplace, information and training on wellbeing and copying with stress are provided. For the availability of good measures to protect workers' health and the statement that workers are encouraged to report safety and health issues, the share are 82% and 79% respectively. Among the five EU Member States at the heart of the PSYR-IR project, it is striking that Italy performs the worst across several of these categories (see Table 18).

Table 18. Are any of the following initiatives available in your workplace?

	Consultation of workers about stressful aspects of work*	Information and training on wellbeing and coping with stress*	Access to counselling or psychological support*	Other measures to address stress at work*	Good measures to protect workers' health in workplace**	Awareness raising or other initiatives to provide information on health and safety*	Worker is encouraged to report safety and health issues in the workplace **
EU27	43	42	38	26	82	59	79
Men					84		81
Women					79		77
Austria	60	52	55	38	88	65	75
Belgium	51	51	54	33	82	66	84
Denmark	53	49	68	37	78	55	82
Estonia	46	52	47	47	90	70	91
Italy	33	37	29	16	88	58	82
Manufacturing or engineering					85		85
Construction or building					84		80
Health and social care services					81		79

OSH Pulse, all respondents, EU27, n=25683

* % yes; ** % strongly agree and agree

Source: Edits, based on Report Flash Eurobarometer (EU-OSHA, 2022)

4.11.4.3 Collective bargaining, workers representative

The MPSR report highlights the positive impact of collective bargaining and worker representation on psychosocial risk management. In countries with strong social partners and structured social dialogue, collective bargaining initiatives focus on mitigating psychosocial risks. For example, Denmark has established collective agreements containing provisions and guidelines for the psychosocial working environment. Through collective bargaining, Denmark fosters strong organisation cultures that prioritise open communication, proactive measures to enhance worker wellbeing, and active worker involvement (EU-OSHA, 2022b). ESENER data also validates the substantial presence of unions in Denmark, with 52% of organisations having workplace union representatives. This percentage is the highest among EU countries, whereas the EU average is only 18% (EU-OSHA, 2022a).

The presence of worker representatives is often associated with fulfilling legal requirements and social norms, especially in smaller organisations. However, the MPSR study revealed that having workers representatives (OSH representatives) in companies is correlated with a heightened awareness of and effectiveness in managing psychosocial risks (EU-OSHA, 2022b). Yet, ESENER data does not fully support this correlation. Countries like Denmark and Sweden, where psychosocial risks are more effectively managed, have high percentages of organisations with OSH representatives. Similarly high percentages are also observed in countries like the Czech Republic and Estonia, but these countries have the lowest proportion of action plans to prevent work-related stress (EU-OSHA, 2022a). This inconsistency requires further investigation to understand the true impact of OSH representatives in managing psychosocial risks effectively.

4.11.4.4 OSH training

The MPSR report underscores that while OSH training is widely available across different sectors and countries, it often lacks a specific focus on psychosocial risks. However, certain sectors, such as health care, are more likely to offer training on psychosocial risks given the heightened exposure of their employees, particularly in light of the COVID-19 pandemic (EU-OSHA, 2022b). According to ESENER data, on average, 34% of organisations in the EU provide training to employees that includes the prevention of psychosocial risks. The highest shares were reported in Italy (49%), Ireland (48%), and Sweden (47%), while the Czech Republic (19%), Luxembourg (22%), Lithuania, France, and Estonia (all 25%) reported the lowest (EU-OSHA, 2022a).

The MPSR report indicates that organisations exhibiting heightened awareness of psychosocial risks generally demonstrate a concurrent interest in or provision of training initiatives. Conversely, enterprises with lower levels of awareness tend to exhibit a lack of interest or perceived necessity for such training, often resulting in an absence of formalised training programs. Additionally, the report suggests a correlation between organisation size and training availability. Specifically, micro-sized organisations frequently cite insufficient internal resources as a barrier to conducting formal training sessions. Moreover, when OSH training is offered within micro and small organisations, it frequently neglects to address psychosocial risks comprehensively (EU-OSHA, 2022b).

The study further highlights a significant disparity between managers and workers concerning the awareness of training opportunities related to psychosocial risks. For instance, managers may identify several training opportunities for psychosocial risk management within organisation, whereas employees may remain unaware of these offerings. Additionally, in many cases, training

sessions covering psychosocial risk topics are exclusively accessible to OSH representatives, thereby restricting broader employee participation in these vital training initiatives (EU-OSHA, 2022b).

5. Conclusions

The aim of this report was to provide **state-of-the-art knowledge** on various aspects of the psychosocial risks that affect worker well-being and subsequent outcomes in the post-pandemic workplaces in the European Union. This was investigated by implementing an **overarching conceptual framework** on OSH and linking it with the **empirical evidence** on psychosocial risks and workers' mental health.

A first conclusion that emerged from our analysis of EU surveys is that key information on specific risks that have been identified in the literature is **not available** in empirical data. More specifically, no data were available on role conflict, role overload and role ambiguity. This is an important gap.

The **most prevalent psychosocial risk factors** identified include dealing with difficult clients, high job demands leading to excessive workload, and work-life imbalance where many employees feel compelled to work beyond regular hours. A critical barrier to addressing psychosocial risks is the **reluctance among employees to discuss these issues openly**, often due to fear of stigma associated with mental health problems.

While there is a **high level of awareness** regarding psychosocial risk factors and their integration into risk assessments, **effective management of these risk factors remains a significant challenge**. Despite this awareness, a substantial number of organisations lack dedicated action plans for managing these risks effectively. Sectors like Human Health and Social Work Activities demonstrate better awareness and systematic approaches to managing psychosocial risks. In contrast, sectors such as Construction, Waste Management, Water and Electricity Supply, and Manufacturing tend to prioritise safety risks over psychosocial ones, resulting in less recognition and management of the latter.

Overall, **larger organisations** generally exhibit more comprehensive approaches to addressing psychosocial risks compared to micro and small companies. The **role of managers** emerges as pivotal in shaping organisational responses to psychosocial risks, as their attitudes and actions significantly influence how these risks are perceived and managed.

Collective bargaining has demonstrated a beneficial effect on the management of psychosocial risks, although its prevalence remains insufficient across many countries. **OSH training** often overlooks psychosocial risk factors, indicating a need for enhanced educational initiatives that specifically target these issues.

References

Australian National University. “Physical Wellbeing,” May 20, 2020. https://www.anu.edu.au/physical-wellbeing.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. In *Journal of Managerial Psychology* (Vol. 22, Issue 3, pp. 309–328). https://doi.org/10.1108/02683940710733115

Bakker, A. B., & Demerouti, E. (2017). Job Demands-Resources Theory: Taking Stock and Looking Forward Job Demands – Resources Theory: Taking Stock and Looking Forward. *Journal of Occupational Health Psychology*, 22(September 2018), 273–285.

Becher, H.; & Dollard, M. (November 2016). *Psychosocial safety climate and better productivity in Australian workplaces: costs, productivity, presenteeism, absenteeism* (PDF). OCLC 1330650163.

Boxall, P., Huo, M. L., & Winterton, J. (2019). How do workers benefit from skill utilisation and how can these benefits be enhanced? *Journal of Industrial Relations*, 61(5), 704–725. https://doi.org/10.1177/0022185618819169

Brun, J. P., & Dugas, N. (2008). An analysis of employee recognition: Perspectives on human resources practices. *International Journal of Human Resource Management*, 19(4), 716–730. https://doi.org/10.1080/09585190801953723

Chamberlin, M., Newton, D. W., & LePine, J. A. (2018). A meta-analysis of empowerment and voice as transmitters of high-performance managerial practices to job performance. *Journal of Organizational Behavior*, 39(10), 1296–1313. https://doi.org/10.1002/job.2295

Chen, L., Zhang, L., & Lin, Y. C. (2012). A meta-analysis of work-family conflict and work-related outcomes: A cross-national comparison. *International Conference on Management Science and Engineering - Annual Conference Proceedings*, 71102130, 1147–1154. https://doi.org/10.1109/ICMSE.2012.6414320

Chiaburu, D. S., Peng, A. C., Oh, I. S., Banks, G. C., & Lomeli, L. C. (2013). Antecedents and consequences of employee organizational cynicism: A meta-analysis. *Journal of Vocational Behavior*, 83(2), 181–197. https://doi.org/10.1016/j.jvb.2013.03.007

Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. Organizational Behavior and Human Decision Processes, 86(2), 278–321. https://doi.org/10.1006/obhd.2001.2958

Dalal, R. S. (2005). A Meta-Analysis of the Relationship Between Organizational Citizenship Behavior and Counterproductive Work Behavior. *Journal of Applied Psychology* 90, no. 6 (November 2005): 1241–55. https://doi.org/10.1037/0021-9010.90.6.1241.

De Witte, H., Pienaar, J., & De Cuyper, N. (2016). Review of 30 years of longitudinal studies on the association between job insecurity and health and well-being: Is there causal evidence? *Australian Psychologist*, 51(1), 18–31. https://doi.org/10.1111/ap.

Dollard, M.F. and Bakker, A.B. (2010), Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. Journal of Occupational and Organizational Psychology, 83: 579-599. https://doi.org/10.1348/096317909X470690

Dollard, Maureen F.; Opie, Tessa; Lenthall, Sue; Wakerman, John; Knight, Sabina; Dunn, Sandra; Rickard, Greg; MacLeod, Martha (October 2012). "Psychosocial safety climate as an antecedent of work characteristics and psychological strain: A multilevel model". *Work & Stress*. 26 (4): 385–404. doi:10.1080/02678373.2012.734154.

Eatough, E. M., Chang, C. H., Miloslavic, S. A., & Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behavior: A meta-analysis. *Journal of Applied Psychology*, 96(3), 619–632. https://doi.org/10.1037/a0021887

EU-OSHA (2022). OSH Pulse - Occupational safety and health in post-pandemic workplaces. Flash Eurobarometer. Report. European Agency for Safety and Health at Work (EU-OSHA), ISSN: 1831-9343

EU-OSHA (2022a). Third European Survey of Enterprises on New and Emerging Risks (ESENER 2019): Overview report - How European workplaces manage safety and health.

EU-OSHA (2022b). Managing psychosocial risks in European micro and small enterprises: Qualitative evidence from the Third European Survey of Enterprises on New and Emerging Risks (ESENER 2019).

Eurofound (2008). Extended and unusual working hours in European companies; Establishment Survey on Working Time 2004–2005. In European Foundation for the Improvement of Living and Working Conditions: Vol. VIII.

Eurofound (2020). Second round of the Living, Working and COVID-19 e-Survey.

Eurofound (2022). Fifth round of the Living, Working and COVID-19 e-Survey: Living in a new era of uncertainty. Luxembourg: Publications Office of the European Union.

Eurofound. (2023). Psychosocial risks to workers' well-being: Lessons from the COVID-19 pandemic. https://www.eurofound.europa.eu/en/publications/2023/psychosocial-risks-workers-well-being-lessons-covid-19-pandemic

Fischer, S., Hyder, S., & Walker, A. (2020). The effect of employee affective and cognitive trust in leadership on organisational citizenship behaviour and organisational commitment: Meta-analytic findings and implications for trust research. *Australian Journal of Management*, 45(4), 662–679. https://doi.org/10.1177/0312896219899450

Framke, E., Alexanderson, K., Sørensen, J. K., Pedersen, J., Madsen, I. E. H., Rugulies, R., & Farrants, K. (2023). Emotional demands and all-cause and diagnosis-specific long-term sickness absence: a prospective cohort study in Sweden. *European Journal of Public Health*, 33(3), 435–441. https://doi.org/10.1093/eurpub/ckad072

Haar, J. M., & Spell, C. S. (2009). How does distributive justice affect work attitudes? The moderating effects of autonomy. *The International Journal of Human Resource Management*, 20(8), 1827–1842. https://doi.org/10.1080/09585190903087248

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: test of a theory. *Organizational Behavior and Human Performance*, 16(170), 250–279. http://web.mit.edu/curhan/www/docs/Articles/15341_Readings/Group_Performance/Hackman_et_al_1976_Motivation_thru_the_design_of_work.pdf

Hagqvist, E., Lidwall, U., & Leineweber, C. (2022). Is work-life interference a risk factor for sickness absence? A longitudinal study of the Swedish working population. *European Journal of Public Health*, 32(3), 398–401. https://doi.org/10.1093/eurpub/ckac028

Hall, G. B., Dollard, M. F., & Coward, J. (2010). Psychosocial Safety Climate: Development of the PSC-12. *International Journal of Stress Management*, 17(4), 353–383. https://doi.org/10.1037/a0021320

Hobfoll, S. E. (1989). Conservation of Resources: A New Attempt at Conceptualizing Stress. American Psychologist, 44(3), 513–524. https://doi.org/10.1037/0003-066X.44.3.513

Hobfoll, S. E. (2001), The influence of culture community and the nested self in the stress process: Advancing conservation of resources theory. *Applied Psychology: An International Journal*, 50, 337-421.

Huth, K. B. S., & Chung-Yan, G. A. (2022). Quantifying the Evidence for the Absence of the Job Demands and Job Control Interaction on Workers' Well-Being: A Bayesian Meta-Analysis. *Journal of Applied Psychology*, 108(6), 1060–1072. https://doi.org/10.1037/apl0001066

Huyghebaert, Tiphaine; Gillet, Nicolas; Lahiani, Fadi-Joseph; Dubois-Fleury, Amandine; & Fouquereau, Evelyne (May 2018). "Psychological Safety Climate as a Human Resource Development Target: Effects on Workers Functioning Through Need Satisfaction and Thwarting". *Advances in Developing Human Resources*. 20 (2): 169–181. doi:10.1177/1523422318756955.

International Labour Organization (ILO) & World Health Organization (WHO). (2016). Managing psychosocial risks at work: A collective approach.

Jiang, L., & Lavaysse, L. M. (2018). Cognitive and affective job insecurity: A meta-analysis and a primary study. *Journal of Management*, 44(6), 2307–2342. https://doi.org/10.1177/0149206318773853

Judge, Timothy A., and John D. Kammeyer-Mueller. "Job Attitudes." *Annual Review of Psychology* 63, no. 1 (January 10, 2012): 341–67. https://doi.org/10.1146/annurev-psych-120710-100511.

Karasek, R. A. (1979). *Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign* Author (s): Robert A. Karasek, Jr. Published by: Sage Publications, Inc. on behalf of the Johnson Graduate School of Management, Cornell University Stable URL. Administrative Science Quarterly, 24(2), 285–308.

Nielsen, K., Nielsen, M.B, Chidiebere Ogbonnaya, Marja Känsälä, Eveliina Saari & Kerstin Isaksson (2017) Workplace resources to improve both employee wellbeing and performance: A systematic review and meta-analysis, *Work & Stress*, 31:2, 101-120, DOI: 10.1080/02678373.2017.1304463

Kossek, E. E., Pichler, S., Bodner, T., & Hammer, L. B. (2011). Workplace social support and work-family conflict: A meta-analysis clarifying the influence of general and work-family-specific supervisor and organizational support. *Personnel Psychology*, 64(2), 289–313. https://doi.org/10.1111/j.1744-6570.2011.01211.x

Kristof, A. L. (1996). Person-organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology*, 49, 556. http://dx.doi.org/10.1016/j.jaci.2012.05.050

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

LePine, J. A., Podsakoff, N. P., & LePine, M. A. (2005). A meta-analytic test of the challenge Stressor-hindrance stressor framework: An explanation for inconsistent relationships among

Stressors and performance. *Academy of Management Journal*, 48(5), 764–775. https://doi.org/10.5465/AMJ.2005.18803921

Li, N., She, J., & Dong, S. (2021). The Impact of Work-to-Family Conflict on Work Domain: A Meta-Analysis. *Journal of Advanced Management Science*, 9(2), 32–37. https://doi.org/10.18178/joams.9.2.32-37

Maden-Eyiusta, C. (2021). Role conflict, role ambiguity, and proactive behaviors: does flexible role orientation moderate the mediating impact of engagement? *The International Journal of Human Resource Management*, 32(13), 2829–2855. https://doi.org/10.1080/09585192.2019.1616590

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). *Job Burnout*. 397–422.

Meyer, S. C., & Hünefeld, L. (2018). Challenging cognitive demands at work, related working conditions, and employee well-being. *International Journal of Environmental Research and Public Health*, 15(12). https://doi.org/10.3390/ijerph15122911

Morf, M., Feierabend, A., & Staffelbach, B. (2017). Task variety and counterproductive work behavior. *Journal of Managerial Psychology*, 32(8), 581–592. https://doi.org/10.1108/JMP-02-2017-0048

Morrissette, A. M., & Kisamore, J. L. (2020). A Meta-Analysis of the Relationship between Role Stress and Organizational Commitment: The Moderating Effects of Occupational Type and Culture. *Occupational Health Science*, 4(1–2), 23–42. https://doi.org/10.1007/s41542-020-00062-5

Nguyen, N. T. H., & Tuan, L. T. (2022). Creating Reasonable Workload to Enhance Public Employee Job Satisfaction: The Role of Supervisor Support, Co-Worker Support, and Tangible Job Resources. *Public Performance and Management Review*, 45(1), 131–162. https://doi.org/10.1080/15309576.2021.2018717

Niedhammer, I., Bertrais, S., & Witt, K. (2021). Psychosocial work exposures and health outcomes: A meta-review of 72 literature reviews with meta-analysis. *Scandinavian Journal of Work, Environment & Health*, 47(7), 489–508. https://doi.org/10.5271/sjweh.3968

Örtqvist, D., & Wincent, J. (2006). Prominent consequences of role stress: A meta-analytic review. *International Journal of Stress Management*, 13(4), 399–422. https://doi.org/10.1037/1072-5245.13.4.399

Özkan, A. H. (2023). Organizational justice perceptions and turnover intention: a meta-analytic review. *Kybernetes*, 52(8), 2886–2899. https://doi.org/10.1108/K-01-2022-0119

Rasool, T., Warraich, N. F., & Sajid, M. (2022). *Examining the Impact of Technology Overload at the Workplace: A Systematic Review*. SAGE Open, 12(3). https://doi.org/10.1177/21582440221114320

Robbins, S. P., & Judge, T. A. (2019). Leadership. In *Organizational Behavior* (pp. 392–433). Pearson.

Rukundo, C., Beka Be Nguema, J.N.; Atamba, C., & Mohamed, H. H. (2020). Thriving from Challenges Stress: The Interactive Effect of Role Conflict, Time Pressure, and Negative Affect on Chinese Employees" Work Engagement. *International Journal of Human Resource Studies*, 10(4), Pages 287-30. doi:http://dx.doi.org/10.5296/ijhrs.v10i4.17989.

Sanwald, A.& Engelbert, T. (2014). Atypical employment and health: A meta-analysis atypical employment and health: A meta-analysis University of Innsbruck.

Schmidt, S., Roesler, U., Kusserow, T., & Rau, R. (2014). Uncertainty in the workplace: Examining role ambiguity and role conflict, and their link to depression-a meta-analysis. *European Journal of Work and Organizational Psychology*, 23(1), 91–106. https://doi.org/10.1080/1359432X.2012.711523

Siegrist, J. (1996). Adverse Health Effects of High-Effort / Low-Reward Conditions. *Journal of Occupational Health Psychology*, 1(1), 27–41.

Siegrist, J. (2016). *Effort-Reward Imbalance Model.* In Stress: Concepts, Cognition, Emotion, and Behavior: Handbook of Stress. Elsevier Inc. https://doi.org/10.1016/B978-0-12-800951-2.00009-1

Theorell, T., Hammarström, A., Aronsson, G., Bendz, L. T., Grape, T., Hogstedt, C., Marteinsdottir, I., Skoog, I., & Hall, C. (2015). A systematic review including meta-analysis of work environment and depressive symptoms. *BMC Public Health*, 1–14. https://doi.org/10.1186/s12889-015-1954-4

Van den Broeck, A., De Cuyper, N., De Witte, H. & Vansteenkiste, M. (2010). Not all job demands are equal: Differentiating job hindrances and job challenges in the Job Demands-Resources model, *European Journal of Work and Organizational Psychology*, 19: 6, 735 — 759

Vandekerckhove, Sem; Lenaerts, Karolien; Szekér, Lise; Desiere, Sam; Lamberts, Miet; Ramioul, Monique (2021). *Musculoskeletal disorders and psychosocial risk factors in the workplace — statistical analysis of EU-wide survey data*. Publisher: European Agency for Safety and Health at Work (EU-OSHA).

Virtanen, M., Jokela, M., Nyberg, S. T., Madsen, I. E. H., Lallukka, T., Ahola, K., Alfredsson, L., Batty, G. D., Bjorner, J. B., Borritz, M., Burr, H., Casini, A., Clays, E., De Bacquer, D., Dragano, N., Erbel, R., Ferrie, J. E., Fransson, E. I., Hamer, M., … Kivimäki, M. (2015). Long working hours and alcohol use: Systematic review and meta-analysis of published studies and unpublished individual participant data. *BMJ (Online)*, 350(January), 1–14. https://doi.org/10.1136/bmj.g7772

World Health Organization (WHO) (2022). Mental health and COVID-19: Early evidence of the pandemic's impact: Scientific brief.

Yildiz, B., Yildiz, H., & Ayaz Arda, O. (2021). Relationship between work–family conflict and turnover intention in nurses: A meta-analytic review. *Journal of Advanced Nursing*, 77(8), 3317–3330. https://doi.org/10.1111/jan.14846

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