

Working conditions

Burnout in the workplace: A review of data and policy responses in the EU



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Country codes

AT	Austria	FI	Finland	NL	Netherlands
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	HR	Croatia	PT	Portugal
CY	Cyprus	HU	Hungary	RO	Romania
CZ	Czech Republic	IE	Ireland	SE	Sweden
DE	Germany	IT	Italy	SI	Slovenia
DK	Denmark	LU	Luxembourg	SK	Slovakia
EE	Estonia	LT	Lithuania	UK	United Kingdom
EL	Greece	LV	Latvia		
ES	Spain	MT	Malta		

Introduction

Burnout is a topic that has triggered widespread interest among the general public and the media, with articles on the subject being published on a regular basis. While some articles have sought to question the existence of burnout, others have discussed its different stages, factors and warning signs, as well as investigating the actions and measures employers and employees can take to address the issue.

In addition to the attention it has received from the media, burnout has been the subject of research and policy responses across Europe. With a view to gaining an EU-wide perspective on the issue, Eurofound asked its Network of Correspondents in the 28 EU Member States of the European Union and Norway to identify the most relevant national research and policy debates on burnout – what is its incidence? Is it a disease or a syndrome? What are its work-related determinants? – and compare how the issue has been addressed by the social partners and in public policy in each country. Based on the responses of the correspondents to a standardised questionnaire, the present report presents a comparative review of the existing data and policy responses on burnout.

Overall, the responses confirm that burnout research is growing – particularly when it comes to small-scale occupational studies. However, they also show that while the issue is indeed widely studied, the research tends to be patchy, applies a range of different instruments to measure burnout and is not always carried out by the most authoritative organisations, such as governmental institutions and health institutes. As one correspondent put it, ‘it [burnout] is a popular topic for doctoral dissertations and master’s theses’.

The responses also reveal differences between self-reporting and medical diagnostics, which reflect different understandings and definitions of burnout. The prevalence of burnout is usually higher in self-reported data and it is more frequent among

women than among men. Overall, the data are difficult to compare, as they build on different definitions. Some define burnout as a syndrome, while others classify it as a disease – and in some countries it may be work-related or occupational. When burnout is considered as a syndrome, its measurement builds on different definitions and cut-off values. The data sources also differ in terms of their methodology for data collection, meaning they are not harmonised and therefore not comparable.

The responses of Eurofound’s correspondents confirm the multiple determinants of burnout in the case of workers, both work-related and individual. Socio-economic researchers would perhaps argue that in the available research the focus is too often placed on individual determinants, implying work-related determinants are under-researched in comparison to personal factors determining burnout. In the present study, it was therefore only possible to present fragmented evidence – mainly stemming from small-scale occupational studies. While some work-related factors – such as exposure to psychosocial risks including heavy workload, long working hours and overtime – undoubtedly seem to trigger burnout, the influence of other factors is more ambiguous, according to the results of the different studies. These factors include autonomy, the degree of influence of management and the role of rewards.

The results also indicate that responses to burnout can be found under different policy headings, such as stress at work, (excessive) working time and mental health in the workplace, while burnout may also be included in national occupational safety and health strategies. Without detection and proper treatment, the burnout symptoms are fairly chronic (and so is the risk to health) and may last for as long as eight years. Preventive actions include checklists, tools for early detection, training programmes for high-risk occupations, awareness-raising actions and good practice guidelines.

1 Prevalence of burnout in EU Member States

Various independent and parallel studies have led to the emergence and development of the concept of burnout at work. As it stands, there are many definitions and ways of measuring burnout.

The first reference to burnout is attributed to Freudenberg (1974), who stated:

The dictionary defines the verb 'burn out' as to 'fail, wear out, or become exhausted by making excessive demands on energy, strength, or resources'. And that is exactly what happens when a staff member in an alternative institution burns out for whatever reasons and becomes inoperative to all intents and purposes.

Burnout was first described in relation to human service work by Maslach et al (1997):

Frequently the staff client interaction is centred around the clients' current problems (psychological, social or physical) and is therefore charged with feelings of anger, embarrassment, fear or despair. Because solutions for clients' problems are not always obvious and easily obtained, the situation becomes more ambiguous and frustrating. For the person who works continuously with people under such circumstances, the chronic stress can be emotionally draining and lead to burnout. Burnout is a psychological syndrome of emotional exhaustion, depersonalisation and reduced personal accomplishment that can occur among individuals who work with other people in some capacity.

This definition of burnout has since been extended to make reference to all occupations. Schaufeli et al (2009) summarised this in their paper 'Burnout: 35 years of research and practice':

By the late 1980s, researchers and practitioners began to recognize that burnout occurred outside the human services, for instance, among managers, entrepreneurs, and white- and blue-collar workers. Thus, the burnout metaphor was extended from the intense requirements of client service to other work requiring creativity, problem solving, or mentoring. In this more general form, burnout was defined as "a state of exhaustion in which one is cynical about the value of one's occupation and doubtful of one's capacity to perform".

In their main findings, they also suggested that, since the turn of the 21st century, 'burnout is increasingly considered as an erosion of a positive psychological state'.

The concept of burnout has proved hugely popular in recent years, and many researchers have developed work on the issue. Ahola (2012) presents a summary of the research on this topic. To date, the research has involved a variety of methods for measuring and operationalising burnout.

Cross-sectoral burnout studies in Europe

Over the last 10 years, only a small number of countries have been able to report on major cross-sectoral representative surveys and data focusing specifically on burnout. These countries include Austria, Belgium, the Czech Republic, Germany, Estonia, Finland, Italy, the Netherlands and Portugal.

In other countries, burnout research has either focused on sectoral or occupational (and therefore often small scale) studies, or major cross-sectoral data and research did not address burnout directly but dealt with closely related thematic areas, such as stress at work, work intensity and work-related exhaustion.

This section examines those studies that have so far focused specifically on the concept of burnout, based on their method of operationalisation.

Self-assessment of respondents based on different inventories

Although some studies aim to capture the extent of burnout based on the assessment of medical professionals, the most widely used methodology to measure burnout is in fact the self-assessment of respondents. Such studies usually consist in asking respondents to answer a set of questions measuring different dimensions of burnout. Figure 1 depicts the most widely used inventories, scales and dimensions that these questions measure.

Figure 1: Burnout inventories, scales and dimensions

<p>Maslach – MBI</p> <ul style="list-style-type: none"> Emotional exhaustion Depersonalisation Personal accomplishment 	<p>Copenhagen – CBI</p> <ul style="list-style-type: none"> Personal burnout Work-related burnout Client-related burnout 	<p>Oldenburg – OLBI</p> <ul style="list-style-type: none"> Exhaustion Disengagement
<p>Shirom-Melamed – SMBM</p> <ul style="list-style-type: none"> Physical fatigue Emotional exhaustion Cognitive weariness 	<p>Burnout Dimensions Inventory – BODI</p> <ul style="list-style-type: none"> Reduced resilience, resistance and overload Insufficient capability of dissociation, dissolution of the boundary between work, leisure and family Depression Dysfunctional compensation 	

Source: Authors; for more details see Annex 1.

The most widely applied inventories of questions are the **Maslach Burnout Inventory (MBI)** (and its various associated versions¹) and the **Copenhagen Burnout Inventory (CBI)**. The **Shirom-Melamed Burnout Measure (SMBM)** is most widely used (around 50%) in studies on the association between burnout and risk to health.² However, as the scales used in these inventories are often adapted – and given the large number of alternative inventories, measures and scales – it can be very difficult to make comparisons between different studies.

Further instruments to measure burnout continue to be developed: for instance, most recently the Austrian

Burnout Dimensions Inventory ‘BODI’ or the ‘Burnout assessment tool’, led by KU Leuven.³

As outlined in Table 1, a number of major cross-sectoral representative studies in the EU using or basing themselves on a variant of the MBI have been carried out, including in Finland, the Netherlands (based on the Netherlands Working Conditions Survey 2007–2016) and Portugal. Other burnout measurement instruments have been used in cross-sectoral studies in Austria, the Czech Republic, Estonia, Germany, Luxembourg and Sweden (see Table 2).

More details on these and other burnout measurement inventories can be found in Annex 1.

1 Besides specific variants aimed at teachers or workers in healthcare, a ‘general’ variant was developed later, addressed at the wider working population beyond the helping profession: Maslach MBI-GS. The three dimensions in this general survey are ‘exhaustion’, ‘cynicism’ and ‘personal efficacy’. In addition, national versions based on the MBI have been developed, such as the Dutch Utrecht Burnout Scale (UBOS), a scale developed by the University of Utrecht, using five questions derived from the MBI – see Schaufeli and Van Dierendonck (1995).

2 Its predecessor, the SMBQ, which is highly correlated to the SMBM (0.96) is nowadays only used in Sweden, where it is recognised as an official instrument to identify burnout.

3 https://burnoutassessmenttool.be/project_eng/

Table 1: Major representative cross-sectoral studies based on the Maslach Burnout Inventory

Study	Sample size and coverage	Main findings regarding prevalence or incidence
Finland – Suvisaari et al (2012)	Some 73% of a sample of 7,964 respondents participated in at least one phase of the study. The sample was nationally representative of the adult population over 30 years of age.	The findings suggested that 3% of female and 2% of male respondents were suffering from severe burnout, where burnout symptoms (as defined by the Maslach Burnout Inventory) occur at least once a week. Meanwhile, 24% of women and 23% of men showed symptoms of milder burnout, with symptoms occurring at least once a month.
Netherlands – Hooftman et al (2017)	Over 40,000 employees. Netherlands Working Conditions Survey 2007–2016.	The percentage of employees experiencing burnout increased from 11.3% in 2007 to 14.6% in 2016.
Portugal – Cunha et al (2014)	38,791 private and public sector professionals in four sectors: education, health, distribution and services.	15% of the professionals demonstrated a moderate risk of burnout (defined by emotional exhaustion, depersonalisation and personal accomplishment). 96% of the population were found to be at high risk of developing depersonalisation, 73% at moderate risk of emotional exhaustion and 66% at moderate risk of low personal accomplishment. Between 2008 and 2013, the proportion of workers affected by burnout increased from 8% to 15%.

Note: See Annex 1, Inventory 1.

Overall, it is difficult to draw a general picture, as the findings of the different studies are not comparable. Different variations on burnout are reported and severe forms of burnout are infrequent, with only 2% of men and 3% of women reporting symptoms of severe burnout in the study in Finland, for example. Other, more moderate forms of burnout were reported by between 15% and 25% of respondents in the different studies.

The studies in Portugal and the Netherlands, both of which were based on the Maslach Burnout Inventory, indicated an increase in burnout over time; a Swedish study using the Shirom-Melamed Burnout Questionnaire found the prevalence of a high level of burnout to be relatively stable among the Northern Swedish working population; and a study conducted in Luxembourg in 2017 and based on the Copenhagen Burnout Inventory (see Table 2) indicated a decrease in burnout over time.

Although some countries reported that further major and cross-sectoral research on burnout was carried out, the studies in question are neither representative nor accessible and therefore have not been included in the present report.

Ad hoc self-assessment of respondents based on a single item

Another set of studies are based on asking respondents to answer one question directly (known as a ‘single item’), to assess whether they believe they are at risk of becoming burnt out.

In **Austria**, the regular work climate survey (Arbeitsklima Index) of the Arbeiterkammer Oberösterreich (2017) asked a representative sample of the Austrian working population whether they felt they were at risk of experiencing burnout in their current jobs. Around a third of employees stated that in their opinion they were at a low risk of becoming burnt out, while 6% reported they had already been on a period of sick leave due to burnout.

The **Czech** survey by Raboch and Ptáček (2015), mentioned in the table above, also asked respondents whether in their opinion burnout presented a threat to them. The results indicated that over a third (34%) of respondents felt they were at risk of burnout.

In **Norway**, the national survey on living conditions (Statens arbeidsmiljøinstitutt (STAMI), 2013) also measured the degree of ‘mental exhaustion from work’ based on a single item, by asking respondents whether they sometimes feel mentally exhausted when they return home from work. Respondents were also asked to indicate the frequency with which they experienced this. In 2013, around 480,000 employees – or 19% of the working population – reported that they experienced mental exhaustion at least once a week after a day at work.

A single item was also used to measure burnout in the quality of working life survey in **Finland** (Letho and Sutela, 2008). The survey asked respondents to assess the level of risk of burnout in their job according to a three-point scale: severe risk, occasional risk or no risk. The proportion of those who experienced either an

Table 2: Major representative cross-sectoral studies based on other inventories or measures

Study	Method, sample size and coverage	Main findings regarding prevalence or incidence
Austria – Scheibenbogen et al (2017)	N = 908, representative of the general population aged 20–67. Own data gathering tool: Burnout Dimensions Inventory (BODI) – See Annex 1, Inventory 5.	Overall, 44% were somewhat affected by burnout. Another 8% were diagnosed with burnout illness involving depression. According to the findings, burnout can be broken down into three main stages: Stage 1: ‘I can do everything’ (19%). Symptoms: undetected overload; compensation mechanisms; lack of leisure activities; neglect of one’s own needs; neglect of relationships; increased irritability/state of stress; difficulty falling asleep; appetite disorder. Stage 2: ‘I can still’ – transitional stage (17%). Symptoms: conscious overload; vegetative dystonia; lack of leisure activities; total concentration on work; increasing social isolation; state of stress/inner restlessness (especially when not working) and anxieties; difficulty falling asleep and sleeping through the night; increased irritability/dysthymia; unspecific psychosomatic complaints/somatoform disorder. Stage 3: ‘I cannot do anything anymore’ – illness stage (8%). Symptoms: complete exhaustion; incapacity to work (subjective/objective); social withdrawal/social phobia; dysphoria/depression; chronic pain syndromes; reduced/extended sleep (wake-up disorder); physical illness; generalised marked depression; hopelessness/being weary of life.
Czech Republic – Raboch and Ptáček (2015)	Representative sample of workers aged 25–50 interviewed by means of an online questionnaire and people aged 51–65 interviewed face to face by an interviewer. Burnout was assessed based on the Shirom-Melamed Burnout Measure – See Annex 1, Inventory 4. The interviewees were also asked to describe their own perception of burnout.	The results of the Shirom-Melamed Burnout Measure questionnaire revealed that 20% of workers experienced specific burnout symptoms (not including mild symptoms). Of the three sub-dimensions of burnout, the most commonly mentioned was physical fatigue, with 39% of the symptoms mentioned being physical. People experiencing such symptoms often feel tired, ‘have had enough’ or feel that their ‘batteries are flat’. This has consequences at the cognitive level (32% of all symptoms mentioned were cognitive) meaning that they have difficulty concentrating and/or thinking about complicated issues or feel they are unable to think clearly. Emotional symptoms of burnout represented only 29% of all symptoms.
Estonia – Seppo et al (2010)	1,200 employees aged 15–74. The Health and Safety Executive (HSE) Management Standards Indicator Tool (UK) and the Copenhagen Psychosocial Questionnaire were used. Face-to-face interviews were carried out in people’s homes.	The average value of the burnout factor – measured by burnout symptoms such as how often people felt exhaustion (physical as well as emotional) and tiredness – was 40.8 on a scale of 0–100. The Copenhagen Psychosocial Questionnaire’s risk factors (emotional demands, workload, pace, etc.) explained 27% of the variance of the burnout factor. During the four weeks prior to the interview, around 15% of persons experienced burnout symptoms ‘all or most of the time’.
Germany – Rose et al (2016), based on BIBB/BAuA (2012)	Sample of 4,511 employees, not including retirees and the self-employed. Oldenburg Burnout Inventory (Demerouti and Bakker, 2008) – See Annex 1, Inventory 3.	The results show that 10% of men and 11% of women report experiencing burnout and 7% of men and 9% of women report having symptoms of depression.
Luxembourg – Sischka and Steffgen (2016a and 2017)	Sample of 1,500 telephone interviews with employees working in Luxembourg. Quality of Work Index had 10 questions related to burnout, based on Copenhagen Burnout Inventory – See Annex 1, Inventory 2.	The report from 2017 does not give concrete figures on the prevalence of burnout, but indicates that the level of burnout experienced by workers (scale of 0–100) has increased as follows: 29.4% in 2014; 28.4% in 2015; 32.8% in 2016; and 32.1% in 2017. Sischka and Steffgen (2016a) also provide the following figures on the prevalence of burnout, based on four questions: 18% in 2013; 16% in 2014; and 15.7% in 2015.
Sweden – Norlund (2011) and Norlund et al (2010)	Sample of 1,000 of the 2004 MONICA survey in Northern Sweden and a five-year follow-up of the same population (N = 626). Shirom Melamed Burnout Questionnaire – see Annex 1, Inventory 4.	The research assesses the prevalence of burnout among the Northern Swedish working population, with a cut-off value of 4.0 on the SMBQ, indicating a ‘high level’ of burnout. For 2004, it finds a level of 12.9% and in 2009 13.1%.

occasional or a severe risk was 47% in 1997, 50% in 2003 and 51% in 2008.

In **Poland**, Sedlak & Sedlak (2011 and 2017) have carried out two editions of the Ogólnopolskie Badanie Satysfakcji z Pracy (All Poland Job Satisfaction Survey) – an open online survey with a large sample size (N = 4,690 in 2011 and N = 4,816 in 2016). In its second edition, the survey included single-item measures of burnout defined as ‘the result of excessive burden at work’ and a second concept – roughly translated as ‘rust-out’ – which was defined as ‘the result of a lack of challenge and professional development’. In 2016, 24% of respondents reported having suffered from burnout, with 7% indicating that they had experienced rust-out.

In the **United Kingdom**, the Virgin Group (2015) commissioned an online YouGov survey of 1,153 adults on the subject of anxiety and burnout in workplaces, using weighting to ensure a representative sample. The survey, based on self-assessment, found that over half (51%) of all full-time employees surveyed in the United Kingdom had experienced anxiety or burnout in their current job. The figure was consistent among men and women and for employees in most age groups, except for respondents over the age of 55, of whom only a third said they had experienced anxiety or burnout.

Occupational studies on burnout

Burnout research initially focused mainly on a number of specific occupations, then gradually came to include other occupations and sectors.

Most occupational studies reported by the Network of Eurofound Correspondents in the framework of the present study relate to doctors, teachers and nurses, as well as to social workers, firefighters, police officers and prison officers. In terms of private sector occupations, occupational studies have investigated telephone operators, workers in the banking and hospitality sectors and media and sales professionals. Apart from these, only one occupational study which at least partially covered workers outside of the service sector was reported: a survey of small construction and real estate companies in Lithuania (Bastakyte and Kaminskas, 2013).

The list provided in Table 3 is not exhaustive, as the correspondents were initially asked to report on major cross-sectoral studies on burnout, and to report on occupational studies only in the absence of such cross-sectoral studies. Eurofound’s analysis shows that in many countries occupational studies remain the only sources of information on burnout.

Burnout was further subject to medical interpretation as researchers tried to move from a continuous burnout strategy, where levels of burnout were graded, towards a dual strategy whereby burnout cases would be distinguished from non-burnout cases, with a view to easing access to treatment. Some researchers have used medical criteria, in particular ICD-10 diagnosis code F43-8 (‘other reactions to severe stress’) to identify burnout and calibrate self-reported answers to burnout questionnaires.⁴

Classification of burnout as a medical diagnosis

As regards the use of comparative classification systems to record and collect diagnostics of burnout, the ICD-10 International Classification of Diseases enables the systematic recording, analysis, interpretation and comparison of mortality and morbidity data collected in different countries or areas and at different times.

In the ICD-10, the World Health Organization (WHO) classifies burnout not as a disorder but rather under the residual code ‘Z: Factors influencing health status and contact with health services’ and, within this, under the group ‘Z73: Problems related to life-management difficulty’. ‘Z73.0 Burnout’ as a distinct sub-category is described as a ‘state of vital exhaustion’. The Z73 classification introduces burnout as one individual problem related to coping with life in a similar way to others.

This classification is distinct from the Z56 group, which includes problems related to employment and unemployment (excluding occupational exposure to risk factors and problems related to housing and economic circumstances). This includes change of job, threat of job loss, stressful work schedule, discord with boss and workmates, uncongenial work environment and other physical and mental strain related to work.

Research in various Member States has applied this classification to the topic of burnout in different ways. Most countries have followed the latest WHO classification closely, such as Austria, Belgium, Bulgaria, Croatia, the Czech Republic, Cyprus, Denmark, Estonia, France, Finland, Greece, Italy, Latvia, the Netherlands, Norway, Slovakia, Portugal and Slovenia. Such a classification emphasises over-exhaustion and does not associate burnout with work and its conditions.

Sweden is the only country which uses ICD-10 code F43.8A, *utmattningssyndrom* (‘fatigue syndrome’) as an approved medical diagnosis, classified under ‘adaptation disorders and response to severe stress’.

⁴ The World Health Organization’s International Statistical Classification of Diseases and Related Health Problems (also known by the acronym ICD) is a healthcare classification system used to classify diseases, symptoms, signs, abnormal findings, social circumstances, complaints and external causes of injury or disease.

Table 3: Major occupational studies on burnout in the EU

Occupation	Country and study
Cross-occupational studies	Bulgaria: Tzenova (2005) – teachers, nurses, hospital staff, social institutions, pharmacists and phone operators. Norway: Innstrand et al (2008) – lawyers, bus drivers, information technology workers, doctors, teachers, church ministers, workers in the advertising industry and nurses. Poland: Lubrańska (2012) – teachers, nurses, trainers, pedagogical staff and social workers.
Healthcare professionals	Belgium: Vandenbroeck et al (2013) – doctors and nurses. Denmark: Madsen et al (2015) – human services (primary and secondary health sector).
Doctors in general	Czech Republic: Raboch and Ptáček (2014). Germany: Rahner (2011). Greece: Nakou et al (2016) – junior doctors. United Kingdom: Imo (2017).
General practitioners	Greece: Alexias et al (2010) – doctors in a public hospital in Athens. Croatia: Ožvačić Adžić et al (2013) – family doctors; Tomljenovic et al (2014) – doctors in hospitals in Rijeka. Hungary: Ádám et al (2009). Norway: Langballe et al (2011) – male and female doctors. Portugal: Marcelino et al (2012) – family doctors in healthcare centres. United Kingdom: Orton et al (2012).
Other specialist doctors	Spain: Obrero Gaitán et al (2014) – orthopaedic surgeons. United Kingdom: Denton et al (2008) – dentists.
Nurses	Cyprus: Raftopoulos et al (2012). Lithuania: Vimantaitė (2007). Malta: Galea (2014) – nurses in cardiac surgery centres. Poland: Kowalczyk et al (2011) – nurses in closed healthcare facilities.
Other professionals working in healthcare	Malta: Agius and Formosa (2014) – podiatrists. Bulgaria: Dimitrova et al (2014) – medical students.
Education professionals	Germany: Blossfeld et al (2014) – childcare workers, teachers in different school types. Lithuania: Merkys and Bubelienė (2013) – teachers in different types of school: primary, lower-secondary, upper-secondary, gymnasium. Portugal: David and Quintão (2012) – teachers at different levels, from early school education to university. Slovakia: Urdziková and Kordosova (2016) – employees in schools and universities.
Preschool teachers	Lithuania: Abromaitienė and Stanišauskienė (2015).
Primary school teachers	Cyprus: Kokkinos (2007). Greece: Vasilopoulos (2012).
Secondary school teachers	Spain: Salanova et al (2003). United Kingdom: Kinman et al (2011).
Other education sector professionals	Croatia: Martinko (2010) – teachers in adult education institutions. Lithuania: Mackonienė and Norvilė (2012) – school psychologists. Poland: Lipowska (2016) – pedagogical staff in orphanages.
Other human service occupations in public sector	Lithuania: Kavaliauskienė and Balčiūnaitė (2015) – social workers. United Kingdom: McFadden (2015) – social workers. Greece: Katsavouni et al (2016) – firefighters; Portugal: Rosa et al (2015) – police officers. Hungary: Sagáth (2013) – prison officers. Slovakia: Mesárosova et al (2016) – social workers, nurses, tutors, home nurses, special pedagogical staff and psychologists.
Private sector professionals with extensive client contact	Croatia: Horvat et al (2016) – banking sector employees in client-facing roles. Lithuania: Pacevičius (2007) – banking sector employees. Cyprus: Zopiatis and Orphanides (2009) – food and drink industry workers. Lithuania: Gruodytė and Navickienė (2014) – tourism sector employees. Bulgaria: Tzenova and Velkova (2007) – artistic/technical staff. Croatia: Ružić (2013) – sales professionals.

The term is found in the Swedish ICD-10 under ‘F40-F48 Neurotic stress-related or somatoform syndromes/F43 Adaptation disorders and response to severe stress/F43.8A *utmattningssyndrom*’. The criteria are as follows:

- physiological or mental symptoms of exhaustion for at least two weeks
- essential lack of psychological energy
- symptoms such as difficulty concentrating, decreased ability to cope with stress, irritability or emotional instability, sleep disturbances, muscle pain, dizziness or palpitations⁵

In order to be classified as *utmattningssyndrom*, these symptoms must occur every day over a two-week period and cause significant suffering with impaired work capacity. Finally, the symptoms must not be related to any other psychiatric diagnosis, substance abuse or medical diagnosis. In a clinical setting, the Shirom-Melamed Burnout Questionnaire (SMBQ) is used in Sweden to identify potential clinical cases of burnout (see Lundgren-Nilsson et al, 2012). It should be noted that the Swedish translation of burnout (*utbrändhet*) is a term rarely used nowadays in Sweden.

Italy uses the (previous) ICD-9-CM (CDC/National Center for Health Statistics, n.d.) classification, which includes a similar medical diagnosis within the group of mental disorders (309.23 – ‘academic/work inhibition’) under the parent code of ‘309 – adjustment reaction with predominant disturbance of other emotions’ and, in contrast to most other European countries, classifies burnout as a ‘problem’ which is ‘work related’ (V62.1 – ‘Negative consequences of the work environment’).

A quick glimpse at the various national ICD manuals to see how the term ‘burnout’ itself is referred to in national languages, and how these terms would translate into English, reveals the difficulty involved in discussing the concept in a comparative, cross-country context. It should also be noted that these terms do not always correspond to the ‘popular’ terms used in the media discussion on burnout and place different levels of importance on the fatigue and exhaustion dimensions.

While the English version of the ICD manual describes burnout as a ‘state of vital exhaustion’, other national versions, when translated into English, refer to:

- ‘Ultimate exhaustion’ (Croatian: *Krajnja iscrpljenost*)
- ‘Overflow/Exhaustion of forces’ (Latvian: *Pārpūle Spēku izsīkums*)

- ‘Overstraining/state of exhaustion’ (Estonian: *Läbipõlenud/Elulise väljakurnatuse seisund*)
- ‘Professional exhaustion syndrome’ (French: *Syndrome d’épuisement professionnel*)
- ‘Exhaustion’ (Greek: *Εξάντληση*; Portuguese: *esgotamento*)
- ‘Problem with burnout’ (Danish: *Problem med udbrændthed*)
- ‘Burnout syndrome, State of complete exhaustion’ (Slovakia: *Syndróm vyhorenia, Stav kompletného vyčerpania*; Germany: *Ausgebranntsein/Burnout, Zustand der totalen Erschoepfung*)
- Or simply ‘Burnout’ (Slovenian: *Izgorelost*)

The Czech translation, meanwhile, refers to ‘burnout’ (*Vyhoření*), ‘extinction’ (*Vyhasnutí*) and ‘state of life exhaustion’ (*Stav životního vyčerpání*). The Italian term (*Stato di esaurimento vitale*) is the only one that translates directly into the English ‘state of vital exhaustion’, while the Finnish term (*Työuupumus*), or ‘work exhaustion’ seems to be the only translation which makes a specific reference to work.

Burnout as an occupational disease

Only in two EU countries has burnout been classified as an ‘occupational disease’ to date, namely in Italy and in Latvia. In France, a proposal to recognise burnout as an occupational disease was rejected in 2017 and again in 2018.

In **Italy**, the National Institution for Insurance against Accidents at Work (Istituto nazionale per l’assicurazione contro gli infortuni sul lavoro, INAIL) includes burnout in its list of occupational diseases (*malattie professionali*). Burnout can be related to the psychic and psychosomatic diseases stemming from work, namely ‘(chronic) adaptation disorder’ (*disturbo dell’adattamento (cronico)*), and ‘chronic post-traumatic stress disorder’ (*disturbo post-traumatico cronico da stress*).

In **Latvia**, burnout is recognised as an occupational disease⁶ under ‘diseases caused by overload (total physical overload or overload of particular organs or systems)’. While there is no debate on burnout, there are plans to introduce general labour legislation which will put in place standards for the prevention of burnout in the workplace.

5 For a complete overview of the criteria for exhaustion disorder, see the Swedish National Board of Health and Welfare (2003) (in Swedish) or an English version in Persson et al (2017), Table I. The latter research conducted a cross-sectional observational study of a Swedish general population; the authors compared two recently developed screening instruments for exhaustion disorder ‘ED’ (the KEDS – Karolinska Exhaustion Disorder Scale and the s-ED Self-reported Exhaustion Disorder Scale) to various related measures for burnout (SMBQ) and engagement (UWES), job demands-control support, stress in private life, family-work interference and personality factors. They find that the instruments designed to assess burnout and work engagement and those designed to measure ED, while being conceptually different, share common grounds.

6 Burnout was recognised as an occupational disease in Latvia in the Law on compulsory social insurance in respect of accidents at work and occupational diseases (adopted on 2 November 1995, valid from 1 January 1997) and Regulation of the Cabinet of Ministers No. 908 (adopted on 6 November 2006, valid from 1 January 2007).

In **France**, the recognition of burnout as a form of work-related stress has been the focus of much debate, so much so that in February 2017 the National Assembly adopted a report from the parliamentary mission set up to address the issue of burnout and look into its definition and a framework for its recognition as a work-related disease. However, this legislative proposal, as well as a new legislative proposal on burnout aimed at leading to the recognition of mental health issues linked with overload as occupational diseases (Assemblée nationale, 2017), were both rejected following their submission in 2018.

In **Belgium**, the Minister of Health Maggie De Block has already announced several times since autumn 2016 that she will introduce new legislation recognising burnout as a work-related disease. This recognition differs from its recognition as an occupational disease, which can lead to specific benefits when an employee can no longer work full time due to this disease.

In the **Netherlands**, burnout is already recognised as a work-related disease, while in Bulgaria it is recognised as a work-related disease mainly in healthcare, education and social work.

In **Slovakia**, burnout is not considered as a medical diagnosis, but its consequences may be classified as a disease, as ‘post-traumatic stress disorder (F43.1)’ has been recognised as an occupational disease or ‘occupational disease threat’. **Romania** includes neuropsychological overload in a 2010 amendment of Law No. 319 on Safety and Health at Work – a factor that can cause certain occupational-related diseases such as hypertension, ischaemic heart disease, neuroses and other neuropsychiatric disorders, while excessive working hours leading to death can also be recognised as an accident at work.

In **Slovakia** and **Romania**, some consequences of burnout can be classified as occupational diseases or accidents at work. Following the case of the death of a woman due to work exhaustion, the Romanian government made several adjustments to its Labour

Code, such as the legal provision of 2010 that illness or death caused by additional working hours is classified as an accident at work if there was no agreement on the extension of the working hours of the employee. The concept of burnout emerged after the case was brought to public attention.

Burnout cases based on medical diagnoses

In only a few countries (Italy, Belgium and Germany) were Eurofound’s correspondents able to report on data on burnout cases based on medical diagnostics.

In **Italy**, where burnout is acknowledged as an occupational disease, INAIL recognised 128 cases of burnout between 2012 and 2016, out of a total of 1,555 that were reported in the same period (see Table 4). Among the recognised cases, 59 involved men and 69 women. Over this period, the recognition rate seemed to decrease while the number of reported cases increased slightly, but this trend would need to be confirmed by a more in-depth study on occupational diseases in Italy.

In **Belgium**, the prevalence of burnout diagnosed by general practitioners and specialists in occupational medicine is extremely low. In a large-scale study based on 135,131 patients over a period of three months, 1,089 cases of burnout were diagnosed by doctors, indicating an estimated prevalence of 0.8% of the active population (Hansez et al, 2014).

In **Germany**, BKK – one of the statutory health insurers – publishes data on cases and days of absence due to the Z73 diagnosis code. BKK’s data showed an increase in the prevalence of cases from 0.7% of the population in 2006 to 2.8% in 2016 (those involving women increased from 1% to 3.3% while those involving men increased from 0.5% to 2.3%).

In the framework of the DEGS1 study⁷ carried out by the Robert Koch Institute (Maske et al, 2016), 7,987 people

Table 4: Reported and recognised cases of burnout in Italy, 2012–2016

	2012	2013	2014	2015	2016
Reported cases	296	289	330	334	306
Of which:					
Recognised by INAIL as occupational disease	41	26	19	27	15
Not recognised by INAIL as occupational disease	252	259	306	298	241
Pending cases	3	4	5	9	50

Source: INAIL, *Occupational diseases according to the date of protocol (Italy) – Biannual data*

⁷ German Health Interview and Examination Survey for Adults (*Studie zur Gesundheit Erwachsener in Deutschland*).

(aged between 18 and 79, including retirees and self-employed people) were asked to report whether they had been diagnosed with burnout by a doctor or a psychotherapist in their lifetime or in the previous 12 months. This study was conducted against the backdrop that a medical classification (i.e. a 'Z' classification) for such a diagnosis was not in place and sick leave depended on the diagnosis of some form of health disorder. In the supplementary study DEGS1-MH (mental health module), 4,483 participants who had previously been diagnosed with a mental health disorder were re-contacted and further assessed through computer-assisted personal interviewing (Jacobi et al, 2014). This applied a modified version of the Munich composite international diagnostic interview (DIA-X/M-CIDI), a German version of the World Health Organization's internationally established composite international diagnostic interview.

DEGS1-MH found that 5.2% of all female participants and 3.3% of all male participants (4.2% on average) said they had been diagnosed with burnout at least once in their life. Some 1.9% of the female respondents and 1.1% of the male respondents said they had been diagnosed within the previous 12 months. Of these diagnoses, 70.9% had a DSM-IV mental disorder,⁸ 59% had an anxiety disorder, around 58% had an affective disorder (depressive episode or depression) and 27% a somatoform disorder. The authors conclude that burnout diagnoses are less frequent than one would expect given the public, media-fuelled awareness of the issue. Given the unclear definitions of the indicators, burnout diagnoses are based on the judgment of the doctor or psychotherapist and therefore dependent on subjectivity. The findings show that the doctor's diagnosis and the patient's self-assessment may differ, and that self-assessments can vary according to the patient's socioeconomic and educational background. For example, most men with a burnout diagnosis are of high socioeconomic status, have a high level of social support and are in the middle of their career (aged 40–49 on average). To them, a burnout diagnosis may be easier to take than a diagnosis of depression. In contrast, participants of a lower socioeconomic status typically report having depression rather than burnout (Jacobi et al, 2014).

The authors acknowledge that bias in diagnosing and reporting may have occurred in the study, underestimating the true prevalence of burnout. Firstly, there is no generally accepted standard for 'burnout' diagnosis in Germany, which makes diagnosis arbitrary.

Secondly, the measurement requires that the patient had, prior to the study, already sought medical help, been diagnosed and been informed of their diagnosis, and then remembered to report it in their interview. Thirdly, there might have been additional underreporting due to fear of potential stigmatisation.

In **Latvia**, where burnout is considered an occupational disease, no data are available. The correspondents note that, according to a recent report, statistics on occupational diseases depend to a large extent on subjective conditions, such as the discipline of doctors in registering occupational diseases, the regularity of medical checks in workplaces and the availability of staff working with databases on occupational diseases (TNS Latvia Ltd and Rīga Stradiņš University, 2013). A lack of funding can have a negative impact on these conditions, reducing the comprehensiveness and comparability of statistics. When it comes to statistics on burnout, the lack of willingness among individuals to reveal their problems adds to the complexity.

Correlation between burnout and mental depression and anxiety

Based on these medical data, the prevalence of burnout as a medical diagnostic seems to be very low (less than 5%). One reason that may explain why there are so few diagnosed cases when there is such widespread popular interest could be that burnout, anxiety and/or depression may be present in the same individuals, and such individuals may have been diagnosed with anxiety and/or depression rather than burnout.

This is the explanation proposed in the German study outlined in the previous section, which revealed that approximately 59% of those diagnosed with burnout also had an anxiety disorder, around 58% an affective disorder (depressive episode or depression) and 27% a somatoform disorder (Maske et al, 2016). Some studies have supported this hypothesis by highlighting the similarities and crossovers between burnout and depression or anxiety. For example, the emotional exhaustion component of burnout can be related to the fatigue or loss of energy that patients suffering from depression may experience. Three such studies are outlined below.

- A Greek study on 427 primary school teachers (Vasilopoulos, 2012) found that those experiencing high social anxiety also reported higher levels of burnout.

⁸ The DSM-IV is a classification system issued in 1994 by the American Psychiatric Association (APA) as part of their Diagnostic and Statistical Manual of Mental Disorders (DSM).

- A Portuguese study among 1,045 young police officers (Rosa et al, 2015) highlighted depression as the main explanatory factor of burnout among this specific group.
- A recent study in Denmark showed a link between burnout and the use of antidepressants (Madsen et al, 2015).

The high correlation between burnout, depression and anxiety is explained by Toker et al (2005):

During its early stages, burnout may occur concomitantly with a high level of anxiety because of the active coping behaviours that usually entail a high level of arousal. When and if these coping behaviours prove ineffective, the individual may give up and engage in emotional detachment and defensive behaviours that may lead to depressive behaviours.

(Toker et al, 2005)

The same study, based on questionnaire data but which also used biological markers, concluded that burnout is distinct from depression and anxiety and is associated with different biological markers, leading to the conclusion that burnout constitutes a risk factor for cardiovascular disease (as well as mental health). A 30-year prospective community study in Zurich reported that individual variables such as mood and anxiety disorders can anticipate subsequent burnout (Rössler et al, 2015). Research on 760 workers in the helping professions in Slovakia (Mesarosova et al, 2016) has also shown that intense experiences of secondary traumatic stress and burnout are related to experiences of other negative symptoms, such as higher rates of anxiety and depression, more frequent experiences of negative emotions (such as anger, fear, sadness and guilt) and pessimistic visions of the future.

In a position paper from 2012, the German society for psychiatry and psychotherapy warned against ‘an unscientific and uncritical use of the term burnout’, that is the tendency to subsume ‘in principle all psychic disorders relating to work strain’. It warned that, if burnout is equated with the severe and often life-threatening clinical picture of depression, this could result in a critical undersupply (Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, 2012, p. 12). This is backed up by Bianchi et al (2015), who reviewed evidence on the overlap between burnout and depression, based on 92 studies, and suggested that the distinction, in particular between the last stage of burnout and clinical depression, is conceptually fragile. Empirically, evidence for the distinctiveness of the concept of burnout has been inconsistent, with most recent studies casting doubt in this regard. The absence of agreed diagnostic criteria for burnout and insufficient consideration of the

heterogeneity of depressive disorders in burnout research represent major obstacles to the resolution of this issue. It is suggested that systematic clinical observation should be given a central role in future research on the overlap between burnout and depression.

Physical consequences of burnout

There is extensive literature available now on the physical effects of burnout on the individual, and to summarise it would go beyond the scope of this report. An overview of the earlier research in this area is provided by Shirom et al (2005). More recently, a meta-study by Salvagioni et al (2017), based on 36 selected prospective studies, showed that burnout was a predictor of twelve physical consequences: hypercholesterolemia, type 2 diabetes, coronary heart disease, hospitalisation due to cardiovascular disorder, musculoskeletal pain, changes in pain experiences, prolonged fatigue, headaches, gastrointestinal issues, respiratory problems, severe injuries and mortality below the age of 45 years.

Another related question in this regard concerns physical markers which would enable burnout to be detected. Elevated cortisol levels have been studied in this regard (see Melamed et al, 1999); and while findings on cortisol levels in burnout patients appear to be mixed, a recent study by Oosterholt et al (2014) showed that patients with both clinical and non-clinical burnout had lower cortisol levels than healthy control groups. Most recently, hair cortisol has been suggested as a biological marker for burnout symptomatology: while burnout patients have lowered levels of hair cortisol, patients with depression did not (Penz et al, 2018). Another clinical marker that has been researched in conjunction with burnout is insomnia or the inability to recover (see, for example, Metlaine et al 2017, 2018 or Toker and Melamed, 2017).

Differentiated findings for different groups

When it comes to differentiated findings for different sub-groups of workers, the results of these cross-sectoral studies have not proven conclusive (see Table 5). In terms of gender, several studies have indicated that women are more likely to be affected by burnout than men (Belgium: Hansez et al, 2010; Czech Republic: Raboch and Ptáček, 2015; Germany: Maske et al, 2016; Netherlands: CBS data), although others have found no significant differences between men and women (Austria: Scheibenbogen et al, 2017; Finland: Suvisaari et al, 2012; Slovenia: Pšeničny 2010).

Table 5: Selected findings on the prevalence of burnout among different groups of workers

Country/Study	Gender	Age group
Austria – Scheibenbogen et al (2017)	Not statistically significant.	12% of those specifically affected by a burnout illness (stage three) are under 30 years of age, 11% aged between 30 and 39, and 9% between 50 and 59.
Belgium – Hansez et al (2010)	Of those diagnosed with burnout, 62% were women.	People aged 45–55 were the most prevalent age group in the study (32%).
Czech Republic – Raboch and Ptáček (2015)	Burnout was most common among women. More specific information is not available.	Burnout was most common in people up to the age of 44.
Finland – Suvisaari et al (2012)	Differences based on gender and age group were not found to be statistically significant. Burnout occurrence declined somewhat from 2000 to 2011, to a statistically significant extent among women and as a referential among men (in the case of the latter, the figures were not statistically significant/accurate but indicative/probable).	For women, mild burnout increased with age, from 21% of respondents aged 30–44 to 29% of those aged 55–64. For men, the level of mild burnout varied, from 25% of respondents aged 30–44 to 19.3% of those aged 45–54 and 24.3% of those aged 55–64.
Germany – Maske et al (2016)	The prevalence of burnout over a person's lifetime was significantly higher for women (5.2%) than for men (3.3%), as well as its prevalence in the previous 12 months (1.9% for women and 1.1% for men).	The highest prevalence was found among men aged 40–59 and for women aged 30–59.
Germany – Rose et al (2016) based on BIBB/BAuA (2012)	10% of men and 11% of women reported having experienced burnout and 7% of men and 9% of women report having depressive symptoms.	No difference in prevalence was identified among the 31–50 age group; in the 51–60 age group, the prevalence of burnout was 11% for women and 9% for men.
Luxembourg – Sischka and Steffgen (2016a and 2017)	According to Luxembourg's Quality of Work Index, women are more likely to have experienced burnout, although concrete figures were not reported in 2017. In 2016, the index (Sischka and Steffgen, 2016a) reported that the prevalence for men was 16.2% in 2013, 15% in 2014 and 14.9% in 2015. For women, it was 20.7% in 2013, 17.5% in 2014 and 16.9% in 2015.	Not reported in 2017. Based on data from 2013–2015, the 25–34 age group seems to be less affected by burnout, while those aged 35–44 and 45–54 showed a higher prevalence of burnout. The data regarding the prevalence of burnout among the 16–24 and the 55+ age groups have been more variable over time, which could be due to small sample sizes.
Netherlands – Hooftman et al (2017)	According to the Netherlands Working Conditions Survey, women were found to be more likely to have experienced burnout (15.3%, as compared to 14.0% of men).	People in the 25–34 age group are most at risk of burnout, followed by the 55–64 age group.
Slovenia – Pšeničny (2010)	No significant differences between women and men were found, although the research did show that women in managerial roles and female entrepreneurs experience the highest levels of burnout.	Not statistically significant.
Sweden – Norlund et al (2010)	Women had a higher level of burnout than men, with the most pronounced difference evident in the 35–44 years age group. In both sexes, the level of burnout decreased with age.	The highest levels of burnout (highest SMBQ scores) were found in younger persons.

2 Work-related determinants of burnout

Originally, when the concept of burnout first appeared, the association with work seemed very clear. More recently, however, individual determinants and characteristics seem to be researched more frequently than work-related determinants and in a more fragmented way (see Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde, 2012). This is also clear when analysing the detailed studies (both cross-sectoral and occupational) reported by Eurofound's correspondents: only a few considered the impact of work on the risk of burnout, while those that did so generated long, fragmented lists of possible work determinants.

The work determinants highlighted by Eurofound's correspondents in the present study related to psychosocial risks, with a strong emphasis on high demands (such as long working hours and fast-paced work). In addition, the correspondents referred to risks linked to specific occupations (for example, human services), as well as risks linked to conflicts of ethics and values, role conflicts, low career prospects and low justice at work, a form of job insecurity whereby individuals no longer think they belong and make a difference in their company, but believe that their employer sees them as a tool.

In general, people working in places or jobs which are characterised by a high level of exposure to psychosocial risks such as high work intensity, long working hours, emotional demands, low level of autonomy and tense social relationships at work – for example high levels of conflict, exposure to bullying, lack of social support from colleagues, difficult relations with clients or stakeholders, poor-quality leadership and conflicts of ethics and values – were found to be at a higher risk of burnout, or indeed more likely to already be developing it.

The correspondents also underlined the role of rewards at work as a driver for burnout. This connection could be explained by the job demands–resources model, which refers to two processes that explain the relationship between engagement and burnout (Bakker and Demerouti, 2007; Schaufeli and Bakker, 2004). The model distinguishes between work characteristics that have a positive effect on health and well-being and those that have a negative effect: these are referred to as either job resources or job demands. The job demand–resources model assumes two possible paths: one leading to engagement (the motivational model) and the other leading to burnout (the strain process).

Some authors argue that high demands are more linked to emotional exhaustion, while low resources (for example little support from management and colleagues, poor-quality leadership and low reward) are more linked to cynicism (Institut national de la santé et de la recherche médicale, 2011).

Stressful, emotional and tiring working environment

In Cyprus, Raftopoulos et al (2012) found a correlation between stressful working environments and high degrees of burnout, as well as between self-reported fatigue and burnout. The incidence of burnout was 17% among those who reported that their job was stressful, compared to 4.3% among those who believed it was not stressful, while it was 13.7% among those who reported experiencing fatigue, compared to 1.8% who did not report having experienced fatigue.

Bastakyte and Kaminskas (2013) found high-paced, emotionally demanding and stressful conditions to be the main psychosocial risk factors for developing burnout among real estate agency employees in Lithuania; in an earlier study from the same country, Vimantaitė (2007) listed ongoing emotional tension, often evoking stress and conflicts at work, as a determinant of burnout for nurses in cardiac surgery centres.

In another study on nurses, this time in Poland, Kowalczyk et al (2011) concluded that a high level of work-related stress correlated with the observed level of burnout. The most comprehensive Dutch burnout study, by Smulders et al (2013), found excessive emotional demands to be the factor with the highest odds ratio. A study of teachers in the UK similarly found emotional labour to be significantly linked to burnout (Kinman et al, 2011).

Conflicts in the workplace

Hansez et al (2014) found conflicts in the workplace to be among the four most prevalent work-related factors connected to burnout in Belgium. In Lithuania, Abromaitienė and Stanišauskienė (2015) reported organisational conflicts to be among the determinants of burnout for teaching staff, while in Sweden, the Swedish Agency for Health Technology Assessment and Assessment of Social Services found that people experiencing conflicts or bullying in the workplace are overrepresented among those who develop symptoms of depression and exhaustion (SBU, 2014).

Social support from colleagues

A recurring factor in burnout research is social support from colleagues (or rather the absence of such support), which has been found across several studies to mitigate or reduce the risk of burnout. Among the studies reported by Eurofound's correspondents are studies in Germany (Rose et al, 2016); Estonia (Seppo et al, 2010); Norway, among doctors (Hertzberg et al, 2016); Sweden (SBU, 2014); and the United Kingdom, among secondary school teachers (Kinman et al, 2011). Also, while the Netherlands correspondent referred to social support from colleagues as an associated factor found in the Dutch burnout literature, he also observed that the support of colleagues does not seem to compensate for the effects of excessive work pressure in the Netherlands (De Lange et al, 2003).

Physical aspects of the working environment

Physical aspects of the working environment have very rarely been included in research or been found to be associated with burnout. One exception is a study conducted among cardiac surgery nurses in Lithuania (Vimantaitė, 2007), which pointed to unfavourable working conditions – for example, working with disinfectants which often evokes allergic reactions or skin problems and therefore leads to physical stress (fatigue or various forms of pain) – as risk factors for burnout. In the Netherlands, a comprehensive study by Smulders et al (2013) ranked poor physical working conditions (such as exposure to noise and heavy or hazardous work) in the middle of a range of other work-related risk factors (with an odds ratio of 1.8). Furthermore, a study by Nakou et al (2016) revealed that junior doctors in Greece showed higher levels of depersonalisation on the MBI scale when they had suffered a workplace accident.

Heavy workload and long working hours

Another recurrent factor that has been found to be associated with burnout is a heavy workload and long working hours. This is often connected to other aspects related to the organisation of work and working time, such as having an adequate amount of resources, autonomy over one's work organisation and appropriate working hours. The impact of excessive workload was found to be particularly high among male doctors in Norway (Langballe et al, 2011) and related to higher burnout levels among family doctors in Portugal (Marcelino et al, 2012) and teachers (David and Quintão, 2012). They were also found to significantly influence the risk of burnout among workers in the helping professions in Slovakia who have to work with a large number of clients (Mesarosova et al, 2016).

Long or continuous working hours were often found to be significantly connected to burnout, for instance among junior doctors in Greece, especially when continuous working hours exceeded 32 hours (Nakou et al, 2016). This was also found to be the case when long or continuous working hours were combined with heavy workloads, for example among social workers in Lithuania (Kavaliauskienė and Balčiūnaitė, 2015) and workers in various sectors in the Netherlands (Smulders et al, 2013), with an odds ratio of 1.3–1.4. In a longitudinal Norwegian study, long working hours and 'work-to-home facilitation' were significant predictors of disengagement among female doctors (Langballe et al, 2011). In Luxembourg, Sischka and Steffgen (2016a) found that workers with longer working hours, workers who do higher amounts of overtime and those with atypical working hours scored higher on their burnout scales. In Spain, orthopaedic surgeons who work on call were also found to be associated with a higher level of burnout (Obrero Gaitán et al, 2014).

Autonomy, teamwork and possibilities for professional development

Another important work-related factor that influences the likelihood of burnout is the degree of autonomy at work. In Germany, for example, the study by Rose et al (2016) found the prevalence of burnout to be substantially higher when autonomy was lower, and vice versa (see Table 6).

Table 6: Prevalence of burnout among men and women and degree of autonomy at work in Germany

Autonomy	Men with burnout (%)	Women with burnout (%)
High autonomy	6	7
Rather high autonomy	9	8
Rather low autonomy	11	13
Low autonomy	17	15

Source: Rose et al (2016), p. 36, Table 2.20

The study among Lithuanian construction sector workers found that the biggest problem for construction companies is that most employees have no influence over their allocated workload and lack sufficient time to do important tasks to a high standard (Bastakyte and Kaminskas, 2013).

On the other hand, the Norwegian longitudinal study among doctors revealed the unexpected outcome that those who had reported having higher levels of autonomy at the beginning of the research were associated with higher levels of self-reported

exhaustion two years afterwards (Langballe et al, 2011). Also, the results of Smulders et al (2013) in the Netherlands, which found a significantly stronger association between those who telework and those who become burnt out (odds ratio 1.3), could suggest that autonomy is a double-edged sword in the context of burnout, especially when considering work–life balance and the concept of ‘boundaryless work’.

Teamwork has been researched much less frequently, although a study of dentists in the United Kingdom (Denton et al, 2008) did show that those who work in larger teams had lower burnout scores and more positive work engagement scores. Furthermore, research into teamwork and burnout levels among medical specialists in Bulgaria suggested that teamwork within medical departments has a buffering effect on burnout if the work demand is low (Dimitrova and Todorova, 2015). It also identified a buffering effect on depersonalisation when organisational demand is high, but found that teamwork between different medical departments does not have a protective function with regard to burnout.

Opportunities to develop professionally and upskill were also mentioned as an individual strategy to counteract the effects of burnout in a study from Poland (Lipowska, 2016), while a lack of opportunities for creativity, learning or development at work was found to increase the likelihood of burnout in the Netherlands (Smulders et al, 2013).

Impact of management

Another determining factor for burnout is the role of management and leadership, particularly in terms of people’s relationships with and level of trust in their managers.

According to Smulders et al (2013), lack of support from management meant that the risk of burnout was found to be 2.3 times higher in the Netherlands. Research into burnout among orphanage staff in Poland (Lipowska, 2016) concluded that mentoring, appreciation and trust from supervisors also play a positive role in mitigating burnout and maintaining or restoring motivation to work. In contrast, research among Lithuanian construction and real estate companies, which utilised a questionnaire about motivation, showed that the least motivating factor for workers was their relationship with managers (Bastakyte and Kaminskas, 2013). Research among medical staff in a public hospital in Greece also found only a moderate degree of influence

between emotional exhaustion and workers’ satisfaction with their immediate supervisor and/or colleagues (Alexias et al, 2010).

Rewards

Rewards of various natures were another factor taken into account in some of the identified research on burnout. One assumption could be that a perceived imbalance between rewards desired and rewards obtained would increase the likelihood of burnout. One study on the relationship between burnout and job stress found a link between inequity – that is, the discrepancy between what the employee contributes and what they receive in return – and emotional exhaustion (Taris et al, 2001).

The lack of financial reward or inadequate remuneration for work was found to be associated with burnout among social workers, cardiac nurses and teachers in Lithuania (Abromaitienė and Stanišauskienė, 2015; Kavaliauskienė and Balčiūnaitė, 2015; Vimantaitė, 2007). Spanish research among orthopaedic surgeons reported that 17.3% of respondents subjectively highlighted the disparity between salary and liability as a burnout factor, while 12.5% highlighted the lack of recognition of their work – by both their employers and/or patients (Obrero Gaitán et al, 2014). In contrast, research into medical professionals in Greece found that the level of emotional exhaustion was only moderately influenced by their opportunities for promotion (Alexias et al, 2010).

The importance people attribute to rewards varies, and research suggests that intrapersonal predictors are as important as interpersonal predictors when it comes to burnout. Slovenian research, for example, has outlined performance-based self-esteem as a particularly strong intrapersonal predictor of burnout, explaining 60% of the variance (Pšeničny, 2010).

Another form of reward is personal accomplishment, which measures feelings of competence and successful achievement in one’s work. Although burnout would perhaps typically be associated with lower scores of personal accomplishment, research in the United Kingdom on senior social workers showed that, despite showing high levels of emotional exhaustion and depersonalisation (and hence a high risk of burnout), the social workers continued to feel competent and successful in their work (McFadden, 2015).

3 Effects of burnout on work

Some of the research reports cited by Eurofound's correspondents suggest that there are negative effects of burnout on performance – primarily on individuals and their health but possibly on organisations too, although less research is available on the latter.

The effects are multiple, ranging from decline in job satisfaction or motivation, reduction in individual productivity and disengagement, negative reactions to clients (including patients or pupils) and decrease in organisational commitment. The effects of burnout on the individual can also be physical (see the section in Chapter 1 – Physical consequences of burnout). Burnout can lead to insomnia and inability to recover, affecting the quality of life of sufferers, more frequent absence and sick leave from work, and also to higher staff turnover. Ultimately, severe burnout can lead to long-term disengagement and inability to work.

Performance and motivation

Burnout has been associated with declining job satisfaction among educational psychologists in Lithuania (Mackonienė and Norvilė, 2012). A longitudinal study in Poland showed that changes in motivation to work and burnout are bidirectional and that negative changes in motivation and changes leading to burnout are to some extent reversible. Moreover, the study found that the burnout process depends on professional and personal values (Lipowska, 2016).

Gruodytė and Navickienė (2014) found that occupational burnout affects workers' concentration and successful performance of tasks, reduces their level of performance and organisational commitment, and increases absences and staff turnover rates. An Italian study suggests that the most common effects of burnout at company level are a drop in productivity, growing disengagement among workers, and an increase in sick leave (Carlini et al, 2016). On the other hand, a Dutch meta-analysis showed that the correlations between burnout and objective productivity measures were rather low, varying from 0.19 to 0.55 (Taris, 2006).

Sick leave

Very few countries have concrete statistics available on the association between sick leave and burnout.

According to the most recent figures (May 2017) of the Arbeitsklima Index, 6% of employees in Austria have been on sick leave due to burnout (Arbeiterkammer Oberösterreich, 2017).

German data on the prevalence of burnout according to the Z73 diagnosis code is provided by one of the statutory health insurers, BKK. BKK's report from 2016 showed that the number of periods of sick leave had increased from 0.7 per 1,000 members in 2006 to 2.7 per 1,000 members in 2015. Women had higher sick leave rates than men (3.3 per 1,000 female members as compared to 2.3 per 1,000 male members in 2015). However, the health insurer points out that the number of cases and days of sick leave will in fact be higher, because doctors also use the ICD-10 categories F43 ('reactions to severe stress and adjustment disorders'), F48 ('other nonpsychotic mental disorders') and R53 ('malaise and fatigue'), in addition to Z73 ('work determinants associated with burnout and effects of burnout').

According to the findings of the BKK study, absence from work due to burnout rose from 16 days per 1,000 members in 2006 to 87.5 days in 2012, but declined to 67.3 days in 2015, which is thought to be due to changes in the provision of therapy by health insurers.

Besides these studies, recent inventory-based studies in Denmark and the Netherlands found associations between levels of burnout and sick leave. According to the Danish PUMA study, the average sickness absences were 13.9 days and 6 days per year respectively among participants in the highest and lowest work burnout quartiles (Borritz et al, 2006). In the Netherlands, employees with a low burnout score (1–1.5) have an average absence rate of around 2.5%, those with a burnout score around the cut-off value (3.2) have an average absence rate of 5% and employees with a burnout score of 7 have an average absence rate of 25% (Smulders et al, 2013).

Work ability, disability and long-term disengagement

Burnout can also be relevant when studying longer-term labour market behaviour, work ability and functional capacity.

Van Echtelt (2014) studied the effects of emotional exhaustion on a person's labour market position two years later, based on data from the Dutch labour supply panel (N = 5,000). The findings reveal that people experiencing a high level of emotional exhaustion (a limited measure for burnout) had relatively often given up work within two years (4.1%, compared to 2.3% of those who had not suffered from emotional exhaustion).

Most people who had stopped working received unemployment or social assistance benefits, with smaller proportions on disability benefits and pre-pension benefits. Employees suffering from emotional exhaustion were also more likely to be on long-term sick leave than those who had not experienced emotional exhaustion. It is evident that people with emotional exhaustion view changing jobs as a way of escaping from their stressful situation. People experiencing burnout also relatively often express a desire to reduce their working hours, but do not actually do so more often than people not experiencing burnout.

According to the German Employment Survey, 74% of women and 71% of men with burnout said that their work ability had been negatively affected in the past four weeks, compared to 45% of women and 34% of

men who had not experienced burnout (BIBB/BAuA, 2012). Moreover, 12% of men and 14% of women with burnout said that they had considered leaving their job in the previous 12 months (compared to 12% of men and 17% of women with a depression diagnosis).

In Italy, a number of studies have suggested that chronic post-traumatic stress disorder can lead to permanent invalidity, although the extent of this influence varies according to the different studies: from 10% to 35% according to Carlini et al (2016), from 5% to 30% according to Bargagna and Società italiana di medicina legale e delle assicurazioni (1996) and Palmieri et al (2004), and from 16% to 45% according to Buzzi and Vanini (2014).

Dutch employees that are classified as having burnout are also more likely to receive disability benefits (which employees receive after two years of sickness in the Dutch system). Based on self-reported data from the Netherlands working conditions survey (2015), burnout is responsible for around 4–5% of new recipients of disability benefits. Burnout is not registered as an official diagnosis in the disability scheme. Figures from the employee insurance scheme implementing body UWV show that burnout and stress-related illness are the two most common mental health issues affecting new recipients of disability benefits. Just 0.5% of the total number of people with burnout – around 900,000 in the Netherlands, according to the Netherlands working conditions survey – end up receiving disability benefits. This means that many employees with burnout either recover and resume work within two years or do not pass the medical examination and are declared unfit for work (including other jobs/functions).

4 National policy responses to the issue of burnout

In national policies, burnout is addressed under a wide variety of headings. The main policy anchor for burnout is work-related stress, suggesting that burnout is assessed as prolonged exposure to chronic job stressors. In many countries, references are made to the ‘European autonomous framework agreement on work-related stress’ and its associated implementation reports.⁹ In its booklet, *Health and safety at work is everybody’s business – Practical guidance for employers*, the European Commission shares a similar approach, stating that ‘stress at work may have negative psychological, physical and social impacts and result in burnout, depression and in extreme cases even suicide’ (European Commission, 2016).

A second anchor is mental health in the workplace, emphasising the consequences of burnout on mental health (conditions such as depression, generalised syndrome of anxiety, post-traumatic stress disorder, and so on).

A third anchor is excessive working time, underlining the dimension of exhaustion in burnout. Burnout also features in numerous national occupational safety and health strategies.

Finally, in some countries, the focus remains on specific sectors and occupations.

Table 7 (below) summarises the wider policy debate on burnout in EU Member States, including the main areas in relation to which the topic is addressed.

Table 7: Coverage of burnout as part of the wider policy debate in EU Member States

Country	Areas in relation to which burnout is addressed	Details
Austria	Stress, work intensification, work without boundaries	Burnout is mentioned in the early intervention programme as part of the Austrian Health and Safety at Work Act (<i>ArbeitnehmerInnenschutzgesetz</i>) 2011. The Work and Health Act (<i>Arbeits- und Gesundheitsgesetz</i>) was implemented in Austria at national level.
Belgium	Well-being at work and humanisation of work, work-related health and safety issues	This is covered in the 1996 law on well-being at work on the execution of work and prevention of psychosocial risks, including violence and harassment in the workplace.
Bulgaria	Mental health	The action plan included in the National Health Strategy 2014–2020 (under policy 1.5) is geared towards the protection and the improvement of mental health in the workplace. Burnout is recognised as a work-related disease mainly in the healthcare, education and social work sectors.
Cyprus	Mental health in the workplace	There is no policy anchor addressing burnout.
Czech Republic	Stress in the workplace	Discussions among the social partners took place in relation to a draft amendment proposal on a provision to the Labour Code regarding the issue of work-related stress and risk of violence in the workplace, but raised concerns from employers and trade unions. The amendment has not been approved by the parliament. However, national and sectoral social partners organise awareness-raising actions and training seminars on the risks of burnout.
Germany	Mental health and stress at work	The 2013 Occupational Health and Safety Act (<i>Arbeitsschutzgesetz</i>) stipulates the assessment of risks to mental health. Mental health is debated among the social partners and addressed in the psychological strategic programme of the German joint strategy on occupational safety and health.

⁹ The Framework agreement on work-related stress was signed on 8 October 2004 by the EU-level social partners: European Trade Union Confederation (ETUC), Union of Industrial and Employers’ Confederations of Europe (UNICE) – now known as BusinessEurope – the European Association of Craft Small and Medium-sized Enterprises (UEAPME) as well as the European Centre of Enterprises with Public Participation and of Enterprises of general Economic Interest (CEEP).

Country	Areas in relation to which burnout is addressed	Details
Denmark	Mental health and psychological working environment (injuries, stress, depression, post-traumatic stress disorder)	The Danish Working Environment Act indicates sanctions that can be applied when there are issues in relation to the psychological environment and controls that can be carried out in companies when there is a high risk of mental overload.
Estonia	Mental health issues and work-related stress	The Estonian National Health Plan 2009–2020 briefly covers the topic of mental health. One of the measures regarding the state of mental health was to promote people's awareness and knowledge, including turning attention to the early identification of depression and ensuring the availability of services.
Finland	Mental health and working life	Well-being at work in general featured distinctly in the Finnish government programme 2011–2014.
France	Psychological risk and stress at work	This is an emerging policy concern in France and there have been some attempts to develop a comprehensive answer to the issue. For instance, the French Confederation of Management (Confédération Française de l'Encadrement), composed of federations and trade unions, has published a practical guide on the identification and prevention of the <i>syndrome d'épuisement professionnel</i> (professional exhaustion syndrome), including proposals to facilitate the recognition of burnout in work-related negotiations and the financial implications for social security.
Greece	Health and excessive working time	There is no policy anchor addressing burnout.
Hungary	Work-related issues	There is no policy anchor addressing burnout.
Ireland	Mental health at work, workplace stress and work–life balance	Addressed in relation to specific sectors or occupational groups (doctors, nursing staff).
Italy	Work-related stress	Addressed in relation to specific sectors or occupational groups (nursing staff, staff working in education, women and older workers).
Luxembourg	Stress, working time, absenteeism, bullying issues	Addressed in relation to exposure in specific sectors (such as cleaning), to sick leave linked to stress and its resulting costs for social security. Trade unions have addressed the issue by bringing support to employees suffering from stress (<i>Stressberodungsstell</i>) and extended the service to sufferers of burnout. The peak-level employers' organisation l'Union des Entreprises Luxembourgeoises encouraged prevention in companies at the ninth annual forum on health and safety in 2015.
Malta	Mental health and staff shortages in hospitals	The Malta Union of Midwives and Nurses has elevated the issue to a general nationwide policy debate and the Parliamentary Secretary for Health has expressed his intention to work with all stakeholders, such as the Faculty of Health Sciences, the union representing nurses and management at both public and private hospitals in order to find ways to reduce levels of stress.
Netherlands	Work-related disease; health and labour conditions	National policy is mainly restricted to legislation and enforcement. Employers have financial incentives to pay wages in case of absenteeism for the first two years of sickness (sometimes not up to 100%, in particular in sectors with blue-collar workers).
Norway	Mental health in the workplace (depression, anxiety, minor mental disorders)	There is no policy anchor addressing burnout.
Poland	Working conditions, overtime, sick leave due to accidents	There is no policy anchor addressing burnout.
Portugal	Work-related stress	The media have reported a political willingness to update the list of occupational diseases and to include burnout and other work-related mental health problems, namely those linked to moral and sexual harassment.

Country	Areas in relation to which burnout is addressed	Details
Romania	Work overload, overtime, stress management and psychological risk in the workplace	Following the case of the death of a female worker due to exhaustion in 2010, a modification of the Romanian Labour Code now includes a procedure to resolve disagreements between employers and trade unions via arbitration. The text (renumbered as art. 132) provides that, if there are no legal rules on workloads, they are established by the employer after consultation with the representative union or, where appropriate, with employee representatives. Therefore, 'agreement' has been replaced with 'consultation', meaning the opinion of the trade unions may not be taken into account when the employer establishes the workloads. Additionally, the country's national health strategy for 2014–2020 contains a component dedicated to improving mental health in the workplace. The territorial labour inspectorates have initiated and organised actions at local level with the aim of raising awareness and informing on stress management and psychosocial risks in the workplace, in order to ensure safe and healthy jobs for workers. However, burnout remains unaddressed by employers and trade union organisations, who are not involved in the debates on the issue.
Spain	Psychosocial risks at work	There is no policy anchor addressing burnout. Initiatives on 'digital rights' (i.e. digital disconnection outside working time) are valued by trade unions, who have requested the topic be included in the workers' statute and the occupational risks prevention law, but due to reservations from employer organisations, the proposal has not been developed further.
Sweden	Mental health in the workplace and costs resulting from long-term sick leave, work-related stress	The social partners are also involved in the debate. In the municipal sector, where stress-related disorders are common, the social partners have agreed on an action package to improve health in the workplace. The package includes annual accounts of working environment risks, awareness-raising initiatives targeting politicians and special support to municipalities with especially high rates of sick leave.
Slovakia	Mental health in the workplace, work-related stress, work-life balance	This is not a priority topic for political discussion. Political representatives do not specify initiatives directly focused on solutions to the problem of burnout. However, these solutions are part of some strategic documents such as the country's occupational safety and health strategy for the period 2016–2020 and the strategic framework for health for the period 2014–2030.
United Kingdom	Work-related stress, mental illness	The topic is addressed in relation to specific sectors or occupational groups (doctors, nursing staff, social workers, public service).
Countries where burnout is not covered in the wider debate		
Croatia	The topic is of interest to the general public and media on an ad hoc basis.	There have been no systematic policy responses or discussions in relation to burnout. However, the social partners in Croatia, with the aid of the European Trade Union Confederation, have translated and published a stress interpretation guide, and linked it to the Croatian conceptual framework of occupational stress. Since the Croatian accession to the EU in 2013, the social partners at national level have been working on its implementation in Croatia. The social partners have been analysing and negotiating the conceptual framework for telework, but the framework relating to burnout is in the pipeline in the near future. Through the European Agency for Safety and Health at Work, the social partners in Croatia actively participated in 2014–2015 campaign 'Healthy workplaces manage stress', in which the psychological risks at work and possibilities for their reduction were clearly explained in the Croatian language.
Latvia	Burnout has been recognised as an occupational disease (diseases caused by overload) since 2007. The topic is not under significant debate but since 2004 has featured regularly in research and in media: in both, working conditions are seen as one of the causes for burnout, while predisposition for burnout is believed to be linked to the individual.	The social partners are not involved in the debate; only health professionals keep data on the incidence of burnout and provide information about prevention. Specific policy responses or specific tools to address burnout have not been identified.
Lithuania	Burnout has recently been included in the International Classification of Diseases	Policy responses are provided in relation to recommendations included in scientific findings from experts in the field.

Prevention of work-related stress and burnout: recent developments in public policy

Belgium was the first country to establish specific legislation on well-being at work, in 1996. The prevention of psychological risks at work and protection of mental health in the workplace is a priority and is part of the Belgian National Strategy on Well-being at Work 2016–2020. A new law in March 2017 introduced a donation system whereby one colleague can transfer leave to another, in order to facilitate work–life balance of employees and reduce burnout. The new legislation led the social partners to set up a committee dedicated to discussing burnout issues such as the implementation of awareness-raising campaigns. In October 2017, a new social agreement was signed by workers, employers and public authorities for staff working in public and private health organisations. The plan is set to cover a four-year period (2017–2020) and was established through negotiations led by the Minister of Social Affairs and the Minister of Employment. It aims in particular to improve pay and working conditions, as well as to set up a policy to prevent psychosocial risks such as burnout.

In 2010, a report on burnout and training satisfaction among medical residents in **Greece** questioned whether the European Working Time Directive would make a difference (Msaouel et al, 2010). In 2015, the European Court of Justice recognised a breach of working time regulations and overtime compensation in doctors working in hospitals. Following this, the Greek Ministry of Health passed Law 4498/2017, which institutionalised the harmonisation of Greek law with the European Directive 2003/88 as regards working time for doctors and working time rules protecting against burnout. Although burnout has not been subjected to national dialogue between employers and employees, actions between the social partners and the Greek Ministry of Labour, Social Security and Welfare concern work-related stress, of which burnout is treated as a manifestation or consequence. In addition, the social partners have agreed on the implementation of the European framework agreement on work-related stress, concluded in 2004 by the European cross-industry social partners.

In the **Czech Republic**, although the topic of burnout has been restricted mainly to academic and research circles and has not been included in the political debate in recent years, the growing effects of stress in the workplace have led to discussions on a draft amendment to the country's labour code (Act No. 262/2006 Coll.). The amendment stipulates that the employer should avoid the risk of work-related stress and the risk of violence in the workplace. While trade unions see the new provision primarily as a preventive measure and have welcomed this change, employers have reservations in this respect. The

amendment to the labour code, however, has not yet been approved by the parliament and the controversial provision may yet be rejected.

In 2013, the **German** Labour Protection Act and **Austrian** Health and Safety at Work Act were amended to explicitly refer to psychological strain as a risk factor that needs to be avoided in workplaces. Psychological strain includes forms of psychosocial, psycho-emotional and psycho-mental strain. According to the law, employers are required to evaluate workplaces with respect to psychological strain that can cause health problems and find and implement adequate remedies. In the opinion of policymakers, this amendment represented a step towards the prevention of psychological strain, including burnout.

Germany also includes psychological risks as an issue in its Joint German Occupational Safety and Health Strategy (Gemeinsame Deutsche Arbeitsschutzstrategie) and in 2015 introduced an act on prevention which also covers psychological risks. The strategy put the focus on mental health and actors in the national occupational safety and health system provide information and support with implementation. Information on burnout prevention in particular is published by the German Social Accident Insurance and sectoral employer liability associations (Berufsgenossenschaften). The country's trade unions have also been calling for an anti-stress policy (Deutscher Gewerkschaftsbund, 2016). However, this has been rejected by the government due to a lack of reliable data.

In some countries, such as **France**, burnout has been extensively debated and discussed in recent years. In order to reinforce the prevention of burnout, the French plan for health at work 2016–2020 aims through its Action 1.20 to improve the understanding of the syndrome and set up recommendations – to be approved by the country's High Authority of Health (*Haute autorité de santé*) – for workplace doctors, GPs and other health professionals. The emphasis is on prevention rather than recognition. To this end, a set of actions on health at work specifically for small and medium-sized enterprises has been established as a result of collective negotiations between the social partners and other actors in the field (namely social security and ministries of health, agriculture and environment). Committees for health, safety and working conditions (*Comités d'hygiène, de sécurité et des conditions de travail*, CHSCTs) – which are present in all establishments of more than 50 employees and are formed of employee representatives – have since 2002 been responsible for psychosocial risks. However, since the reform of the French labour law in October 2017, the risk is that these CHSCTs will be replaced by merged representative bodies, and trade unions have expressed their concern about the possible disappearance of risk-prevention policies in the workplace and pleaded for the protection of CHSCTs.

Involvement of the social partners in tackling work-related stress

It is important to mention some examples from countries where there have been debates among the social partners regarding mental health at work. While burnout is not specifically mentioned, there is a readiness on the part of the social partners to include the psychological working environment in the debate and to push forward the recognition of employer responsibility in order to put in place measures to prevent and tackle this issue.

In **Austria**, all the social partners are very active in making burnout and stress at work a subject of discussion.

In **Belgium**, in response to new governmental actions, the social partners announced their own initiative in their new inter-sectoral agreement 2017–2018. They will set up a special committee within the National Labour Council (Conseil national du travail) with a rotating presidency, in order to investigate, identify, analyse and discuss burnout. The work should help to improve the setting up of awareness-raising campaigns (such as information campaigns, brochures and sharing of good practices) and other actions in the workplace.

In **Denmark**, as a result of an ongoing policy debate about the rise in the incidence of psychological work-related injuries in 2012, in August of that year the Minister of Employment launched three initiatives related to health and safety at work. One of the initiatives placed the psychological working environment on equal footing with the physical working environment, which means that the Working Environment Act now permits action against problems within the psychological working environment. The next policy change to the Act came in March 2015, when the majority government in the Danish parliament introduced monitoring of companies where there is seen to be a risk of psychological overload. Since December 2015, the social partners have been debating the psychosocial working environment in the media. The trade unions are pushing to get the working environment on the agenda for a tripartite dialogue and to recognise the responsibility of employers with regard to the psychosocial working environment. For example, in December 2015, the two largest public and private employer organisations released a joint article in one of the largest Danish newspapers, in which they stated that the responsibility of employers for their employees' mental health is exaggerated (Jyllands-Posten, 2015). However, in the tripartite dialogue, the trade unions have brought to the table a proposal for mandatory education in psychosocial working environments for employees and managers.

Germany also provides an interesting case. According to the trade unions, work intensification, lack of staff, work organisation, lack of rest periods, difficulties in balancing work and private life and lack of appreciation are the main causes for mental disorders. Burnout, as such, is not specifically addressed; rather, initiatives address working conditions which may pose a risk to mental health. The United Services Trade Union (Vereinte Dienstleistungsgewerkschaft – Ver.di) has dealt extensively with jobs cuts and understaffing as a cause for sick leave. Moreover, the chemical trade union IG Bergbau, Chemie, Energie, the metalworkers' union G Metall and Ver.di campaign for more autonomy in determining working time, which is also seen as a measure against stress and mental strain. Generally speaking, employers tend to focus on individual mental strength and the resilience of the worker and on workplace health management to support individual workers to withstand stress. Only some health insurers, such as the BKK, have dealt explicitly with burnout.

It is worth noting that, in some rare cases, health is addressed through collective bargaining. A prominent example was the collective bargaining agreement concluded by Ver.di and the Berlin university hospital Charité in 2016, which agreed on measures against understaffing, on fixing minimum numbers of staff and on a bipartite (worker–management) committee aimed at monitoring the application of the agreement.

In **Sweden**, the government and social partners are involved in a large debate on mental health in the workplace, but this does not refer to burnout. The Swedish Work Environment Authority (n.d.) indicates that the causes of work-related stress are heavy workload and problems affecting social interplay in the workplace. Other causes listed are shift work, working alone and shortcomings in the physical environment. According to the Swedish Work Environment Authority, the employer is responsible for the management of the working environment and prevention against work-related stress through organisational measures, such as increasing resources or reducing the demands of the work. At local level, the social partners have agreed on an action package for a healthier workplace environment, including awareness-raising initiatives to support municipalities that face high rates of sick leave.

In other countries, the focus in the context of burnout seems to be restricted to certain occupational groups, often to health professionals and those working in public services. This is the case in particular in the **United Kingdom, Ireland, Malta and Bulgaria**.

Preventive actions

A wide range of preventive actions were reported by Eurofound's correspondents, from awareness-raising activities such as information campaigns to training, consultation with health professionals, sharing of examples of good practice and the provision of tools to carry out risk assessments on stress and early detection of burnout.

Mass media are most frequently used to convey information to the public at large, while other specific actions directly target groups at risk, such as in the health sector. Often embedded in the large spectrum of the psychological working environment, the preventive programmes tend to promote a healthy working environment to avoid the occurrence of stress and depression. For this reason, many companies have deployed a range of resources to assess and measure work-related stress with the aim of tackling the incidence of long-term sickness and the ensuing costs of filling vacant posts.

Table 8: Examples of actions to prevent burnout in the workplace and good practice

Country	Details
Austria	Checklists from various public and private institutions are available, for example by the Austrian Health Promotion Foundation (Fonds Gesundes Österreich). Burnout prevention programmes are provided by social insurance institutions, for instance the social insurance institution for the self-employed, for which the majority of costs are taken on by the insurance. Counselling is also provided free of charge by various institutions.
Belgium	Since 1 September 2014, companies are obliged to introduce measures to prevent their employees from experiencing burnout by sensitising them and performing risk analyses. The Federal Public Service Employment, Labour and Social Dialogue (Service public fédéral Emploi, Travail et Concertation sociale) has assembled a tool for the early detection of burnout, aimed at any healthcare provider that is faced with employees experiencing burnout. The country's labour inspectorate checks whether companies have proper measures in place to prevent and handle burnout, and companies that are found to have insufficient measures in place risk fines of up to €6,000. Several measures facilitate the work-life balance of employees and help to prevent burnout, such as the donation of leave from one colleague to another or occasional telework.
Bulgaria	The Bulgarian national institute for education and inclusive policies (Национален институт за образование и приобщаващи политики) has set up a programme for the prevention of burnout, addressing teachers at all educational levels and administrative staff. The aim of the programme is to improve the balance between labour and resource inputs (physical and mental efforts), the understanding of the characteristics, factors and appearance of stress and professional burnout, the recognition of possible burnout, and access to personal resources in order to control stress and prevent occupational burnout. Another example of prevention through specialised training among vulnerable groups of professionals is the 'Prevention of stress in teaching' training programme for teachers. The course examines the most common causes of stress in teachers and the negative consequences it brings, as well as how and why chronic stress affects physical and mental health.
Czech Republic	Both national and sectoral social partners organise awareness-raising seminars aimed at preventing the occurrence of burnout. They are usually sponsored by the European Social Fund (ESF) and are held in cooperation with a range of interested parties, such as trade unions, employers, the government and major regional companies. The Czech Chamber of Commerce (Hospodářská komora České republiky) organised lectures on the prevention of stress and burnout in 2015. In the same year, the Czech Confederation of Industry (Svaz průmyslu a dopravy České republiky) organised a seminar on stress and burnout in cooperation with the Czech-Moravian Confederation of Trade Unions (Českomoravská konfederace odborových svazů). Elementary school teachers around the capital are also entitled to attend a free, ESF-funded training course on the prevention of stress and burnout for teachers.
Germany	In Bavaria, a council set up by the Bavarian Economic Association (die Vereinigung der Bayerischen Wirtschaft) funded a research study on burnout among teachers and published a monitoring report on prevention and intervention measures by the country's 16 federal states (Blossfeld et al, 2014). At federal level, the New Quality of Work Initiative, a major multi-stakeholder public initiative, highlighted a burnout prevention programme run by the administration of public finances of North-Rhine Westphalia since 2010. The six-week programme comprises lectures and workshops for employees and dialogue with managerial staff. Moreover, workers can be trained to serve as burnout prevention trainers in their establishment.

Country	Details
Estonia	The Estonian Labour Inspectorate (Tööinspektsioon) has developed a web page dedicated to work-related stress, which includes a self-analysis tool (the HSE Management Standards Indicator Tool, based on the UK model) for companies for measuring work-related stress. It has also gathered good practices from companies in dealing with work-related stress and held social campaigns in 2010, 2012 and 2014–2015 (with a focus on the health, services and transport sectors). In addition, the Estonian Trade Union Confederation (Eesti Ametiühingute Keskkliit, EAKL) and Estonian Employers Confederation (Eesti Tööandjate Keskkliit, ETKL) promote health, safety and well-being at work. EAKL has information on its web page regarding work-related stress, explaining the causes and issues and providing suggestions on how to handle such stress. Both social partners have collaborated with the Labour Inspectorate, for example in 2009–2010, when they participated in a project which involved a national social campaign and the creation of the aforementioned web page dedicated to work-related stress. The Estonian Mental Health and Well-Being Coalition (Eesti Vaimse Tervise ja Heaolu Koalitsioon, VATEK), which is an independent public interest foundation, brings together mental health organisations across Estonia. VATEK has developed a mental health strategy for the period 2016–2025 in which mental health in the workplace is discussed, making reference also to work-related stress and the need to support the development of employee-friendly working environments. There is also a web page, developed in collaboration with the Ministry of Social Affairs (Sotsiaalministeerium), the Tööinspektsioon, National Institute for Health Development (Tervise Arengu Instituut) and the Health Board (Terviseamet), which is dedicated to overall work–life balance and provides articles, information and references to relevant materials.
Finland	There are official health guidelines from the Finnish Institute of Occupational Health (Työterveyslaitos), among others, for identifying burnout and addressing its causes, but there is no information on the extent to which the guidelines are followed or the effect that they have had. The Centre for Occupational Safety (Työturvallisuuskeskus) offers recommendations, models and guidelines, which are usually designed for well-being at work in general, and may be used for the prevention of burnout. However, none of these can be considered actions in place, as they are in no way obligatory. Legislation, mainly the Occupational Safety and Health Act (738/2002) and the Occupational Health Care Act (1383/2001), defines safety and health obligations of employers and employees on a very general level.
France	In 2015, the French Ministry of Labour issued a guide on burnout, prepared by the National Institute of Research and Security (Institut National de Recherche et de Sécurité) and the National agency for the improvement of working conditions (Agence nationale pour l'amélioration des conditions de travail) addressed to employers, human resources services, staff representatives, CHSCTs, general practitioners, occupational doctors and health and safety services. The guide also offers guidelines to identify possible sources or risks of burnout. In 2016, the Federation of Actors in Psychosocial Risks Prevention (Fédération des Intervenants des Risques Psychosociaux) also issued a guide to good practices for the prevention of burnout, addressed to human resources departments and consulting businesses in psychological risk prevention, as well as CHSCTs. The guide assesses the prevention of burnout as an urgent need for public health, underlining the critical aspect of prevention, and notes that the public debate has focused on the issue of its recognition as a work-related disease.
Luxembourg	A resource centre for the prevention and management of chronic stress (Centre de ressources Prévention et Gestion du Stress chronique Luxembourg et Grande Région) has been created to provide guidance and support for the prevention of burnout and assistance to sufferers of burnout. In July 2017, the Chamber of Employees (Chambre des Salariés) published a handbook for staff representatives to prevent them from psychological risks, including burnout. The Association for health at work in the financial sector (Association pour la Santé au Travail du Secteur Financier) also provides a self-evaluation questionnaire and information on burnout is provided on the government portal Sante.lu.
Romania	The Romanian National Health Strategy for 2014–2020 contains a component dedicated to improving mental health in the workplace. The territorial labour inspectorates have initiated and organised, at local level, actions aimed at raising awareness and providing information on stress management and psychosocial risks in the workplace, in order to ensure safe and healthy jobs for workers.
Slovenia	In 2016, the National Institute of Public Health (Nacionalni inštitut za javno zdravje NIJZ) published recommendations for employers and employees about mental health at work, including how to recognise, measure and prevent stress, burnout and depression at work at individual and organisational levels.

Below are some examples of preventive activities by employers with regard to work-related stress.

Table 8: Examples of actions by employers to prevent burnout in the workplace

Country	Details
Ireland	One of Ireland's major public sector employers, the Health Service Executive, has a policy for prevention and management of stress in the workplace. Most other large employers also have policies on workplace stress. In addition, in 2007, the Labour Relations Commission (now the Workplace Relations Commission) published a Guide on Work-Related Stress in conjunction with Ibec and the Irish Congress of Trade Unions.
Malta	The Maltese framework for the control of work-related stress, set up by the Occupational Health and Safety Authority, provides a model policy on work-related stress for companies to commit to protecting the health and welfare of their employees (including the identification of stress factors and improvement of the working environment). The aims of the policy are to establish an effective and consistent approach to the prevention of work-related stress and to provide support where cases of stress are identified.

Country	Details
Sweden	<p>In 2016, the Swedish government introduced provisions on organisational and social working environments to regulate requirements, objectives, workloads, working hours and victimisation. For example, employers are now obliged to ensure that resources are adapted to whatever demands are imposed at their work. If the demands are greater than the resources, the employer can reduce the amount of work, change the order of priority, provide opportunities for rest and recovery or increase staffing. The employer also needs to make sure that a dialogue is conducted between employer and employee in order to prevent ill-health. As part of their annual working environment barometer, the white-collar trade union Unionen looked into the effects of the new provisions. The union sent out a survey to more than 7,000 working environment representatives across the country, of which around 2,700 responded. Only around a quarter of the respondents stated that their employer works to prevent unhealthy workloads. However, a third of the representatives considered their own knowledge of the new provisions to be poor or very poor.</p>
United Kingdom	<p>The Trades Union Congress, in partnership with the National Health Service, launched the 'Better Health at Work' scheme. The project engaged over 100 employers to help spread good practice, with a focus on mental health. The project aimed to increase awareness among employers, union representatives and employees of the importance of good health and how this impacts workforce well-being. Practices included a number of mental health first aid courses run for representatives in regional workplaces to help identify and deal with members of staff who may be suffering from stress. In addition, the Health and Safety Executive (HSE) has compiled a set of management standards which cover the primary sources of stress at work and define the characteristics and culture of an organisation in which the risks of work-related stress are effectively managed and controlled.</p>

Conclusions

This comparative analysis of the available data and policy responses on burnout in Europe finds evidence of a strong general public interest in the topic.

Researchers have responded to this interest with numerous studies, but the approaches taken have varied in terms of definitions, operationalisation and findings.

The question asked at the beginning was whether burnout is a disease or a syndrome. At the moment, it appears to be both. All in all, it remains hard to make a comprehensive assessment of the issue and to answer questions regarding the number and characteristics of people experiencing burnout or suffering from it.

This illustrates a subject that is still in development; a subject in which many aspects are still being debated and addressed; a subject that is crossing over into other scientific disciplines and continues to be analysed by new research. One hypothesis is that the word 'burnout', used so frequently in the media and by the general public, is used to describe some of the ill-health brought on by work. However, over time, burnout may be understood differently by different social groups, and this may lead to discrepancies between the use of the word and its scientific definitions.

Common to all approaches to the topic of burnout is the recognition of the role of exhaustion – particularly emotional – and extreme fatigue, as a result of long-term exposure to strenuous work factors. Although there is a lack of available research on burnout in some domains, research on the topic has over time been extended from the human services sector to cover other occupations. Nevertheless, the original focus on employees working with patients and clients remains well established in research and it has also led to policy responses in some countries.

If burnout is indeed a disease, another question relates to its classification. It is clear that, in most countries, burnout is considered as a pathological entity, although it may be classified and reported differently within the various international classifications of diseases. Only in Italy and Latvia is burnout currently recognised as an occupational disease. In several other countries, such as Belgium, Bulgaria (in some specific sectors) and the Netherlands, there have been concrete discussions as to whether it should be regarded as a 'work-related disease'. In France, a legislative proposal on the recognition of mental diseases resulting from 'burnout syndrome', such as anxiety, post-traumatic stress disorder, generalised anxiety and mental depression,

was recently rejected. As concluded by Eurofound's Norwegian correspondent, a major problem with the burnout concept is that factors that may contribute to related or overlapping psychological health issues are not considered simultaneously. Burnout is rarely studied or discussed jointly with depression or distress, for example. This prevents the creation of a comprehensive understanding of the factors determining mental health.

The research on work determinants of burnout points to psychosocial risks, with a strong emphasis on high demands, such as long working hours and fast and dense work. In addition, the authors refer to risks linked to specific occupations (such as human services), as well as risks linked to ethical conflicts, value conflicts, role conflict, injustice at work and low rewards. This brings into the picture a social component of burnout, which requires a rethink that will lead to changes in the world of work in terms of all-round humanisation.

The Network of Eurofound Correspondents were able to identify some studies on the impact of burnout on the performance of companies. The evidence pointed to increased risk of sickness absences, turnover intention, decreased work ability, lower performance in work and premature exit from the labour market.

As a policy topic, burnout can be found under a variety of headings, such as mental health at work, stress and excessive working hours, or as an occupational safety and health issue. There seems to be a growing interest among the social partners to debate the issue (for example in Croatia and the Czech Republic) and preventive actions are emerging in the majority of Member States.

While it is clear that there is popular interest in the topic of burnout, further research is necessary to assess whether the data that has so far been collected and the subsequent policy responses are successfully addressing the topic. A number of key questions remain, such as how the specific features of burnout can be identified and whether the work factors that lead to burnout are the same as those that lead to work-related stress. Further research must also establish whether emotional exhaustion – one of the three dimensions of burnout – is different from fatigue and exhaustion, and whether emotional fatigue is linked to responding to demands from clients. If so, is burnout a different type of fatigue that calls for specific recovery mechanisms? It also remains unclear how long it takes a person to become burnt out, as well as what can be done to prevent the most serious effects of burnout.

Bibliography

All Eurofound publications are available at www.eurofound.europa.eu

Abromaitienė, L. and Stanišauskienė, V. (2015), 'Profesinis perdegimas karjeros raidos kontekste: ikimokyklinio ugdymo pedagogų atvejis', *Andragogika /Andragogy*, Vol. 5, pp. 10–26.

Ádám, S., Torzsa, P., Gyórfy, Z., Vörös, K. and Kalabay, L. (2009), 'Kiegész a háziórvosok és a háziórvosi rezidensek körében: a magas a súlyos fokú kiegész prevalenciája', *Orvosi Hetilap*, Vol. 150, No. 7, pp. 317–323.

Agius, T. and Formosa, C. (2014) 'Degree of burnout among Maltese podiatrists working in two different settings', *Malta Journal of Health Sciences*, Vol. 1, No. 2, pp. 35–39.

Ahola, K. (2012), *Understanding and preventing worker burnout*, OSH Wiki platform, EU-OSHA, available at: https://oshwiki.eu/wiki/Understanding_and_Preventing_Worker_Burnout, accessed 14 June 2018.

Alexias, G., Anagnostopoulos, F. and Pilatis, I. (2010), 'Επαγγελματική εξουθένωση και ικανοποίηση από την εργασία του ιατρικού προσωπικού Δημοσίου Νοσοκομείου των Αθηνών' [Professional burnout and satisfaction from the work of the medical staff of Athens Public Hospital], *Επιθεώρηση Κοινωνικών Ερευνών*, 131a.

Arbeiterkammer Oberösterreich (2017), *Arbeitsklima Index*, newsletter, Issue 2, May 2017.

Assemblée nationale (2017), *Proposition de loi sur le burn-out visant à faire reconnaître comme maladies professionnelles les pathologies psychiques résultant de l'épuisement professionnel*, presented on 20 December 2017, Paris.

Bakker, A. and Demerouti, E. (2007), 'The job demands–resources model: State of the art', *Journal of Managerial Psychology*, Vol. 22, No. 3, pp. 309–328.

Bargagna, M. and Società italiana di medicina legale e delle assicurazioni (1996), *Guida orientativa per la valutazione del danno biologico permanente*, Giuffrè Editore, Milan.

Bastakyte, D. and Kaminskas, K. A. (2013), 'Survey of stress and other psychosocial factors in Lithuanian small construction and real estate companies', *Sveikatos mokslai/Health Sciences*, Vol. 23, No. 2, pp. 14–20.

Bianchi, R., Schonfeld, I. S. and Laurent, E. (2015), 'Burnout–depression overlap: A review', *Clinical Psychology Review*, Vol. 36, pp. 28–41.

BIBB/BAuA, 2012, *Erwerbstätigenbefragung 2012* [Employment Survey 2012], Federal Institute for Vocational Education and Training (BIBB) and Federal Institute for Occupational Safety and Health (BAuA), Berlin.

Blossfeld, H.-P., Bos, W., Daniel, H.-D., Hannover, B., Lenzen, D., Prenzel, M., Rosbach, H.-G., Tippelt, R., and Wosmann, L. (2014), *Psychische Belastungen und Burnout beim Bildungspersonal: Empfehlungen zur Kompetenz- und Organisationsentwicklung*, Vereinigung der Bayerischen Wirtschaft e.V., Waxmann, Münster.

Borritz, M., Bültmann, U., Rugulies, R., Christensen, K. B., Villadsen, E. and Kristensen, T. S. (2005), 'Psychosocial work characteristics as predictors for burnout: Findings from 3-year follow up of the PUMA study', *Journal of Occupational and Environmental Medicine*, Vol. 47, No. 10, pp. 1015–1025.

Borritz, M., Rugulies, R., Bjorner, J. B., Villadsen, E., Mikkelsen, O. A. and Kristensen, T. S. (2006), 'Burnout among employers in human work service work: Design and baseline findings of the PUMA study', *Scandinavian Journal of Public Health*, Vol. 34, No. 1, pp. 49–58.

Buzzi, F. and Vanini, M. (2014), *Guida alla valutazione psichiatrica e medico-legale del danno biologico di natura psichica*, Giuffrè Editore, Milan.

Carlini, L., Fidenzi, L., Gualtieri, G., Nucci, G., Fagiolini, A., Coluccia, A. et al (2016), 'Analisi e valutazione medico-legale della sindrome da burnout nell'ambito delle helping profession e della tutela INAIL per i casi di malattia e suicidio', *Rivista di Psichiatria*, Vol. 51, pp. 87–95.

CDC/National Center for Health Statistics, *International Classification of Diseases, Ninth Revision, Clinical Modification* (ICD-9-CM), web page, accessed 19 June 2018.

Cunha, M., Pereira, J., Cunha, J. and Gascón, S. (2014), *Evaluation Report of Psychosocial Risk Profile 2008-2013: People Management and Healthy Organisations*, Associação Portuguesa de Psicologia da Saúde Ocupacional, Lisbon.

David, I. and Quintão, S. (2012), 'Burnout in teachers: Its relationship with personality, coping strategies and life satisfaction', *Acta Medica Portuguesa*, Vol. 25, No. 3, pp. 145–155.

- De Lange, A. H., Taris, T. W., Kompier, M. A., Houtman, I. L. and Bongers, P. M. (2003). “The very best of the millennium”: Longitudinal research and the demands-control-(support) model’, *Journal of Occupational Health Psychology*, Vol. 8, No. 4, pp. 282–305.
- De Vries, J., Michielsen, H. J. and Van Heck, G. L. (2003), ‘Assessment of fatigue among working people: A comparison of six questionnaires’, *Occupational & Environmental Medicine*, Vol. 60, Suppl. 1, i10–i15.
- Demerouti, E. and Bakker, A.B. (2008), ‘The Oldenburg Burnout Inventory: A good alternative to measure burnout and engagement’ in Halbesleben, J. (ed.), *Handbook of stress and burnout in health care*, Nova Science Publishers, Hauppauge, New York, pp. 65–78.
- Denton, D. A., Newton, J. T. and Bower, E. J. (2008), ‘Occupational burnout and work engagement: A national survey of dentists in the United Kingdom’, *British Dental Journal*, Vol. 205, No. 7, pp. 382–383.
- Deutsche Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde (2012), *Positionspapier der Deutschen Gesellschaft für Psychiatrie, Psychotherapie und Nervenheilkunde (DGPPN) zum Thema Burnout*, position paper, 13 September 2012, Berlin.
- Deutscher Gewerkschaftsbund (2016), ‘Wir brauchen eine umfassende Anti-Stress-Politik’, web page, accessed 4 July 2018.
- Dimitrova, E. and Todorova, I. (2015), ‘The impact of team work and the requirements of work at burnout levels between medical specialists in Bulgaria’, in *Bulgarian Journal of Psychology* 1–4, pp. 117–134.
- Dimitrova, C., Foreva, M., Prodanova, D., Komsiska K., and Peeva, K. (2014), ‘Medical students and burnout syndrome – an empirical study’, *Announcements of Union of Scientists – Sliven*, Vol. 28, No. 3.
- Echtelt, P. van (ed.) (2014), *Burnout: verbanden tussen emotionele uitputting, arbeidsmarktpositie en Het Nieuwe Werken*, Sociaal Cultureel Planbureau, The Hague.
- European Commission (2016), *Health and safety at work is everybody’s business – Practical guidance for employers*, Publications Office of the European Union, Luxembourg.
- Freudenberger, H. J. (1974), ‘Staff burn-out’, *Journal of Social Issues*, Vol. 30, pp. 159–165.
- Galea, M. (2014), ‘The Progressive impact of burnout on Malta nurses’, *SOP Transactions on Psychology*, Vol. 1, No. 1, pp. 1–11.
- Gruodytė, I. and Navickienė, R. (2014), ‘Profesinio perdegimo sindromo ir mentorystės įtaka organizacijos veiklai’, in Lietuvos Sporto Universitetas (ed.), *Mokslas ir praktika: aktualijos ir perspektyvos*, pp. 43–49, Kaunas.
- Hansez, I., Firket, P., Braeckman, L., and Mairiaux, P. (2010), *Recherche sur le burnout au sein de la population active belge*, Service public fédéral Emploi, Travail et Concertation sociale, Brussels.
- Hansez, I., Mairiaux, P., Schippers, N., Braeckman, L., Firket, P. and Muller, M. (2014), *Recherche sur le Burnout au sein de la population active belge: synthèse du rapport final*, Service public fédéral Emploi, Travail et Concertation sociale, Brussels.
- Hertzberg, T., Rø, K., Vaglum, P., Moum, T., Røvik, J., Gude, T., Ekeberg, O., and Tyssen, R. (2016), ‘Work-home interface stress: An important predictor of emotional exhaustion 15 years into a medical career’, *Industrial Health*, Vol. 54, No. 2, pp. 139–148.
- Hollmann, S. (2017), ‘Burnout-Präventionsprogramm – Vorsorge kommt an’, in neues handeln GmbH (ed.), *Verwaltung der Zukunft*, Initiative Neue Qualität der Arbeit, pp. 111–114, Berlin.
- Hoofman, W. E., Mars, G. M. J., Janssen, B., De Vroome, E. M. M., Pleijers, A. J. S. F., Michiels, J. J. M. et al (2017), *Nationale enquête arbeidsomstandigheden 2016* [National working conditions survey 2016], TNO, Centraal Bureau voor de Statistiek (CBS) and Ministerie van Sociale Zaken en Werkgelegenheid, Leiden and Heerlen.
- Horvat, G., Tomašević, S. and Leutar, Z. (2016), ‘Sindrom sagorijevanja na poslu djelatnika bankarskog sektora koji su u direktnom kontaktu s korisnicima’, *Socijalne teme*, Vol. 1, No. 3. pp. 31–47.
- Imo, U. (2017), ‘Burnout and psychiatric morbidity among doctors in the UK: A systematic literature review of prevalence and associated factors’, *BJPsych Bulletin*, Vol. 41, No. 4.
- Innstrand, S. T., Langballe, E. M., Espnes, G. A., Falkum, E. and Asland, O. G. (2008), ‘Positive and negative work-family interaction and burnout: A longitudinal study of reciprocal relations’, *Work & Stress*, Vol. 22, No. 1, pp. 1–15.
- Institut national de la santé et de la recherche médicale (2011), *Stress au travail et santé: Situation chez les indépendants*, Paris.
- Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro (2017), *Dati con cadenza semestrale malattie professionali per data protocollo Italia*, Rome.
- Jacobi, F., Höfler, M., Strehle, J., Mack, S., Gerschler, A., Scholl, L. et al (2014), ‘Mental disorders in the general population: Study on the health of adults in Germany and the additional module mental health (DEGS1-MH)’, *Der Nervenarzt*, Vol. 85, No. 1, pp. 77–87.
- Kaschka, W. P., Korczak, D. and Broich, K. (2011) ‘Burnout: A fashionable diagnosis’, *Deutsches Ärzteblatt International*, Vol. 108, No. 46, pp. 781–787.

- Katsavouni, F., Bebetos, E., Malliou, P. and Beneka, A. (2016) 'The relationship between burnout, PTSD symptoms and injuries in firefighters', *Occupational Medicine*, Vol. 66, No. 1, pp. 32–37.
- Kavaliauskienė, V. and Balčiūnaitė, R. (2015), 'Profesinis perdegimas ir jo raiška socialinio darbo profesionalizacijos kontekste', *Tiltai*, Vol. 69, No. 4, pp. 17–36.
- Kebza, V. and Šolcová, I. (2010), 'Syndrom vyhoření, vybrané psychologické proměnné a rizikové faktory kardiovaskulárních onemocnění', *Československá psychologie*, Vol. 54, No. 1, pp. 1–16.
- Kinman, G., Wray, S. and Strange, C. (2011), 'Emotional labour, burnout and job satisfaction in UK teachers: The role of workplace social support', *Educational Psychology*, Vol. 31, No. 7, pp. 843–856.
- Knieps, F. and Pfaff, H. (2017), 'Gesundheit und Arbeit Zahlen, Daten, Fakten – mit Gastbeiträgen aus Wissenschaft, Politik und Praxis', Medizinische Wissenschaftliche Verlagsgesellschaft, Berlin.
- Kokkinos, C. M. (2007) 'Job stressors, personality and burnout in primary school teachers', *British Journal of Educational Psychology*, Vol. 77, No. 1, pp. 229–243.
- Kowalczyk, K., Zdańska, A., Krajewska-Kułak, E., Łukaszuk, C., Van Damme-Ostapowicz, K., Klimaszewska, K. et al (2011), 'Stres w pracy pielęgniarzek jako czynnik ryzyka wypalenia zawodowego', *Problemy Pielęgniarstwa*, Vol. 19, No. 3, pp. 307–314.
- Kristensen, T., Borritz M., Villadsen, E. and Christensen, K. (2005), 'The Copenhagen Burnout Inventory: A new tool for the assessment of burnout', *Work & Stress*, Vol. 19, No. 3, pp. 192–207.
- Langballe, E. M., Innstrand, S. T., Aasland, O. G. and Falkum, E. (2011), 'The predictive value of individual factors, work-related factors, and work-home interaction on burnout in female and male physicians: A longitudinal study', *Stress & Health*, Vol. 27, No. 1, pp. 73–78.
- Lehto, A-M. and Sutela, H. (2008), *Työolojen kolme vuosikymmentä. Työolotutkimusten tuloksia 1977-2008*, [Three decades of working conditions. Results of working conditions studies 1977–2008], Statistics Finland, Helsinki.
- Lipowska, J. (2016), *Wypalenie zawodowe a motywacja do pracy i czynniki ją wzmacniające u kadry pedagogicznej instytucji opiekuńczo-wychowawczych*, [Effect of work motivation and enhancing factors on job burnout among pedagogic staff in orphanages], PhD thesis, Adam Mickiewicz University, Poznań.
- Lubrańska, A. (2012), 'Środowisko pracy a wypalenie zawodowe – analiza wzajemnych relacji na przykładzie badań reprezentantów różnych obszarów aktywności', *Acta Universitatis Lodzianis, Folia Psychologica*, No. 16, pp. 35–45.
- Lundgren-Nilsson, Å, Jonsdottir, I.H., Pallant, J. and Ahlberg, G. (2012), *Internal construct validity of the Shirom-Melamed Burnout Questionnaire (SMBQ)*, *BMC Public Health*, Vol. 12, No. 1.
- Mackonienė, R. and Norvilė, N. (2012), 'Burnout, job satisfaction, self-efficacy, and proactive coping among Lithuanian school psychologists', *Tiltai*, Vol. 60, No. 3, pp. 199–211.
- Madsen, I. E., Lange, T., Borritz, M. and Rugulies, R. (2015), 'Burnout as a risk factor for antidepressant treatment: A repeated measures time-to-event analysis of 2936 Danish human service workers', *Journal of Psychiatric Research*, Vol. 65, pp. 47–52.
- Marcelino, G., Cerveira, J. M., Carvalho, I., Costa, J. A., Lopes, M., Calado, N. E. et al (2012) 'Burnout levels among Portuguese family doctors: A nationwide survey', *BMJ Open*, Vol. 2, No. 3.
- Martinko, J. (2010), 'Profesionalno sagorijevanje na poslu nastavnika u obrazovanju odraslih', *Andragoški glasnik*, Vol. 14, No. 2, pp. 99–110.
- Maske, U., Riedel-Heller, S., Seiffert, I., Jacobi, F. and Hapke, U. (2016), 'Häufigkeit und psychiatrische Komorbiditäten von selbstberichtetem diagnostiziertem Burnout-Syndrom Ergebnisse der bevölkerungsrepräsentativen „Studie zur Gesundheit Erwachsener in Deutschland (DEGS1)“, *Psychiatrische Praxis*, Vol. 43, No. 1, pp. 18–24.
- Maslach, C. and Jackson, S. E. (1981), 'The measurement of experienced burnout', *Journal of Occupational Behaviour*, Vol. 2, pp. 99–113
- Maslach, C., Jackson, S. E. and Leiter, M. (1997), 'Maslach burnout inventory manual' in Zalaquett, C. P. and Wood, R. J. (eds.), *Evaluating stress: a book of resources*, Scarecrow Press, Lanham, Maryland, pp. 191–218.
- McFadden, P. (2015) *Measuring burnout among UK social workers: A Community Care study*, Queen's University, Belfast.
- Melamed, S., Ugarten, U., Shirom, A., Kahana, L., Lerman, Y. and Froom, P. (1999), 'Chronic burnout, somatic arousal and elevated salivary cortisol levels', *Journal of Psychosomatic Research*, Volume 46, No. 6, June 1999, pp. 591–598.
- Merkys, G. and Bubelienė, D. (2013), 'Occupational burnout coping and hobby: teachers' survey data', *Acta Paedagogica Vilnensia*, Vol. 31, pp. 110–125.

- Mesarosova, M., Köverová, M., Raczova, B., Hricova, M. and Lovas, L. (2016), 'Self-care as a factor in coping with the negative consequences of practising helping professions', Press Release, 8 December, Pavol Jozef Safarik University, Kosice.
- Metlaine, A., Sauvet, F., Gomez-Merino, D., Elbaz, M., Delafosse, J.Y., Leger, D. and Mounir Chennaoui (2017), 'Association between insomnia symptoms, job strain and burnout syndrome: A cross-sectional survey of 1300 financial workers', *BMJ Open*, Vol. 7, No. 1.
- Metlaine A., Sauvet F., Gomez-Merino D., Boucher T., Elbaz M., Delafosse J.Y., Leger D., Chennaoui M. (2018), 'Sleep and biological parameters in professional burnout: A psychophysiological characterization', *PLOS ONE*, Vol. 13, No. 1.
- Msaouel, P., Keramaris, N. C., Tasoulis, A., Kolokythas, D., Syrmos, N., Parasas, N. et al (2010), 'Burnout and training satisfaction of medical residents in Greece: Will the European Work Time Directive make a difference?', *Human Resources for Health*, Vol. 8, No.1, p. 16.
- Nakou, I., Nena, A., Zisimopoulos, A. and Konstantinidis, T. K. (2016), 'Frequency of burnout syndrome among junior doctors in the Thrace region during the time of economic crisis', *Health and Work*.
- National Board of Health and Welfare (2003), *Utmattningsyndrom: Stressrelaterad psykisk ohälsa* (in Swedish), Stockholm, Socialstyrelsen.
- Norlund, S., Reuterwall, C., Höög, J., Lindahl, B. Janlert, U. and Slunga Birgander, L., (2010), 'Burnout, working conditions and gender: Results from the northern Sweden MONICA study', *BMC Public Health*, No. 10, p. 326.
- Norlund, S. (2011), Psychosocial work factors and burnout: A study of a working general population and patients at a stress rehabilitation clinic, Department of Public Health and Clinical Medicine, Umea University, Sweden.
- Obrero Gaitán, D., Moreno Saiz, M., Gómez Ramírez, M. J. and Delgado Martínez, A. D. (2014) 'Estudio de prevalencia sobre el síndrome de Burnout o desgaste profesional en los cirujanos ortopédicos de Andalucía', *Revista de la Sociedad Andaluza de Traumatología y Ortopedia*, Vol. 31, No. 2, pp. 9–16.
- Oosterholt, B., Maes, J., Van der Linden, D., Verbraak, M., Michiel A. (2014), 'Burnout and cortisol: Evidence for a lower cortisol awakening response in both clinical and non-clinical burnout', *Journal of Psychosomatic Research*, Vol. 78, No. 5, pp. 445–451.
- Orton, P., Orton, C. and Pereira Gray, D. (2012), 'Depersonalised doctors: A cross-sectional study of 564 doctors, 760 consultations and 1876 patient reports in UK general practice', *BMJ Open*, Vol. 2, No. 1.
- Ožvačić Adžić, Z., Katić, M., Kern, J., Soler, J. K., Cerovečki, V. and Polašek, O. (2013), 'Is burnout in family physicians in Croatia related to interpersonal quality of care?', *Arh Hig Rada Toksikol*, Vol. 64, No. 2, pp. 255–264.
- Pacevičius, J. (2007) 'Profesinio „perdegimo“ sindromas ir jo raiška banko darbuotojų veikloje'. *Economics & Management*, Vol. 12, No. 1, pp. 629–635.
- Palmieri, L., Ronchi, G. U., Bolino, G. and Fedeli, P. (2004), *La valutazione medico-legale del danno biologico in responsabilità civile*, Giuffrè Editore, Milan.
- Penz, M., Stalder, T., Miller, R., Ludwig, V.M., Kanthak, M.K. and Kirschbaum, 'Cortisol as a biological marker for burnout symptomatology', *Psychoneuroendocrinology*, No. 94, pp. 17–24.
- Persson, R., Österberg, K., Viborg, N., Jönsson, P. and Tenenbaum, A. (2017), Two Swedish screening instruments for exhaustion disorder: Cross-sectional associations with burnout, work stress, private life stress, and personality traits, *Scandinavian Journal of Public Health*, No. 45, pp. 381–388.
- Pšeničny, A. (2010), *Reciprocal burnout model: Interconnectedness of interpersonal and intrapersonal factors of burnout syndrome*, survey, University of Ljubljana, Ljubljana.
- Raboch, J. and Ptáček, R. (2014), 'Syndrom vyhoření a deprese u českých lékařů', *Practicus*, No. 8, pp. 29–30.
- Raboch, J. and Ptáček, R., (2015), 'Stres, deprese a životní styl v ČR: Prevencia syndrómu vyhorenia sociálneho pracovníka', *Acta medicae*, Vol. 4, No. 1, pp. 78–81.
- Raftopoulos, V., Charalambous, A. and Talias, M. (2012), 'The factors associated with the burnout syndrome and fatigue in Cypriot nurses: A census report', *BMC Public Health*, Vol. 12, No. 1.
- Rahner, E. (2011), *Das Burnout-Syndrom bei Ärzten: eine qualitative Studie zur Selbstwahrnehmung von Ursachen und Lösungsansätzen*, doctoral dissertation, Freie Universität Berlin, Berlin.
- Rosa, J., Passos, F. and Queirós, C. (2015), 'Um estudo exploratório sobre burnout e indicadores psicopatológicos em polícias', *International Journal on Working Conditions*, No. 10.
- Rose, U., Müller, G., Burr, H., Schulz, A. and Freude, G. (2016), *Arbeit und Mentale Gesundheit. Ergebnisse aus einer Repräsentativitätserhebung der Erwerbstätigen in Deutschland*, Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (BAuA), Dortmund, Berlin and Dresden.
- Rossi, P., Bolino, G. and Migliau, G. (1994), 'La valutazione medico legale del danno cardiovascolare. I danno circolatorio', *Jura Medica*, Vol. 7, No. 59.

- Rössler, W., Hengartner, M. P., Ajdacic-Gross, V. and Angst, J. (2015), 'Predictors of burnout: results from a prospective community study', *European Archives of Psychiatry and Clinical Neuroscience*, Vol. 265, Issue 1, pp.19–25.
- Ružić, E. (2013), 'An investigation on the phenomenon of job burnout in the sales profession', *Ekonomika misao i praksa*, No. 1, pp. 78–96.
- Sagáth, Z. (2013), *A stressz és kiégés vizsgálata a büntetés-végrehajtás dolgozói körében*, thesis, University of Debrecen, Hungary.
- Salanova, M., Llorens, S. and García-Renedo, M. (2003), '¿Por qué se están "quemando" los profesores?', *Prevención, trabajo y salud*, Vol. 28, pp. 16–20.
- Salvagioni D.A.J., Melanda F.N., Mesas A.E., González A.D., Gabani F.L., Andrade S.M. (2017), 'Physical, psychological and occupational consequences of job burnout: A systematic review of prospective studies', *PLOS ONE*, Vol 12, No. 10.
- Schaarschmidt, U. and Fischer, A. W. (1996), 'Zum Zusammenhang von Alter und psychischer Gesundheit bei Lehrerinnen und Lehrern', in M. Jirasko et al (eds.), *Perspektiven psychologischer Forschung in Österreich*, WUV, Vienna, pp. 175–224.
- Schaufeli, W. B., and Bakker, A. B. (2004), 'Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study', *Journal of Organizational Behavior*, Vol. 25, No. 3, pp. 293–315.
- Schaufeli, W. B. and Taris, T. W. (2005), 'The conceptualization and measurement of burnout: Common ground and worlds apart'. *Work & Stress*, Vol. 19, No. 3, pp. 256–262.
- Schaufeli, W. B. and Van Dierendonck, D. (1995), *Utrechtse Burnout Schaal (UBOS): Voorlopige Handleiding*, Utrecht, Utrecht University.
- Schaufeli, W. B., Bakker, A. and Salanova, M. (2006), 'The measurement of work engagement with a short questionnaire: A cross-national study', *Educational and Psychological Measurement*, Vol. 66, No. 4, pp. 701–716.
- Schaufeli, W. B., Bakker, A., Schaap, C., Kladler, A. and Hoogduin, K. (2001), 'On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure', *Psychology & Health*, Vol. 16, No. 5, pp. 565–582.
- Schaufeli, W. B., Leiter, M. P. and Maslach, C. (2009), 'Burnout: 35 years of research and practice', *Career Development International*, Vol. 14, No. 3, pp. 204–220.
- Schaufeli, W. B., Salanova, M., González-Romá, V. and Bakker, A. B. (2002), 'The measurement of engagement and burnout: A confirmative analytic approach', *Journal of Happiness Studies*, Vol. 3, No. 1, pp. 71–92.
- Scheibenbogen, O., Andorfer, U., Kuderer, M. and Musalek, M. (2017), *Prävalenz des Burnout-Syndroms in Österreich. Verlaufsformen und relevante Präventions- und Behandlungsstrategien*, Bundesministerium für Arbeit, Soziales, Gesundheit und Konsumentenschutz, Vienna.
- Sedlak & Sedlak (2011), *Ogólnopolskie Badanie Satysfakcji z Pracy*, survey, Kraków.
- Sedlak & Sedlak (2017), *Satysfakcja Zawodowa Polaków 2016*, survey, Kraków.
- Seppo, I., Järve, J., Kallaste, E., Kraut, L. and Voitka, M. (2010), *Psuhhosotsiaalsete riskide levik Eestis*, Eesti Rakendusuuringute Keskus Centar, Tallinn.
- Shirom, A., Melamed, S., Toker, S., Berliner, S. & Shapira, I. (2005) 'Burnout and health review: current knowledge and future research directions', in Hodgkinson, G. and Ford F. (eds.), *International Review of Industrial and Organizational Psychology*, Chichester, John Wiley & Sons, pp. 269–308.
- Sischka, P. and Steffgen, G. (2016a), *Quality of Work Index: Zur Arbeitsqualität unterschiedlicher Arbeitnehmergruppen in Luxemburg*, interim report, Luxembourg, University of Luxembourg.
- Sischka, P. and Steffgen, G. (2016b), *Quality of Work Index: Burnout am Arbeitsplatz in Luxemburg*, newsletter, Chambre des salariés, Luxembourg, No. 2, 14 June 2016.
- Sischka, P. and Steffgen, G. (2015), *Quality of Work Index: Forschungsbericht zur Weiterentwicklung des Arbeitsqualitätsindex in Luxemburg*, working paper, Luxembourg, University of Luxembourg.
- Sischka, P. and Steffgen, G. (2017), *Quality of Work Index: Zur Arbeitsqualität unterschiedlicher Arbeitnehmergruppen in Luxemburg*, interim report, Luxembourg, University of Luxembourg.
- Smulders, P., Houtman, I., Van Rijssen, J. and Mol, M. (2013), 'Burnout: Trends, internationale verschillen, determinanten en effecten', *Tijdschrift voor Arbeidsvraagstukken*, Vol. 29. No. 3, pp. 258–278.
- Statens arbeidsmiljøinstitutt (STAMI) (2013), *Psykisk utmattethet*, web page, available at: <http://noa.stami.no/arbeidsmiljoindikatorer/helseutfall/arbeidsskader/helseplager/psykisk-utmattethet/>, accessed 15 June 2018.
- SBU (Statens beredning för medicinsk och social utvärdering) (2014), *Arbetsmiljöns betydelse för symptom på depression och utmattningssyndrom. En systematisk litteraturoversikt*, SBU, Stockholm.

Suvisaari, J., Ahola, K., Kiviruusu, O., Korkeila, J., Lindfors, O., Mattile, A. et al (2012), 'Psykkiset oireet ja mielenterveyden häiriöt', in Koskinen, S., Lundqvist, A. and Ristiluoma, N. (eds.) *Terveys, toimintakyky ja hyvinvointi Suomessa 2011 [Health, functional capacity and welfare in Finland in 2011]*, Terveyden ja hyvinvoinnin laitos (THL), Tampere.

Swedish Work Environment Authority (n.d.), *Stress*, web page <https://www.av.se/en/>, accessed 4 July 2018.

Taris, T. W., Peeters, C. W., Le Blanc, P. M., Shreus, P. J. G. and Schaufeli, W. B. (2001), 'From inequity to burnout: the role of job stress', *Journal of Occupational Health Psychology*, Vol. 6, No. 4, pp. 303–323.

TNS Latvia Ltd and Rīga Stradiņš University (2013), *Working conditions and risks in Latvia, 2012–2013*, Riga.

Toker, S., Shirom, A., Shapira, I., Berliner, S. and Melamed, S. (2005), 'The association between burnout, depression, anxiety and inflammation biomarkers: C-reactive protein and fibrinogen in men and women', *Journal of Occupational Health Psychology*, Vol. 10, No. 4, pp. 344–362.

Toker, S. and Melamed, S. (2017), 'Stress, recovery, sleep, and burnout', in Cooper, C. and Campbell Quick, J., *The Handbook of Stress and Health: A Guide to Research and Practice*, pp. 168–185, John Wiley and Sons, Hoboken, New Jersey and Oxford.

Tomljenovic, M., Kolaric, B., Stajduhar, D. and Tesic, V. (2014), 'Stress, depression and burnout among hospital physicians in Rijeka, Croatia', *Psychiatria Danubina*, Vol. 26, Suppl. 3, pp. 450–458.

Tzenova, B. (2005), *Личностни корелати на бърнаут-синдрома*, National Congress of Psychology, Sofia, pp. 360–367.

Tzenova, B. and Velkova, D. (2007), 'Subjective health, burnout and sources of stress in work of artistic-technical staff', *Bulgarian Journal of Psychology*, Vol. 3, pp. 565–572.

Urdziková, J. and Kordosova, M. (2016), *Systémy riadenia a ich vplyv na manažment BOZP - pracovný stres, rizikové správanie, pracovné podmienky a ich dopady na BOZP. II. etapa: Riadenie psychosociálnych rizikových faktorov zamestnancov pracujúcich v oblasti školstva*, Inštitút pre výskum práce a rodiny, Bratislava.

Vandenbroeck, S., Vanbelle, E., De Witte, H., Moerenhout, E., Sercu, M., De Man, H. et al (2013), *Burnout bij artsen en verpleegkundigen in Belgische Ziekenhuizen*, KU Leuven and IDEWE, Netherlands.

Vasilopoulos, S. (2012), 'Job burnout and its relation to social anxiety in primary school teachers', *Hellenic Journal of Psychology*, Vol. 9, No. 1, pp. 18–44.

Vimantaitė, R. (2007), *Slaugytojų, dirbančių lietuvis ligoninių kardiologijos centruose, „perdegimo“ sindromo raiškos ir paplitimo įvertinimas*, doctoral dissertation, Kauno Medicinos Universitetas, Kaunas.

Virgin Group (2015), *Over half of UK workers have experienced 'burnout' in their job*, web page, accessed 18 June 2018.

World Health Organization (n.d.), ICD-10 Version: 2016, WHO International Statistical Classification of Diseases and Related Health Problems, 10th revision, available at: <http://apps.who.int/classifications/icd10/browse/2016/en#/Z73.0>, accessed on 15 June 2018.

Zopiatis, A. and Orphanides, N. (2009), 'Investigating occupational burnout of food and beverage employees: The case of Cyprus', *British Food Journal*, Vol. 111, No. 9, pp. 930–947.

Annexes

Annex 1: Burnout measurement inventories

1. Maslach Burnout Inventory
2. Copenhagen Burnout Inventory
3. Oldenburg Burnout Inventory
4. Shirom-Melamed Burnout Measure
5. Burnout Dimensions Inventory

1. Maslach Burnout Inventory (MBI)

Description	The Maslach Burnout Inventory is designed to measure an enduring state of experienced burnout, an assumption that is borne out by the stability of its scores over time. It was also designed to assess levels and patterns of burnout among groups of workers but not to assess individual distress. To determine the risk of burnout, the original Maslach Burnout Inventory explores three dimensions: emotional exhaustion, depersonalisation and personal accomplishment.		
Questionnaire – three sub-dimensions	Section A – Emotional exhaustion	Section B - Depersonalisation	Section C – Personal achievement
Examples of questions	<ul style="list-style-type: none"> ○ I feel emotionally drained by my work. 	<ul style="list-style-type: none"> ○ I don't really care what happens to some recipients 	<ul style="list-style-type: none"> ○ I have accomplished many worthwhile things in this job

Scoring scale: Never (0); A few times per year (1); Once a month (2); A few times per month (3); Once a week (4); A few times per week (5); Every day (6).

A high score in the first two sections and a low score in the last section may indicate burnout.

Source: *Reproduction by special permission of the publisher, Mind Garden Inc., (www.mindgarden.com) of the Maslach Burnout Inventory General Survey by Wilmar B. Schaufeli, Michael P. Leiter, Christina Maslach, and Susan E. Jackson. Copyright © 1996 by Wilmar B. Schaufeli, Michael P. Leiter, Christina Maslach and Susan E. Jackson. Further reproduction is prohibited without the publisher's written consent. See also Maslach and Jackson (1981) for the original MBI, and Maslach, Jackson and Leiter (1997) for other variants.*

2. Copenhagen Burnout Inventory (CBI)

Description	The Copenhagen Burnout Inventory (CBI) is a public domain questionnaire that measures the degree of psychological fatigue experienced in three sub-dimensions of burnout: personal (PB), work-related (WB), personal (PB), and client-related burnout (CB).		
Questionnaire – three sub-dimensions	Work dimension	Personal dimension	Client-related dimension
Examples of questions	<ul style="list-style-type: none"> ○ Does your work frustrate you? ○ Do you feel that every working hour is tiring for you? ○ Do you have enough energy for family and friends during leisure time? 	<ul style="list-style-type: none"> ○ How often do you think 'I can't take it anymore'? ○ How often do you feel worn out? ○ How often do you feel weak and susceptible to illness? 	<ul style="list-style-type: none"> ○ Does it drain your energy to work with clients? ○ Do you feel that you give more than you get back when you work with clients? ○ Do you sometimes wonder how long you will be able to continue working with clients?

Response categories: To a very high degree; To a high degree; Somewhat; To a low degree; To a very low degree.

Always; Often; Sometimes; Seldom; Never/almost never. Reversed score for last question.

Scoring as for the first scale. If fewer than four questions have been answered, the respondent is classified as a non-respondent.

Source: *Examples taken from Kristensen et al (2005), p. 200 (Table II).*

3. Oldenburg Burnout Inventory (OLBI)

Description	The Oldenburg Burnout Inventory includes positively and negatively framed items to assess the two core dimensions of burnout: exhaustion and disengagement (from work). Exhaustion is defined as the consequence of intense physical, affective and cognitive strain, i.e. as a long-term consequence of prolonged exposure to certain job demands.	
Questionnaire – two sub-dimensions	Exhaustion (eight questions)	Disengagement (eight questions)
	Refers to general feelings of emptiness, overtaxing from work, a strong need for rest, and a state of physical exhaustion.	Disengagement refers to distancing oneself from the object and the content of one's work and to negative, cynical attitudes and behaviour towards one's work in general.
Examples of questions	'After my work, I regularly feel worn out and weary' and 'After my work, I regularly feel totally fit for my leisure activities' (reversed).	'I frequently talk about my work in a negative way' and 'I get more and more engaged in my work' (reversed).
Scoring scale	1 = strongly disagree; 4 = strongly agree	The answer categories are the same as for exhaustion.

For both sub-dimensions, four items are positively worded and four items are negatively worded.

Source: Demerouti and Bakker, 2008.

4. Shirom-Melamed Burnout Measure (SMBM) Version of 2 July 2005 in English

Description	The Shirom-Melamed Burnout Measure was constructed to assess exhaustion – or the dwindling of energy resources – regardless of occupational context. It includes three sub-dimensions: physical fatigue, emotional exhaustion, and cognitive weariness.						
Below are a number of statements that describe different feelings that you may feel at work. Please indicate how often, in the past 30 workdays, you have felt each of the following feelings:							
Questionnaire – three sub-dimensions	Physical fatigue (P)		Emotional exhaustion (E)			Cognitive weariness (C)	
Questions	<ul style="list-style-type: none"> I feel tired. I have no energy for going to work in the morning. I feel physically drained. I feel fed up. I feel like my 'batteries are dead'. I feel burnt out. 		<ul style="list-style-type: none"> I feel I am unable to be sensitive to the needs of co-workers and customers. I feel I am not capable of investing emotionally in co-workers and customers. I feel I am not capable of being sympathetic to co-workers and customers. 			<ul style="list-style-type: none"> My thinking process is slow. I have difficulty concentrating. I feel I'm not thinking clearly. I feel I'm not focused in my thinking. I have difficulty thinking about complex things. 	
Scoring scale	Never or almost never	Very infrequently	Quite infrequently	Sometimes	Quite frequently	Very frequently	Always or almost always
	1	2	3	4	5	6	7

Source: Shirom Melamed Burnout Scale (SMBM), accessed via www.shirom.org

5. Burnout Dimensions Inventory (BODI)

Description	Research survey developed by the Austrian Society for Work Quality and Burnout (Österreichische Gesellschaft für Arbeitsqualität und Burnout) on the prevalence of burnout in Austria in 2013 on behalf of the Federal Ministry of Labour, Social Affairs and Consumer Protection (Bundesministeriums für Arbeit, Soziales und Konsumentenschutz) and in cooperation with the Anton Proksch Institute Vienna.			
Questionnaire: four sub-dimensions and descriptions of impact on the individual – 40 questions in total.	1. Reduced resilience, resistance and overload	2. Insufficient capability of dissociation, dissolution of the boundary between work, leisure and family	3. Depression	4. Dysfunctional compensation

Source: Scheibenbogen et al (2017), pp. 17–18.

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This report looks at the extent of burnout experienced by workers in the EU, based on national research. As a starting point, the report sets out to consider whether burnout is viewed as a medical or occupational disease. It then examines the work determinants associated with burnout and looks at the effects of burnout, including psychosocial and physical work factors, work intensity and work organisation. It also reviews national strategies and policies regarding this issue, the involvement of the social partners in the current debate, as well as preventive actions currently in place.

The European Foundation for the Improvement of Living and Working Conditions (Eurofound) is a tripartite European Union Agency whose role is to provide knowledge in the area of social, employment and work-related policies. Eurofound was established in 1975 by Council Regulation (EEC) No. 1365/75 to contribute to the planning and design of better living and working conditions in Europe.