

Work-related musculoskeletal disorders: prevalence, costs and demographics in the EU

National report: Italy

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This report was commissioned by the European Agency for Safety and Health at Work (EU-OSHA). Its contents, including any opinions and/or conclusions expressed, are those of the author(s) alone and do not necessarily reflect the views of EU-OSHA.

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Luxembourg: Publications Office of the European Union, 2019

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Summary

Prevalence of MSDs

- The percentage of both Italian men and women workers reporting that their work affects their health is lower (29 % and 25 %, respectively) than the average levels for the 28 EU Member States (EU-28) (39 % and 35 %, respectively).
- The percentages of Italian workers affected by back pain, muscular pain in the lower limbs and muscular pain in the shoulders, neck and/or upper limbs are lower than the EU-28 average.
- Musculoskeletal disorders (MSD) are the most typical type of health problems identified by Italian workers. Back pain is the most commonly identified health problem (51.6 % of all workers), followed by muscular pain in the upper limbs (46.7 % of all workers).
- According to the available national data, MSDs represent 65.7 % of all recognised occupational diseases in Italy. Meanwhile, most of the recognised occupational diseases related to the musculoskeletal system correspond to cases with a relatively low degree of incapacity. In addition to this, data on the main and specific types of MSDs resulting in recognised occupational diseases show that soft tissue diseases and dorsopathies are the two most preponderant types of MSD in Italy. Four specific types of MSDs (herniated disc or other specified intervertebral disc disorder, rotator cuff syndrome, lumbar and other intervertebral disc disorders associated with radiculopathy and shoulder derangement) constitute up to two thirds of the existing cases.

Impact of MSDs

- With regard to the costs and other burdens related to MSDs, the available data on disability-adjusted life years (DALYs) show that the number of years of life lost and lived with disability resulting from work-related MSDs per 100,000 workers represents a lower percentage of the total number of years of life lost and lived with disability due to different reasons (cancer, circulatory problems, injuries, etc.) than the EU-28 average.
- Available data show that a lower percentage of people in Italy have reported a period off work as a result of a work-related health problem and resulting in sick leave than the average level for the EU-28, particularly regarding longer periods off work.
- A lower percentage of Italian employees work in companies that support employees to return to work after a long-term sickness than the EU-28 average.

Risk factors for MSDs

- A large percentage of Italian employees are exposed to physical factors at work that may put them at risk of MSDs. More precisely, the most important physical risk factors are standing positions, jobs involving repetitive hand/arm movements, working in sitting positions and working with computers/laptops, in that order. A comparison with EU-level data shows that the four most important physical risk factors (jobs that involve standing, the presence of repetitive hand/arm movements, working in sitting positions and working with computers/laptops) are the same in both cases.
- According to national data, 74.5 % and 76.3 % of Italian workers feel a little personally exposed to health and safety risks at work and to the risk of accidents at work, respectively. Meanwhile, 82.7 % of Italian workers do not feel in danger of being injured at work, and 81.4 % report that they are not afraid of becoming sick because of their work. Finally, almost all of the Italian workers (around 95.0 %) state that they know the extent of the risks present in their own company

- According to national sources, the largest proportion of recognised occupational diseases related to MSDs are in 'craft, skilled and agricultural workers' (63.7 % of the total, in absolute terms); in contrast, they are rare among highly skilled workers such as professionals or legislators/managers. Meanwhile, recognised occupational diseases related to MSDs are particularly present in sectors such as construction, agriculture/fisheries and manufacturing.
- Organisational and psychosocial risk factors also play a role as potential triggers of MSDs. The most relevant among Italian employees are the pace of work being dependent on other people's demands, working at a very high speed, and the presence of tight deadlines. Other relatively important risk factors include the pace of work being dependent on their boss, overall fatigue, or, generally speaking, difficulty sleeping. The comparison with EU-level data shows that the relative importance of the different organisational and psychosocial risk factors is similar in Italy. National data confirm a relatively large number of Italian workers (one out of four) negatively reporting unachievable deadlines, which results in stress and anxiety.

Prevention of MSDs

- Surveys of enterprises suggest that Italian employees benefit considerably from measures aimed at preventing MSDs in their workplaces, with very similar percentages to the EU-28 average. More precisely, the percentage of Italian employees working in establishments where there is a rotation of tasks or the provision of ergonomic equipment is slightly lower than the EU-28 average, whereas the percentage of Italian employees in establishments encouraging regular breaks is slightly higher.
- The same source shows a higher percentage than the EU-28 average of Italian employees working in companies that provide training in their establishments on several preventive measures.

1 Introduction

1.1 Background

This is the national musculoskeletal disorders (MSDs) facts and figures overview report for Italy ⁽¹⁾. This national report is part of a much larger project, '**MSDs facts and figures overview: prevalence, costs and demographics of MSDs in Europe**', intended to support policy-makers at EU and national levels by providing an accurate picture of the prevalence and costs of MSDs across Europe, pulling together existing data from a number of relevant and reliable official statistical sources. This national report is considered complementary to the overview report covering the EU as a whole, *Work-related musculoskeletal disorders: prevalence, costs and demographics in the EU – Final report* ⁽²⁾.

The European Agency for Safety and Health at Work (EU-OSHA), aware of the limits of EU data sources related to MSDs, decided to complement and enrich EU-level findings with national data and analyses. This national report is not intended to provide a comprehensive and exhaustive national overview of MSDs. Rather, the main criteria followed in relation to gathering national data were to identify and focus on national MSD-related information that is either not available at EU level or complementary to existing data. Moreover, EU-OSHA considers that making the information/data identified at national level accessible to the European occupational safety and health (OSH) community and Member States (by publishing it in English) is also important. By sharing this national data at EU level, EU-OSHA aims to improve knowledge on the MSD topic among policy-makers, OSH professionals and national authorities in general.

This national report is structured into five chapters, including this introductory chapter, Chapter 1. Chapter 2 presents some data on the prevalence of MSDs among national workers, as well as information on MSD-related occupational diseases. Chapter 3 analyses the impact of MSDs, presenting information on health, work and employment outcomes (including information on costs linked to MSDs). Chapter 4 identifies several risk factors underpinning MSDs, including physical as well as organisational/psychosocial and sociodemographic risk factors. Chapter 5 provides some information related to activities carried out by enterprises/establishments intended to prevent MSDs within the workforce, including training and support activities to help workers returning to work. Finally, the report lists the main national data sources on MSDs along with (when possible) links through which this information can be accessed. All chapters follow the same structure: each chapter presents national data on MSDs based on EU-level data sources and these data are subsequently complemented with information from national data sources (if any). This has been done to ensure that all reports contain a minimum level of basic information, harmonised for all the Member States analysed.

The structure of this national report is the same as that of the general European overview report (mentioned above), and readers are invited to consult the information available in the equivalent chapter of the general European report for a more comprehensive overview of the issues addressed in this national report.

From a methodological perspective, the information presented in this report comes from national data sources based either on surveys or on administrative data related to the issue of MSDs. This national information has been complemented in some cases with information from European/international data sources to allow comparisons between national and EU-level results.

(1) Information about the occupational safety and health system in the Netherlands is available at: https://oshwiki.eu/wiki/OSH_system_at_national_level_-_Italy

(2) This report is available at: <https://osha.europa.eu/en/publications/msds-facts-and-figures-overview-prevalence-costs-and-demographics-msds-europe/view>

1.2 Causes and consequences of MSDs: a framework

1.2.1 Main sources of information on MSDs

MSDs refer to impairments of bodily structures such as muscles, joints, tendons, ligaments, nerves, cartilage, bones and the localised blood circulation system (EU-OSHA, 2002) ⁽³⁾. If MSDs are caused or aggravated primarily by work and by the effects of the immediate environment in which work is carried out, they are known as work-related MSDs.

The two main sources of information and data regarding MSDs are surveys based on self-reporting and administrative data.

In the case of self-reporting, people are asked whether or not they suffer from an MSD (either in general or a specific type of MSD). When assessing the prevalence of MSDs through surveys, it is customary to ask about the part of the body affected by health complaints and not about the clinical nature of complaints.

Questions regarding the prevalence of MSDs are included in different surveys. The formulation of the questions used varies between surveys and also between different waves of these surveys. These differences are likely to result in different outcomes.

Another important source of information is administrative data. Two examples of available administrative data are:

- data on the number (and proportion) of occupational diseases recognised to be due to diseases of the musculoskeletal system and connective tissue;
- data on declared work-related accidents.

Estimates of MSD prevalence based on self-reporting may include people with relatively mild health complaints as well as people with severe health complaints. Statistics based on administrative data are likely to include only people with more severe health complaints (severe enough to result in the complaint being recognised as an occupational disease).

1.2.2 A multidimensional model of MSDs

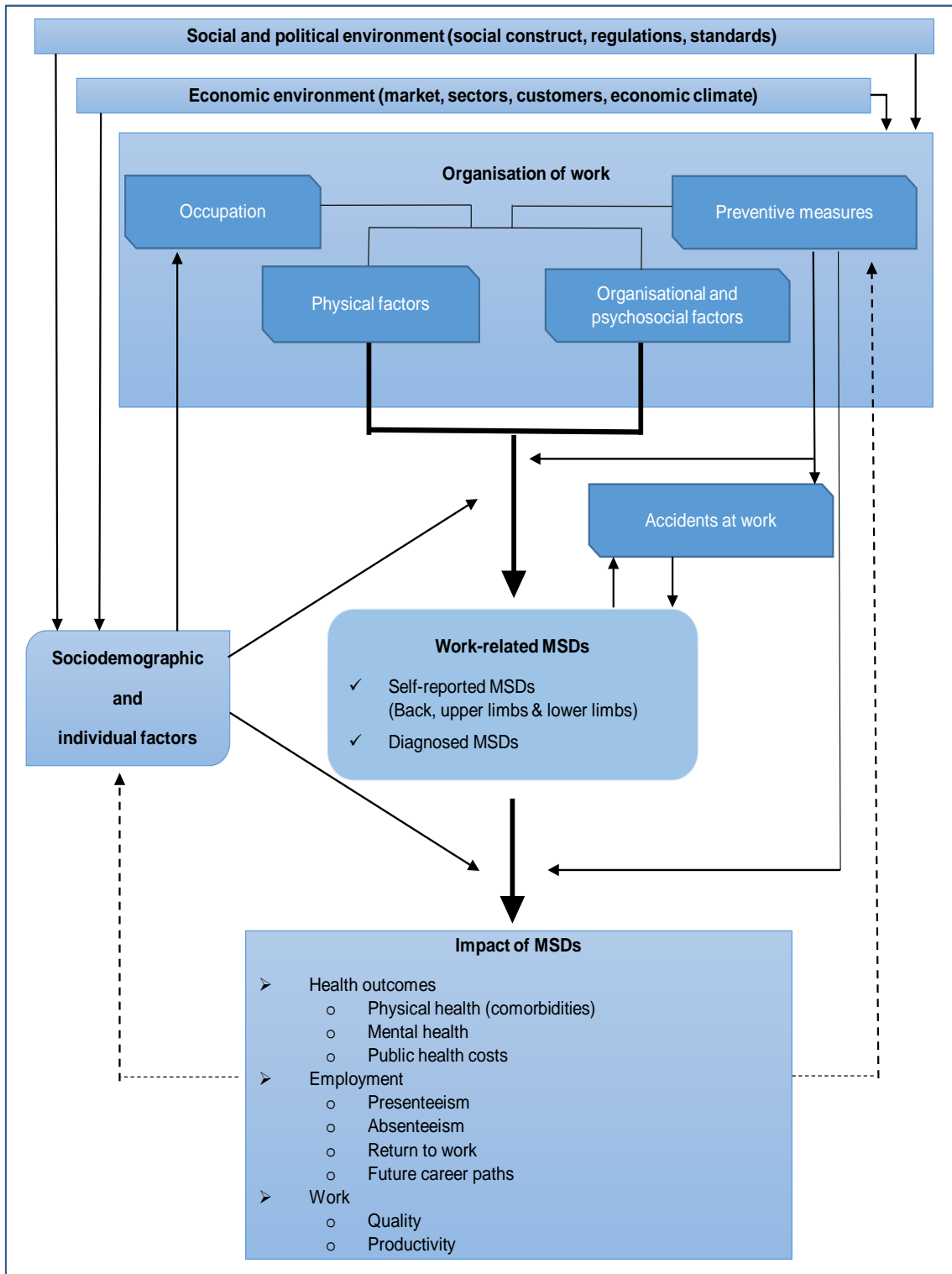
MSDs can be caused by many different (combinations of) factors and may have many different consequences. Figure 1 shows the main causes and consequences of MSDs that have been identified in previous studies.

The objective of this national report is to present additional country-specific information regarding the following aspects of the framework depicted in Figure 1:

- the prevalence of MSDs;
- the impact of MSDs;
- risk factors for MSDs;
- the prevention of MSDs.

(3) EU-OSHA — European Agency for Safety and Health at Work, 'Introduction to work-related musculoskeletal disorders', Facts 71, 2002. Available at: https://osha.europa.eu/sites/default/files/publications/documents/en/publications/factsheets/71/Factsheet_71_-_Introduction_to_work-related_musculoskeletal_disorders.pdf

Figure 1: Theoretical framework of work-related MSDs



Note: theoretical framework developed by Panteia, vhp performance and IKEI

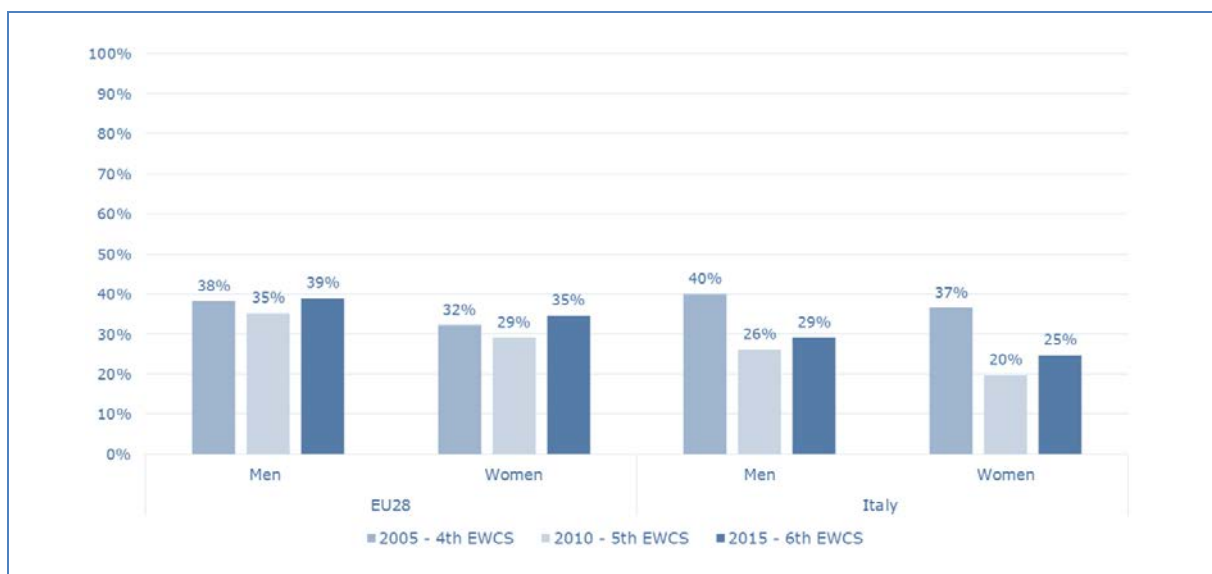
2 Prevalence of MSDs

2.1 Self-reported MSDs

In this chapter an overview of the prevalence of MSDs in Italy and the comparison with the EU-28 is presented.

First, Figure 2 illustrates the percentages of workers, by gender, in Italy who report that their work affects their health. Around 29 % of men and 25 % of women report that their work affects their health (data for 2015); both percentages are lower than the corresponding EU-28 averages (39 % and 35 %, respectively).

Figure 2: Percentages of workers who reported that their work affects their health in the EU-28 and Italy, by gender, 2005, 2010 and 2015



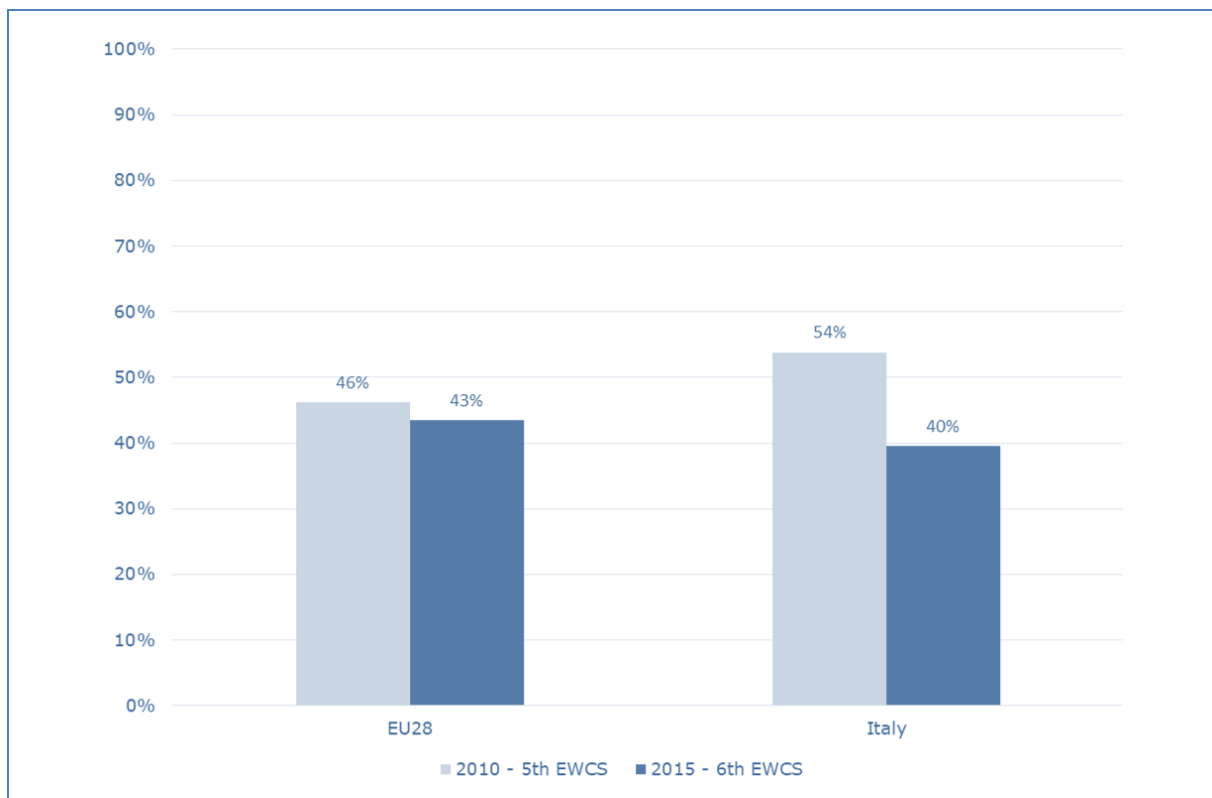
Source: Panteia, based on data from the 2005, 2010 and 2015 waves of the European Working Conditions Survey (EWCS) ⁽⁴⁾

The main focus is on the three specific categories of MSDs, namely back pain, muscular pain in the upper limbs and muscular pain in the lower limbs.

⁽⁴⁾ Eurofound — European Foundation for the Improvement of Living and Working Conditions, European Working Conditions Survey (EWCS). Information about the survey is available at: <https://www.eurofound.europa.eu/surveys/european-working-conditions-surveys>

Figure 3 shows the percentages of workers who reported back pain in the past 12 months in the EU-28 and in Italy. According to the available information, back pain is slightly less prevalent in Italy than in the EU-28, which is not confirmed by the 2010 wave of the European Working Condition Survey. In 2015, 40 % of Italian workers reported back pain in the past 12 months, whereas this percentage was 43 % in the EU-28.

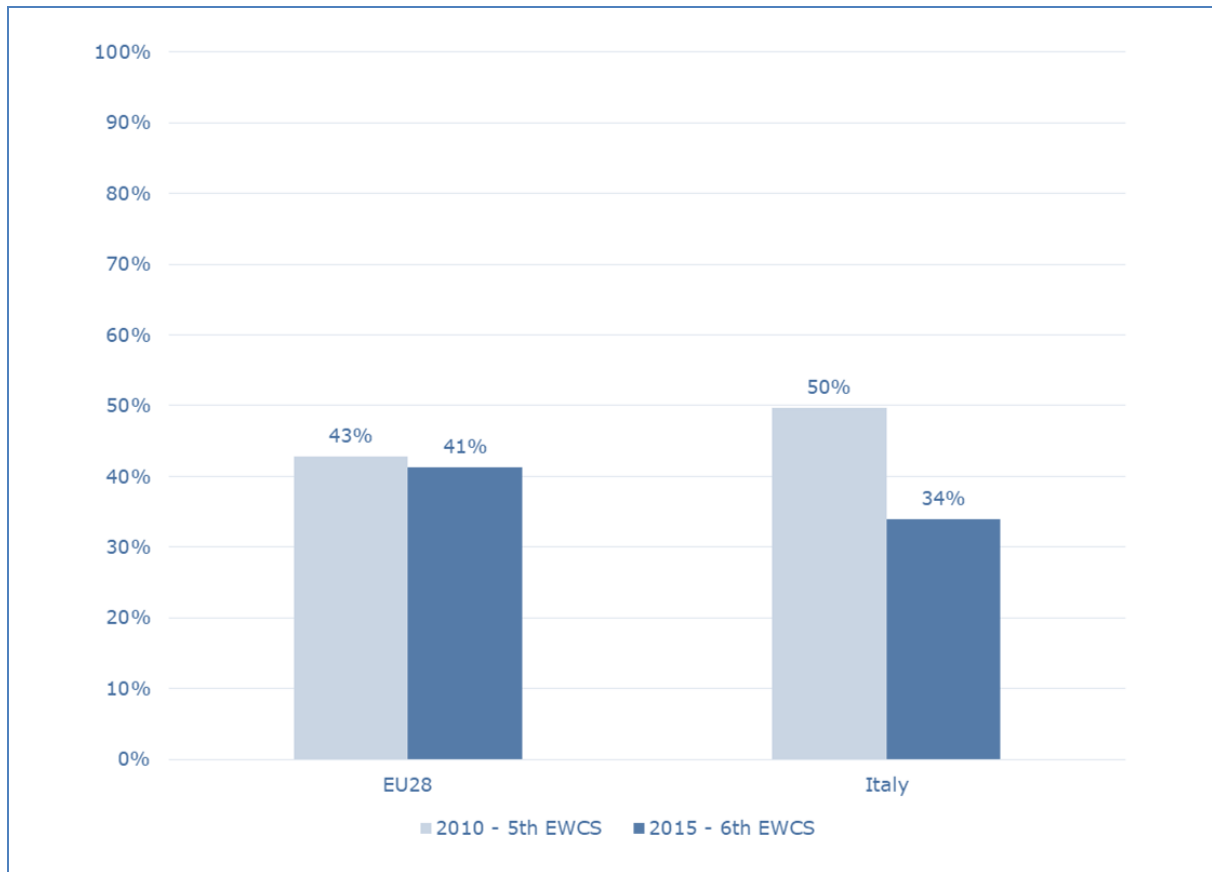
Figure 3: Percentages of workers who reported back pain in the past 12 months in the EU-28 and Italy, in 2010 and 2015



Source: Panteia, based on data from the 2010 and 2015 waves of the EWCS

Figure 4 illustrates the percentage of workers who reported muscular pain in the shoulders, neck and/or upper limbs in the past 12 months in the EU-28 and in Italy. According to the available data, the percentage of Italian workers reporting this type of muscular pain was 34 % in 2015, which was lower than that in the EU-28 (41 %). The percentages for Italy showed a remarkable downwards trend (from 50 % in 2010 to 34 % in 2015).

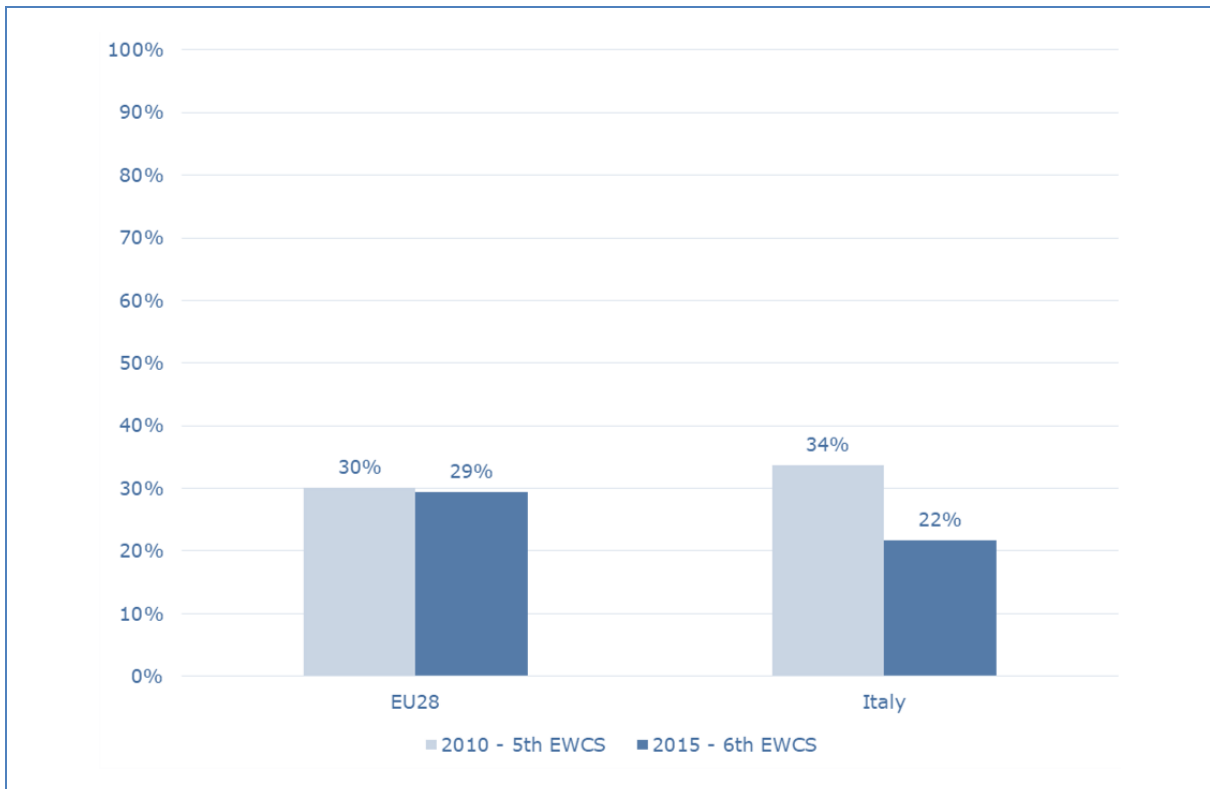
Figure 4: Percentages of workers who reported muscular pains in the shoulders, neck and/or upper limbs in the past 12 months in the EU-28 and Italy, in 2010 and 2015



Source: Panteia, based on data from the 2010 and 2015 waves of the EWCS

Finally, Figure 5 presents the percentages of workers who reported muscular pain in the lower limbs in the past 12 months in the EU-28 and in Italy. The available data show that the percentage of Italian workers reporting being affected by this type of muscular pain was 22 % in 2015, which was below the figure for the EU-28 (29 %). A notable decrease is apparent between 2010 and 2015 in the Italian data.

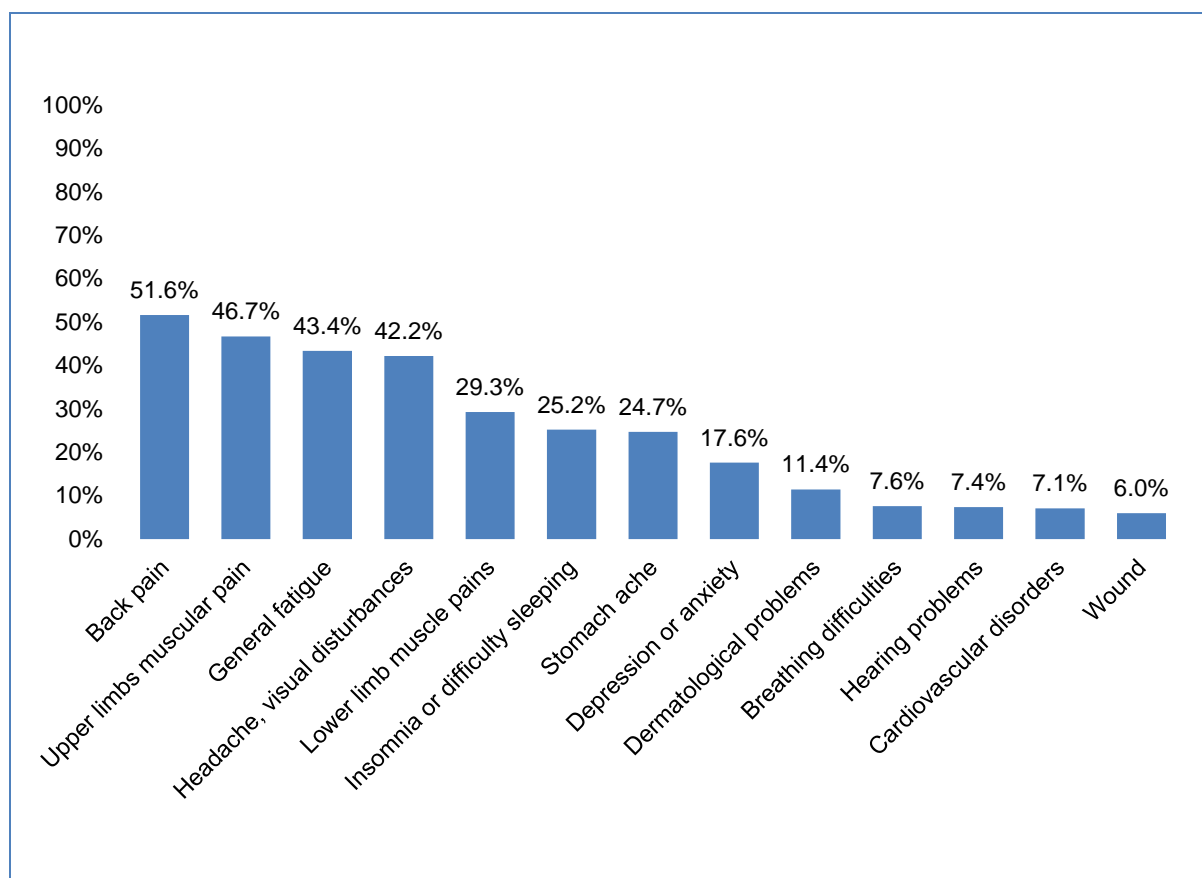
Figure 5: Percentages of workers who reported muscular pains in the lower limbs in the past 12 months in the EU-28 and Italy, in 2010 and 2015



Source: Panteia, based on data from the 2010 and 2015 waves of the EWCS

Finally, national information from INAIL ⁽⁵⁾ confirms that MSD-related problems are the most typical health problems identified by Italian workers, to the extent that back pain is the most commonly identified health problem (51.6 % of all workers), followed by muscular pain in the upper limbs (46.7 % of all workers) (see Figure 6). Other relevant health problems include general fatigue and headaches/visual problems.

⁽⁵⁾ INAIL — Istituto Nazionale per l'Assicurazione contro gli Infortuni sul Lavoro, *Indagine sulla Sicurezza sul Lavoro (INSULA)* (survey on work-related security), 2014. Available at: https://www.inail.it/cs/internet/comunicazione/sala-stampa/conferenze-stampa/ucm_140537_indagine-nazionale-sulla-salute-e-sicurezza-sul.html

Figure 6: Percentage of workers reporting health problems suffered in the last 12 months in Italy, 2014

Source: INAIL, Indagine sulla Sicurezza sul Lavoro (INSULA)

2.2 MSD-related occupational diseases

In addition to the information on self-reported MSDs, the available national data provide some interesting information on the importance of MSDs as the main type of recognised occupational diseases in Italy ⁽⁶⁾. According to the available official data, MSDs represented 12,683 cases out of the 19,291 total Italian recognised occupational diseases in 2017 (65.7 % of the total). Interestingly, MSDs are the main type of recognised occupational diseases year after year, although this relative weight slightly increased between 2014 and 2017. Other types of important occupational diseases, such as diseases of the nervous system or diseases of the ear/mastoid process, are less relevant in relative terms (14.4 % and 8.6 % of the total number of recognised occupational diseases in 2017).

Meanwhile, and from a gender perspective, MSDs are the main type of recognised occupational disease for both genders, although they are slightly more common in women than in men (see Table 1). Thus, 69.8 % of the total recognised occupational diseases among women in Italy were related to MSDs in 2017, compared with 64.5 % among men. This trend of MSDs being more common in women was seen throughout the period 2014-2017.

⁽⁶⁾ INAIL Banca dati (INAIL database). Available at: <https://www.inail.it/cs/internet/attivita/dati-e-statistiche.html> (accessed in May 2019).

Table 1: Number of recognised occupational diseases, by gender and type of disease, 2014-2017

	2014			2015			2016			2017		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Certain infectious and parasitic diseases	3	3	0	1	1	0	2	2	0	1	1	0
Neoplasms	1,296	1,216	80	1,177	1,096	81	1,103	1,029	74	984	923	61
Diseases of the blood and blood-forming organs and certain disorders involving the immune system (D50-D89)	2	2	0	1	1	0	2	2	0	0	0	0
Mental and behavioural disorders (F00-F99)	41	18	23	40	17	23	33	17	16	18	10	8
Diseases of the nervous system (G00-G99)	3,548	1,868	1,680	3,418	1,850	1,568	3,358	1,896	1,462	2,786	1,637	1,149
Diseases of the eye and adnexa (H00-H59)	23	19	4	16	12	4	14	10	4	8	4	4
Diseases of the ear and mastoid process (H60-H95)	2,253	2,221	32	2,130	2,102	28	2,064	2,036	28	1,663	1,640	23
Diseases of the circulatory system (I00-I99)	89	75	14	56	51	5	57	50	7	39	36	3
Diseases of the respiratory system (J00-J99)	1,486	1,338	148	1,303	1,180	123	1,094	999	95	898	820	78
Diseases of the digestive system (K00-K93)	8	8	0	1	1	0	3	3	0	4	4	0
Diseases of the skin and subcutaneous tissue (L00-L99)	272	148	124	251	146	105	260	164	96	196	125	71
Diseases of the musculoskeletal system and connective tissue (M00-M99)	15,323	11,092	4,231	15,879	11,606	4,273	14,724	10,889	3,835	12,683	9,450	3,233
Diseases of the genito-urinary system (N00-N99)	0	0	0	0	0	0	0	0	0	0	0	0
Injury, poisoning and certain other consequences of external causes (S00-T98)	2	2	0	1	1	0	3	2	1	3	1	2
Not determined	53	37	16	75	56	19	191	138	53	8	5	3
Total	24,399	18,047	6,352	24,349	18,120	6,229	22,908	17,237	5,671	19,291	14,656	4,635

Source: INAIL database

Meanwhile, most of the recognised occupational diseases related to the musculoskeletal system correspond to cases with a relatively low degree of incapacity (see Table 2). Thus, up to 96.4 % of cases in 2017 had a degree of incapacity of below 15 %, whereas 46.4 % of cases had a degree of incapacity of 5 % or below and the remaining 50.0 % of cases had a degree of incapacity of between 6 % and 15 %. These percentages are relatively stable, irrespective of gender and of which year is considered.

Table 2: Number of recognised occupational diseases related to the musculoskeletal system, by gender and degree of incapacity, 2014-2017

	Degree of incapacity	2014	2015	2016	2017
Total	No disability	136	156	184	271
	1-5 %	5,613	6,038	5,910	5,891
	6-15 %	9,011	9,240	8,295	6,338
	16-25 %	538	426	323	177
	26-50 %	24	19	11	5
	51-85 %	0	0	0	1
	86-100 %	0	0	0	0
	Fatal	1	0	1	0
	Total		15,323	15,879	14,724
Men	No disability	96	106	123	168
	1-5 %	3,590	3,943	3,982	4,093
	6-15 %	6,949	7,181	6,508	5,024
	16-25 %	434	359	268	160
	26-50 %	22	17	7	5
	51-85 %	0	0	0	0
	86-100 %	0	0	0	0
	Fatal	1	0	1	0
	Total		11,092	11,606	10,889
Women	No disability	40	50	61	103
	1-5 %	2,023	2,095	1,928	1,798
	6-15 %	2,062	2,059	1,787	1,314
	16-25 %	104	67	55	17
	26-50 %	2	2	4	0
	51-85 %	0	0	0	1
	86-100 %	0	0	0	0
	Fatal	0	0	0	0
	Total		4,231	4,273	3,835

Source: INAIL database

However, data on the main and specific types of MSDs resulting in recognised occupational diseases shows that soft tissue diseases (M60-M79) and dorsopathies (M40-M54) are the two most preponderant types of MSD in Italy (see Table 3), followed at a distance by arthropathies (M00-M25) (51.0 %, 43.6 % and 5.4 %, respectively, in 2017). It is interesting to notice that soft tissue diseases (M60-M79) are notably more common in women than in men (67.3 % and 45.4 %, respectively). This general picture did not change significantly during the period 2013-2017.

Meanwhile, as shown in Table 4, the available information shows that there are four specific types of MSDs (herniated disc or other specified intervertebral disc disorder, rotator cuff syndrome, lumbar and other intervertebral disc disorders associated with radiculopathy and shoulder derangement) that constitute up to two thirds of the existing cases (20.9 %, 20.1 %, 13.4 % and 10.5 % of the total cases in 2017, respectively). Differences by gender show that some specific MSDs are more common among men than women in relative terms (for instance, herniated discs and lumbar disorders associated with radiculopathy), whereas other specific MSDs (for instance, shoulder derangement and medial epicondylitis) are more prominent in women (also in relative terms). No important variations can be identified in the period 2014-2017.

Table 3: Number of recognised occupational diseases related to the musculoskeletal system by main class of disease and gender, 2014-2017 (Source INAIL database)

	2014			2015			2016			2017		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Arthropathies (M00-M25)	908	748	160	824	692	132	777	685	92	683	612	71
Connective tissue systemic diseases (M30-M36)	0	0	0	2	2	0	0	0	0	0	0	0
Dorsopathies (M40-M54)	7,262	5,790	1,472	7,674	6,123	1,551	6,731	5,471	1,260	5,532	4,546	986
Soft tissues diseases (M60-M79)	7,153	4,554	2,599	7,378	4,788	2,590	7,215	4,732	2,483	6,467	4,291	2,176
Osteopathies and chondropathies (M80-M94)	0	0	0	1	1	0	1	1	0	1	1	0
Total MSDs	15,323	11,092	4,231	15,879	11,606	4,273	14,724	10,889	3,835	12,683	9,450	3,233

Table 4: Main recognised occupational diseases related to the musculoskeletal system, by gender, 2014-2017 (Source INAIL database)

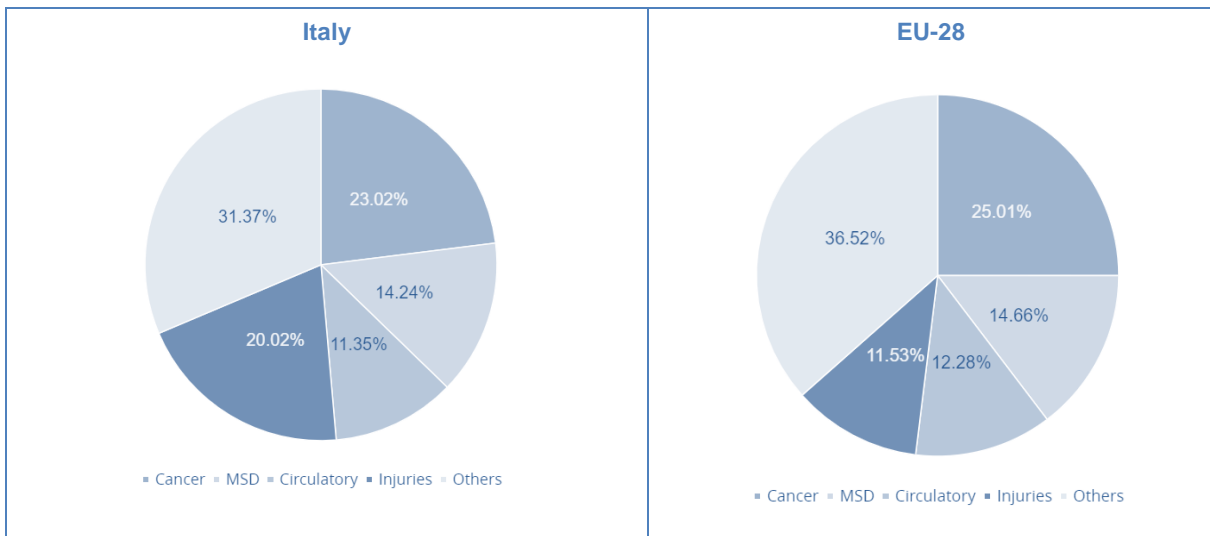
	2014			2015			2016			2017		
	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women
Herniated disc of other specified intervertebral disc disorder	4,007	3,208	799	4,086	3,261	825	3,280	2,689	591	2,648	2,177	471
Rotator cuff syndrome	2,709	1,862	847	2,718	1,921	797	2,788	1,949	839	2,543	1,829	714
Lumbar and other intervertebral disc disorders associated with radiculopathy	2,086	1,637	449	2,182	1,727	455	2,061	1,651	410	1,701	1,396	305
Shoulder derangement	1,538	983	555	1,796	1,156	640	1,683	1,128	555	1,326	886	440
Degeneration of other specified intervertebral disc	888	710	178	1,039	810	229	1,099	878	221	955	772	183
Medial epicondylitis	1,081	675	406	1,019	649	370	983	633	350	923	584	339
Other meniscus derangements	411	394	17	369	354	15	409	397	12	387	379	8
Other synovitis and tenosynovitis	360	132	228	347	125	222	307	107	200	304	99	205
Lateral epicondylitis	218	137	81	235	161	74	303	191	112	282	196	86
Calcifying tendinitis of the shoulder	294	209	85	251	169	82	244	157	87	258	170	88
Other spondylolysis	235	199	36	319	286	33	273	239	34	218	192	26
Shoulder impingement syndrome	287	198	89	278	196	82	294	206	88	218	171	47
Other MSD disorders	1,209	748	461	1,240	791	449	1,000	664	336	920	599	321
Total MSDs	15,323	11,092	4,231	15,879	11,606	4,273	14,724	10,889	3,835	12,683	9,450	3,233

3 Impact of MSDs

3.1. Health outcomes

With regard to costs and burdens related to MSDs, the available data on DALY (7) rates (8) show that the number of years of life lost and lived with disability resulting from work-related MSDs represent 14.24 % of the total number of years of life lost and lived with disability due to different reasons (cancer, circulatory, injuries, etc.), which is slightly lower than the EU-28 average (14.66 %) (see Figure 7).

Figure 7: Distribution of years of life lost and lived with disability (DALYs) per 100.000 workers, by main work-related illnesses in Italy and the EU-28



Source: Panteia based on EU-OSHA, Data visualisation – The economics of OSH (2017).

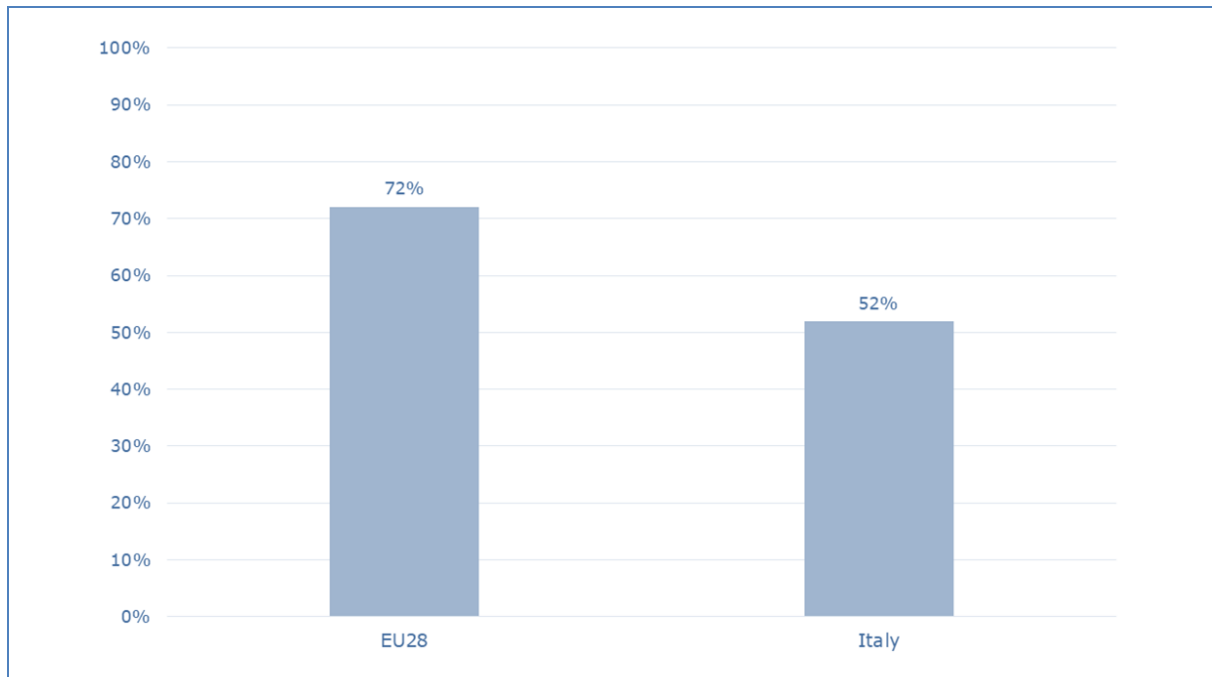
(7) EU-OSHA, Data visualisation – The economics of OSH (2017). Available at: <https://visualisation.osha.europa.eu/osh-costs#!/eu-analysis-illness>

(8) A DALY is the sum of years of life lost (YLL) because of work-related death and years of life lived with disability (YLD) due to work-related injury and illness. DALY rate refers to DALYs per 100,000 workers.

3.2. Employment and work outcomes

Approximately half of Italian employees (52 %) work in companies that support employees returning to work after a long-term sickness. This percentage is much higher in the EU-28 (72 %) (data from ESENER 2 ⁽⁹⁾ for 2014; see Figure 8).

Figure 8: Percentages of employees working in establishments with support measures for employees returning to work after long-term sickness in the EU-28 and Italy, 2014



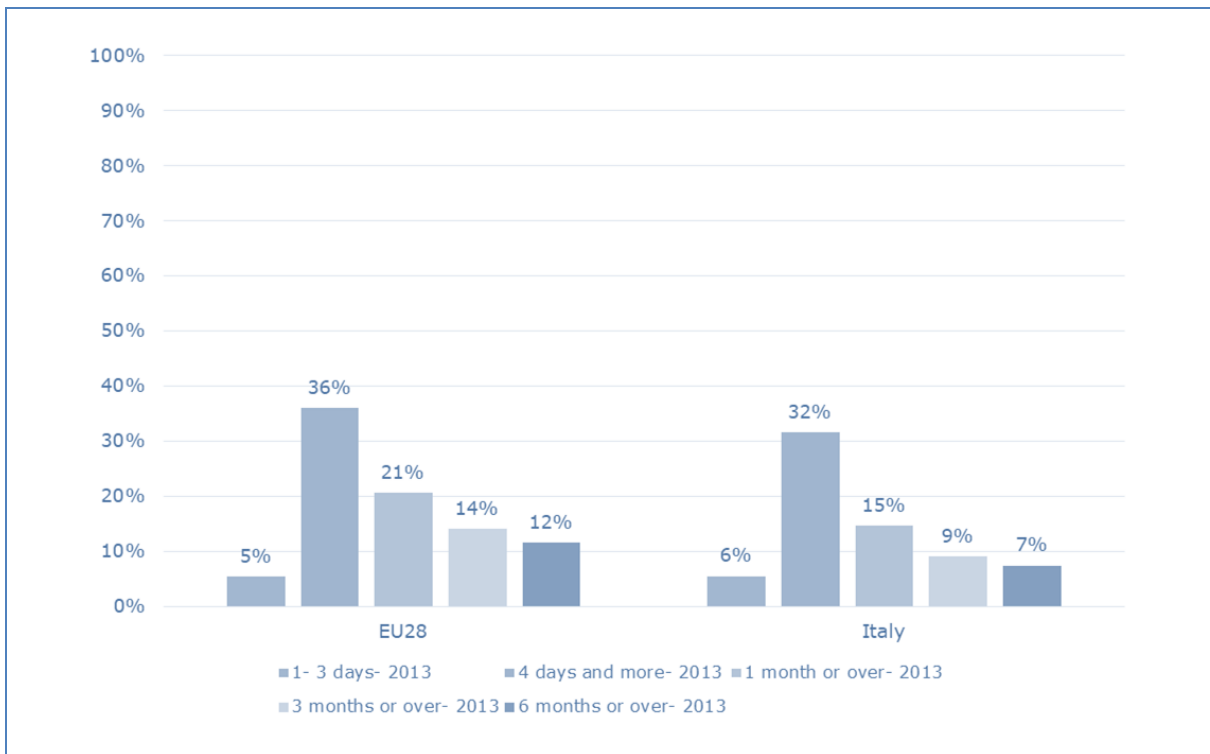
Note: Data are weighted with the employee-proportional weighting factor. This weighting factor controls for the disproportional nature of the national samples, is scaled to the number of employees instead of the number of establishments in the universe, and allows for international analysis. ESENER covers employees in enterprises employing five or more workers.

Source: Panteia, based on ESENER 2 data

⁽⁹⁾ EU-OSHA — European Agency for Safety and Health at Work, European Survey of Enterprises on New and Emerging Risks 2 (ESENER 2). Information about the survey is available at: <https://osha.europa.eu/en/facts-and-figures/esener>

Figure 9 is based on publicly available data from the Labour Force Survey (LFS) ⁽¹⁰⁾ ad hoc modules. It shows the percentage of people who reported a work-related health problem resulting in sick leave characterised by various periods off work, in the EU-28 and in Italy in 2013. The available data show that up to 32 % of Italian workers in this situation had a period of 4 days or over off work, in comparison with 36 % in the EU-28. Moreover, 7 % of Italian workers reporting a work-related health problem resulting in sick leave had a period off work of 6 months or over, compared with 12 % on average in the EU-28.

Figure 9: Percentages of people reporting a work-related health problem resulting in sick leave by period off work, in the EU-28 and Italy, 2013



Source: Panteia, based on LFS ad hoc module (Eurostat)

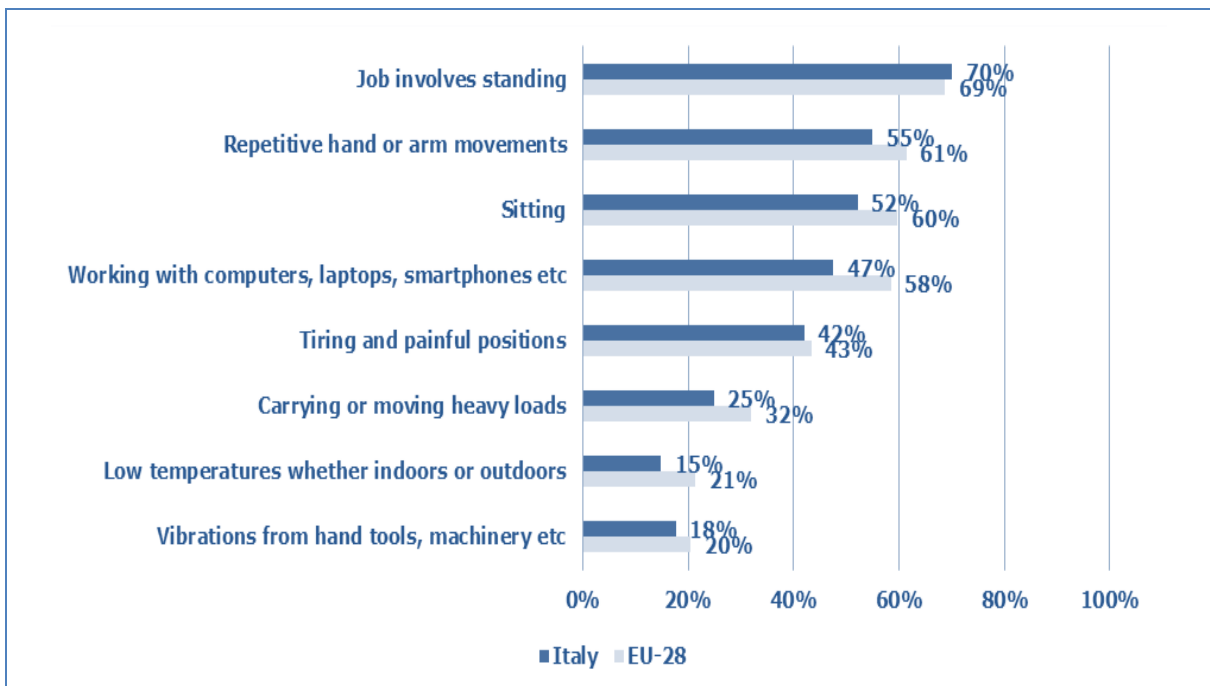
⁽¹⁰⁾ Eurostat, European Union Labour Force Survey (LFS) ad hoc module on accidents at work and other work-related health problems. Information about the survey is available at: <https://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey>

4 Risk factors for MSDs

4.1. Physical factors at work

A large percentage of Italian employees are exposed to physical factors at work that may have an influence on MSDs (see Figure 10). More precisely, 70 % of employees work in establishments where work involves standing positions, whereas 55 %, 52 % and 47 % work in jobs involving repetitive hand/arm movements, working in sitting positions and working with computers/laptops, respectively. 42 % of employees are exposed to tiring/painful positions. Other physical risk factors, such as carrying/moving heavy loads, low temperatures and the presence of vibrations, are less important.

Figure 10: Percentages of employees working in establishments where the following physical risk factors are present in Italy and the EU-28, 2015 (2010 for standing)



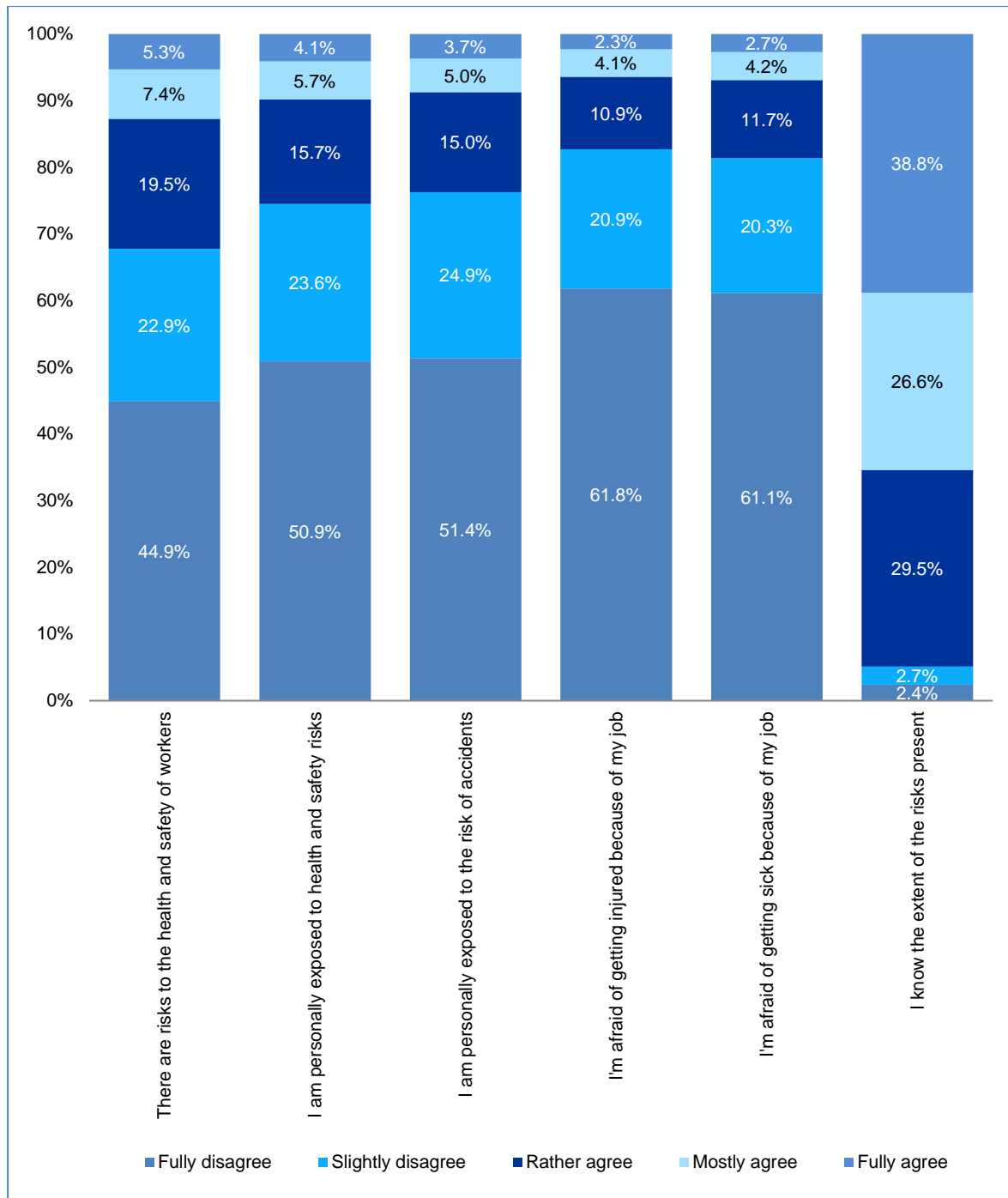
Note: Data are weighted with the employee-proportional weighting factor. This weighting factor controls for the disproportional nature of the national samples, is scaled to the number of employees instead of the number of establishments in the universe, and allows for international analysis. ESENER covers employees in enterprises employing five or more workers.

Source: Panteia, based on ESENER 2 data

A comparison with EU-level data shows that the four most important physical risk factors (work that involves standing, the presence of repetitive hand/arm movements, working in sitting positions and working with computers/laptops) are the same for both the EU-28 and Italy. In fact, the available data show that Italian employees are less exposed than their EU counterparts to all the identified physical risk factors, except for jobs involving standing.

The previous data can be complemented with national data. According to this, 74.5 % and 76.3 % feel a little personally exposed to health and safety risks at work and to the risk of accidents at work, respectively. Meanwhile, 82.7 % of Italian workers do not feel in danger of being injured at work, and 81.4 % report that they are not afraid of becoming sick because of their work. Finally, almost all of the Italian workers (around 95.0 %) state that they know the extent of the risks present in their own company (see Figure 11).

Figure 11: Workers' perception of risks for health and security at work in Italy, 2014

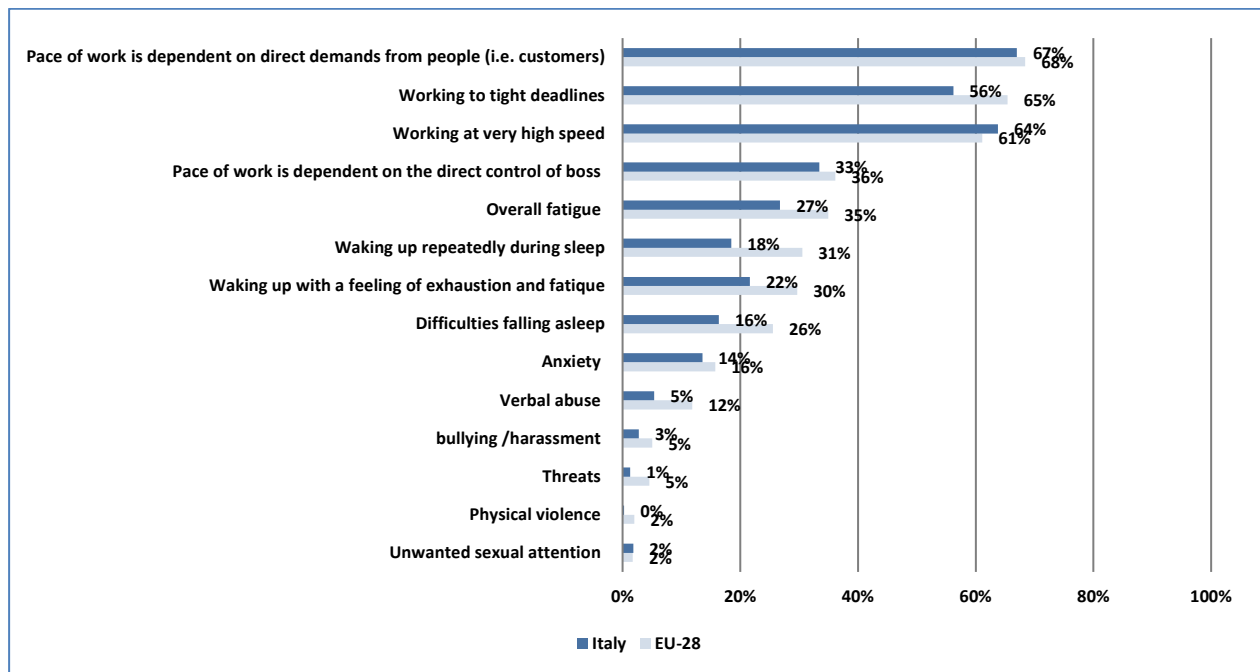


Source: INAIL, Indagine sulla Sicurezza sul Lavoro (INSULA)

4.2. Organisational and psychosocial risk factors

Organisational and psychosocial risk factors also play a role as potential triggers of MSDs (see Figure 12). The most relevant of these factors among Italian employees relate to the pace of work being dependent on other people's demands, working at a very high speed and the presence of tight deadlines (between 67 % and 56 % of employees work in establishments where these risks are present). Other relatively important risks include the pace of work being dependent on their boss, overall fatigue, or, generally speaking, difficulties with sleep.

Figure 12: Percentages of employees working in establishments where the following organisational/psychosocial risk factors are present in Italy and the EU-28, 2015



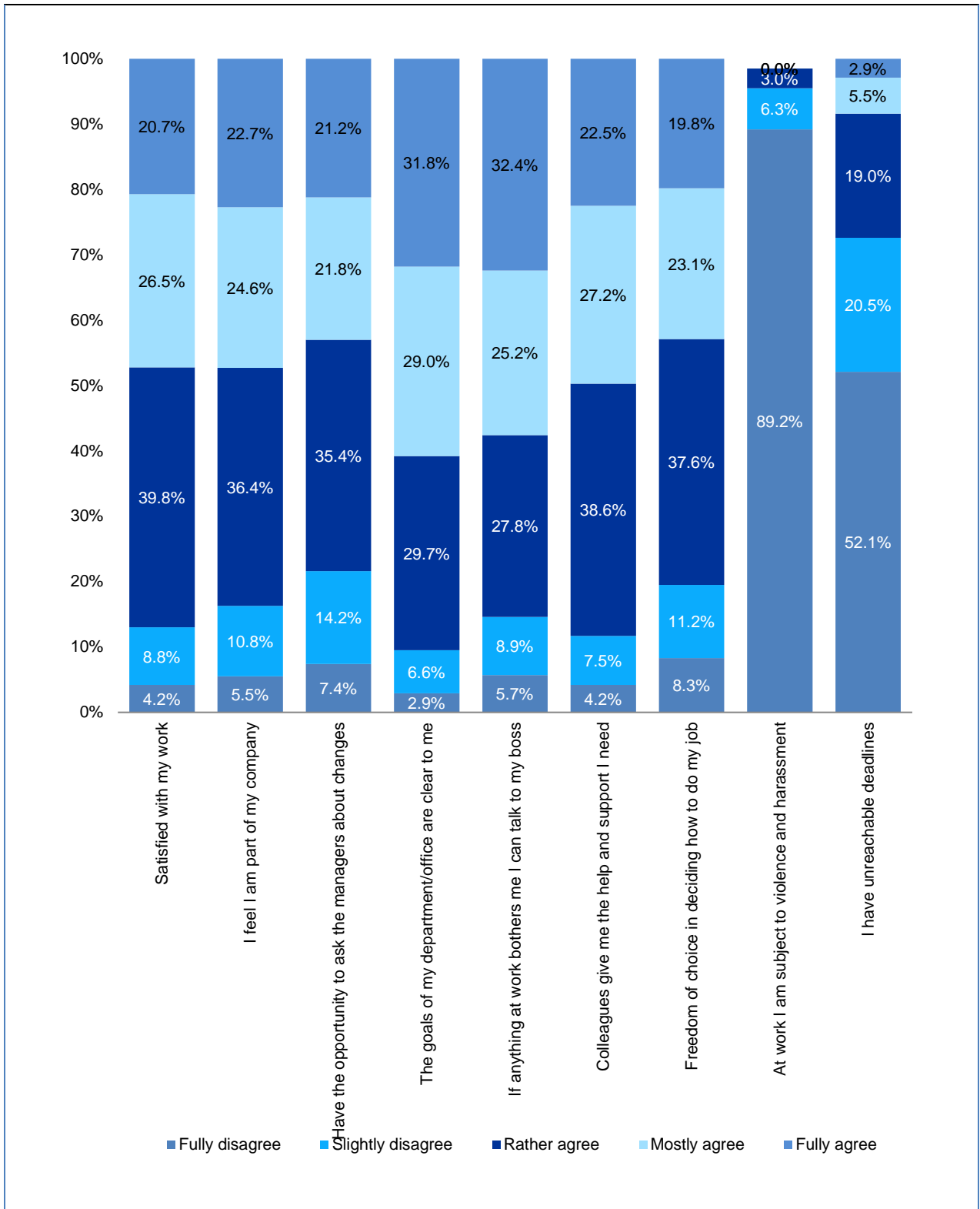
Note: Data are weighted with the employee-proportional weighting factor. This weighting factor controls for the disproportional nature of the national samples, is scaled to the number of employees instead of the number of establishments in the universe, and allows for international analysis. ESENER covers employees in enterprises employing five or more workers.

Source: Panteia, based on ESENER 2 data

A comparison with EU-level data shows that the general order of importance of the different organisational and psychosocial risk factors is similar to that seen in Italy. The available data show that Italian employees are less exposed to the different organisational and psychosocial risk factors, with the only exception being working at very high speed.

The previous data can be compared with national data (see Figure 13), which shows that, generally speaking, Italian workers are not particularly concerned with the existing possible psychosocial risks at work, to the extent that more than 80 % of Italian workers report that, to different levels, they feel satisfied with their work and feel part of the company, they have the opportunity to ask their managers about changes, they feel that the goals of the department/office are clear, they can freely talk to their boss, colleagues give help and support, and they have freedom of choice in deciding how to do the job. By contrast, and interestingly, up to 27.4 % of Italian workers feel that they have unachievable deadlines and 3.0 % feel subject to some form of harassment and violence.

Figure 13: Workers' perception of psychosocial risks for health and security at work, Italy, 2014



Source: INAIL, Indagine sulla Sicurezza sul Lavoro (INSULA)

4.3. Sociodemographic risk factors

Based on existing national data on the number of recognised occupational diseases related to MSDs (see Table 5), it can be seen that these MSDs are more present (at least in absolute numbers) in some specific occupations and sectors. In this sense, and as far as data on occupations is concerned, the largest share of recognised occupational diseases related to MSDs corresponds to 'craft, skilled and agricultural workers' (63.7 % of the total), followed by 'plant and machine operators, assemblers' (11.7 % of the total) and 'elementary occupations' (11.6 %) (data for 2017). By way of contrast, recognised occupational diseases related to MSDs are rare among highly skilled workers such as professionals or legislators/managers.

Table 5: Number of recognised occupational diseases related to the musculoskeletal system, by occupation, 2015-2017

	2015	2016	2017
Legislators, senior officials and managers	101	73	103
Professionals	35	35	34
Technicians and associate professionals	577	433	382
Clerks	145	112	91
Service workers and shop and market sales workers	1,318	1,179	1,037
Craft, skilled and agricultural workers	10,012	9,588	8,082
Plant and machine operators, and assemblers	1,926	1,715	1,481
Elementary occupations	1,765	1,589	1,473
Total	15,879	14,724	12,683

Source: INAIL database

Meanwhile, recognised occupational diseases related to MSDs are particularly present (again in absolute terms) in construction, agriculture/fisheries and manufacturing (29.8 %, 28.3 % and 21.3 %, respectively), whereas their presence among tertiary or public sector workers is less relevant (see Table 6).

Table 6: Number of recognised occupational diseases related to the musculoskeletal system, by sector, 2017

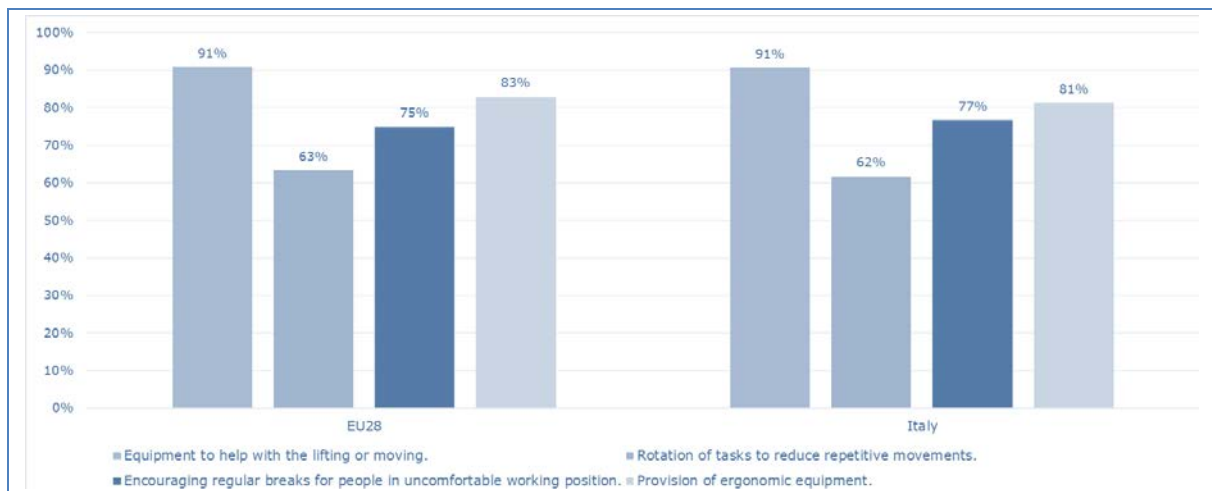
	Soft tissues diseases	Dorsopathies	Arthropathies	Other MSDs	Total
Agriculture/fisheries	1,774	1,733	87	0	3,594
Manufacturing	1,794	771	130	1	2,696
Construction	1,687	1,695	399	0	3,781
Service sector	1,088	1,110	58	0	2,256
Public administration	124	223	9	0	356
Total	6,467	5,532	683	1	12,683

Source: INAIL database

5 Prevention of MSDs

A high proportion of Italian companies report implementing measures to prevent MSDs within their establishment: 91 % of employees work in companies where equipment to help with lifting or moving is provided, and 81 % work in companies where ergonomic equipment is provided. Moreover, 77 % of Italian employees work in companies that encourage regular breaks for people who work in uncomfortable working positions and 62 % work in companies where rotation of tasks has been introduced to reduce repetitive movements (data for 2014; see Figure 14). In all cases, these percentages are relatively similar to the EU-28 averages.

Figure 14: Percentages of employees working in establishments where the following preventive measures are in place, EU-28 and Italy, 2014

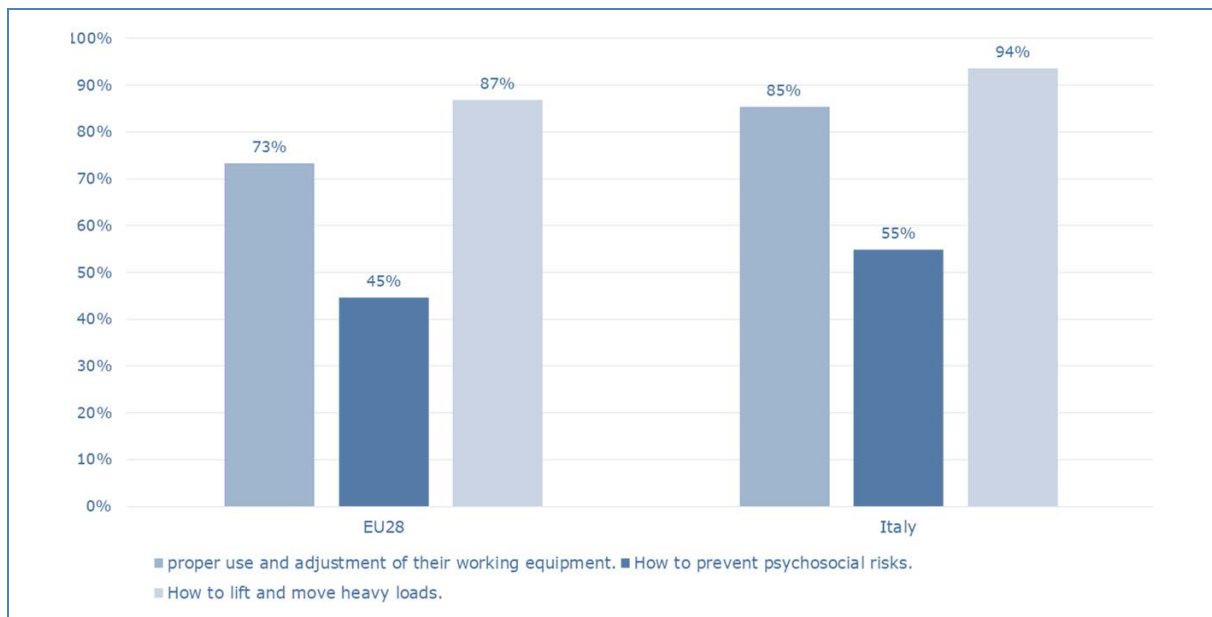


Note: Data are weighted with the employee-proportional weighting factor. This weighting factor controls for the disproportional nature of the national samples, is scaled to the number of employees instead of the number of establishments in the universe, and allows for international analysis. ESENER covers employees in enterprises employing five or more workers.

Source: Panteia, based on ESENER 2 data

As shown in Figure 15, 94 % of Italian employees work in companies where training on how to lift and move heavy loads is provided, 85 % work in companies where training on the proper use and adjustment of work equipment is provided and 55 % work in companies where training on how to prevent psychosocial risks is provided (data for 2014). In all cases, these percentages are higher than the EU-28 averages (87 %, 73 % and 45 %, respectively).

Figure 15: Percentages of employees working in establishments where training is provided in the EU-28 and Italy, 2014



Note: Data are weighted with the employee-proportional weighting factor. This weighting factor controls for the disproportional nature of the national samples, is scaled to the number of employees instead of the number of establishments in the universe, and allows for international analysis. ESENER covers employees in enterprises employing five or more workers.

Source: Panteia, based on ESENER 2 data

6 Main national data sources on MSDs

- Data source 1: INAIL — INAIL database (INAIL Banca dati). Available at: <https://www.inail.it/cs/internet/attivita/dati-e-statistiche.html>
- Data source 2: INAIL — INSULA survey on safety at work (INdagine sulla Sicurezza sul Lavoro). Available at: https://www.inail.it/cs/internet/comunicazione/pubblicazioni/catalogo-generale/insula_i_report_dell_indagine.html; https://www.inail.it/cs/internet/comunicazione/sala-stampa/conferenze-stampa/ucm_140537_indagine-nazionale-sulla-salute-e-sicurezza-sul.html
- Data source 3: INAIL — Malprof. Available at: <https://www.inail.it/cs/internet/attivita/ricerca-e-tecnologia/area-salute-sul-lavoro/sistemi-di-sorveglianza-e-supporto-al-servizio-sanitario-nazionale/malprof.html>;
- Data source 4: INAIL — Information on work accidents (Banca Dati Statistica). Available at: https://internetws.inail.it/BDSbi/saw.dll?Dashboard&NQUser=PUBLIC2&PortalPath=/shared/BS%20202.0%20-%20Prestazioni/portal/IL_DD_IS_CN_NAT_DEF&Page=IL_DD_IS_CN_NAT_DEF_Natura

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

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