

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

National report: Finland

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Table of contents

Summary	5
1 Introduction	7
1.1 Background	7
1.2 Causes and consequences of MSDs: a framework	8
2 Prevalence of MSDs	10
2.1 Self-reported MSDs	10
2.2 MSD-related occupational diseases	13
3 Impact of MSDs	16
3.1 Health outcomes	16
3.2 Employment and work outcomes	21
4 Risk factors for MSDs	25
4.1 Physical factors at work	25
4.2 Organisational and psychosocial risk factors	26
4.3 Sociodemographic risk factors	27
5 Prevention of MSDs	28
6 Main national data sources on MSDs	30

List of figures and tables

Figure 1:	Theoretical framework of work-related MSDs	9
Figure 2:	Percentages of workers who reported that their work affects their health in the EU-28 and Finland, by gender, in 2005, 2010 and 2015	10
Figure 3:	Percentages of workers who reported back pain in the past 12 months in the EU-28 and Finland, in 2010 and 2015.....	11
Figure 4:	Percentages of workers who reported muscular pain in the shoulders, neck and/or upper limbs in the past 12 months in the EU-28 and Finland, in 2010 and 2015	12
Figure 5	Percentages of workers who reported muscular pain in the lower limbs in the past 12 months in the EU-28 and Finland, in 2010 and 2015.....	12
Figure 6:	Evolution of MSDs cases reported and recognised as occupational diseases in Finland (2007-2013)	15
Figure 7:	Distribution of years of life lost and lived with disability (DALYs) per 100,000 workers, by main work-related illnesses in Finland and the EU-28, 2017	16
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 Finland, 2014.....	21
Figure 9:	Percentages of people reporting a work-related health problem resulting in sick leave by period off work, in the EU-28 and Finland, 2013	22
Figure 10:	Percentages of employees working in establishments where there are certain physical risk factors in Finland and in the EU-28, 2015 (2010 for standing).....	25
Figure 11:	Percentages of employees working in establishments where there are certain organisational/psychosocial risk factors in Finland and in the EU-28, 2015	27
Figure 12:	Percentages of employees working in establishments where certain preventive measures are in place, EU-28 and Finland, 2014.....	28
Figure 13:	Percentages of employees working in establishments where training on how to prevent risks is provided in the EU-28 and Finland, 2014	29
Table 1:	Prevalence of various types of MSDs in the past 30 days (%), 2017	13
Table 2:	Prevalence of selected illnesses (treated or detected by a doctor) in the past year (%), by sex and age, 2014	14
Table 3:	Reimbursements of medical expenses, for various categories of diseases, 2017	17
Table 4:	Information on rehabilitation expenditures in 2017, provided by KELA, by disease category (EUR 1,000).....	18
Table 5:	Rehabilitation services arranged by KELA and related to MSDs: number of recipients and procedures, and total expenditure, 2017	19
Table 6:	Recipients of rehabilitation services arranged by KELA, by type of disease, 2010-2017	23
Table 7:	Number of recipients of the disability allowance for people aged 16 years and over and the care allowance for pensioners, by diagnosis, 2010-2017	24
Table 8:	Degree of physical burden of respondent's job, by sex and age (% of respondents among workers), 2014.....	26
Table 9:	Percentages of Finnish respondents who reported a fairly good/good health status and who reported that their work was physically demanding, by socioeconomic status, 2014	28
Table 10:	Percentage of Finnish adult population familiar with the Fit for Life campaign, by gender and socioeconomic status, 2014.....	30

Summary

Prevalence of MSDs

- The percentage of both Finnish men and women workers reporting that their work affects their health is higher (46 % and 49%, respectively) than the average levels for the 28 EU Member States (EU-28) (39 % and 35%, respectively).
- The percentages of Finnish workers affected by back pain, muscular pain in the lower limbs and muscular pain in the shoulders, neck and/or upper limbs are higher than the EU-28 average.
- According to national sources, back-related problems are the most common cause of pain (affecting more than 50 % of the population), followed by shoulder and neck pain. Such disorders seem to be more prevalent among older people. National data also show that 'back illness' is one of the main illnesses detected or treated by a doctor in Finland (the fourth most prevalent). It is more prevalent among the oldest age group.

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 other reasons (cancer, circulatory problems, injuries, etc.) than the EU-28 average.
- According to national sources, more than 1.4 million recipients benefited from 3.1 million MSD-related prescriptions; the cost per MSD-related prescription was EUR 20.9 and the average reimbursement per prescription was EUR 9.4. Meanwhile, diseases related to the musculoskeletal system accounted for the fourth largest proportion of prescriptions, with the largest proportion of prescriptions brought about by diseases related to the cardiovascular and nervous system, followed by diseases related to the alimentary tract/metabolism and diseases of the respiratory system. According to data on expenditure on rehabilitation provided by KELA (the Finnish social security system), MSD-related expenditure amounted to 10.9 % of the total, the third largest amount after rehabilitation expenditures incurred for mental/behavioural disorders and diseases of the nervous system.
- Available data show that a considerably lower percentage of people in Finland have reported a period off work as a result of a work-related health problem resulting in sick leave than the EU-28 average.
- A higher percentage of Finnish employees work in companies that support employees to return to work after long-term sickness than the EU-28 average.
- Overall, 16.2 % of the total number of recipients of rehabilitation services arranged by KELA had an MSD-related disease (the second largest percentage, surpassed only by mental and behavioural disorders). Diseases of the musculoskeletal system and connective tissue are the fourth most common reason given by recipients of the disability allowance for persons aged 16 years or over and the care allowance for pensioners.

Risk factors for MSDs

- A large percentage of Finnish 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 working in sitting positions, jobs involving standing, repetitive hand/arm movements and working with

computers/laptops. A comparison with EU-level data shows that the relative importance of the different physical risk factors is similar in Finland, with the exception of the risk linked to working in sitting positions (which is particularly relevant in Finland).

- National data show that work is physically very demanding for 6.9 % of Finnish workers; this percentage is much higher among men than women (12.2 % versus 3.0 %, respectively). Moreover, those workers with the highest skill levels (upper white-collar workers) report both the best levels of health and the lowest levels of physically demanding jobs.
- Organisational and psychosocial risk factors also play a role as potential triggers of MSDs. The most relevant among Finnish employees are tight deadlines, the pace of work being dependent on other people's demands and working at very high speed. Other relatively important risks include overall fatigue and difficulties with sleep (e.g. waking up repeatedly during sleep and waking up feeling exhausted). A comparison with EU-level data shows that the most relevant organisational and psychosocial risk factors are pretty much the same in Finland as in the EU as a whole. National data confirm that Finnish employees are generally more exposed than their EU counterparts to the three most prevalent risks.

Prevention of MSDs

- Surveys of enterprises suggest that Finnish employees benefit considerably from measures aimed at preventing MSDs in their workplaces, particularly in relation to the provision of equipment that helps with lifting or moving, the provision of ergonomic equipment and encouraging regular breaks for people who work in uncomfortable positions (these percentages are higher than the EU-28 averages). However, the percentage of Finnish employees working in establishments where they can rotate tasks to reduce repetitive movements is slightly lower than the EU-28 average. Meanwhile, the percentage of companies reporting that their establishments provide training on how to lift and move heavy loads is slightly lower in Finland than in the EU-28, whereas the percentage of companies reporting that they provide training on the proper use of equipment and how to prevent psychosocial risk is higher in Finland.
- Available national data on the Finnish Fit for Life campaign show that men and blue-collar workers seem to be more difficult to reach through public health promotion campaigns than women and high-skilled groups.

1 Introduction

1.1 Background

This is the national musculoskeletal disorders (MSDs) facts and figures overview report for Finland ⁽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 Finland is available at: https://oshwiki.eu/wiki/OSH_system_at_national_level_-Finland

⁽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

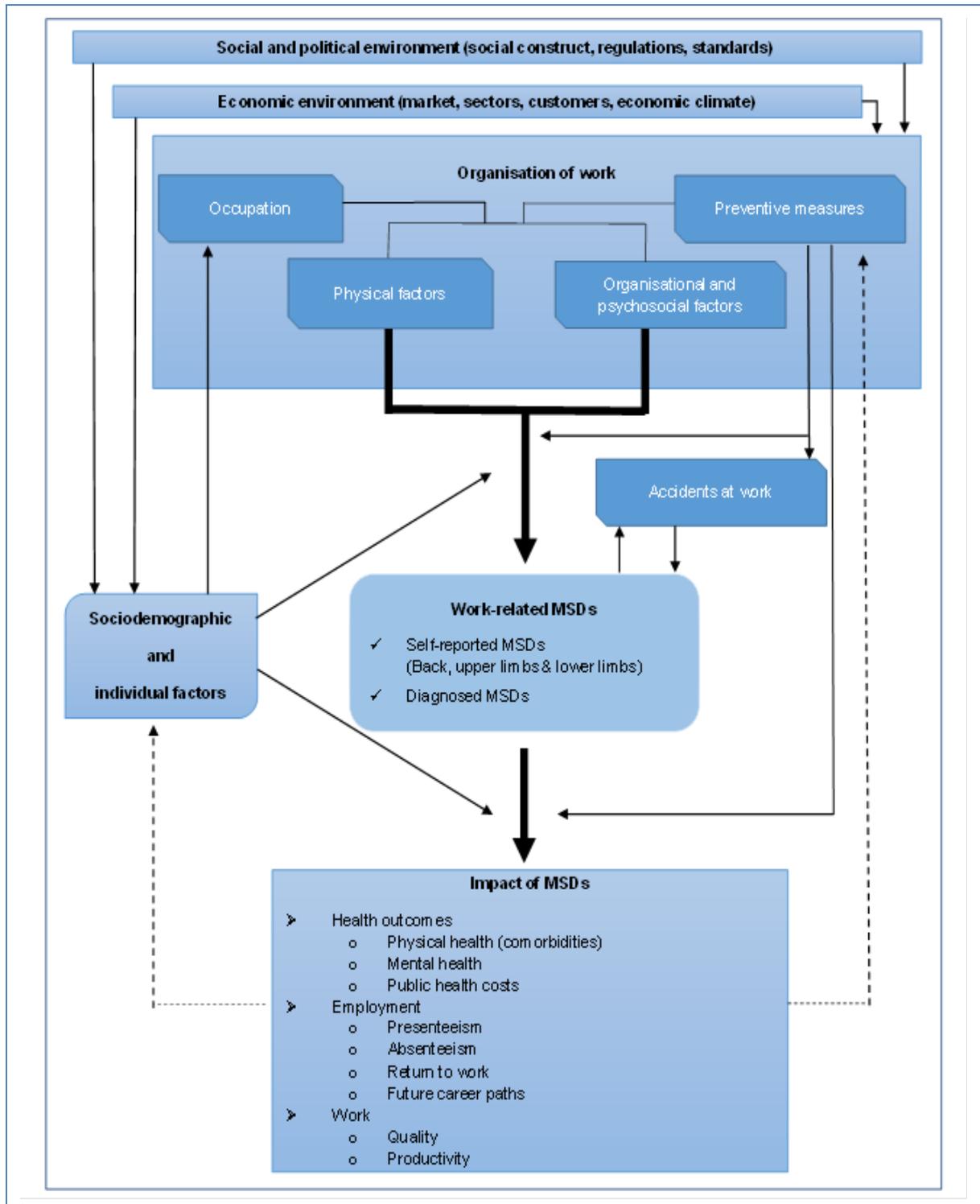
MSDs can be caused by many different (combinations of) factors and may have many different consequences. Figure 1 shows the main causes and consequences of MSDs that have been identified in previous studies.

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

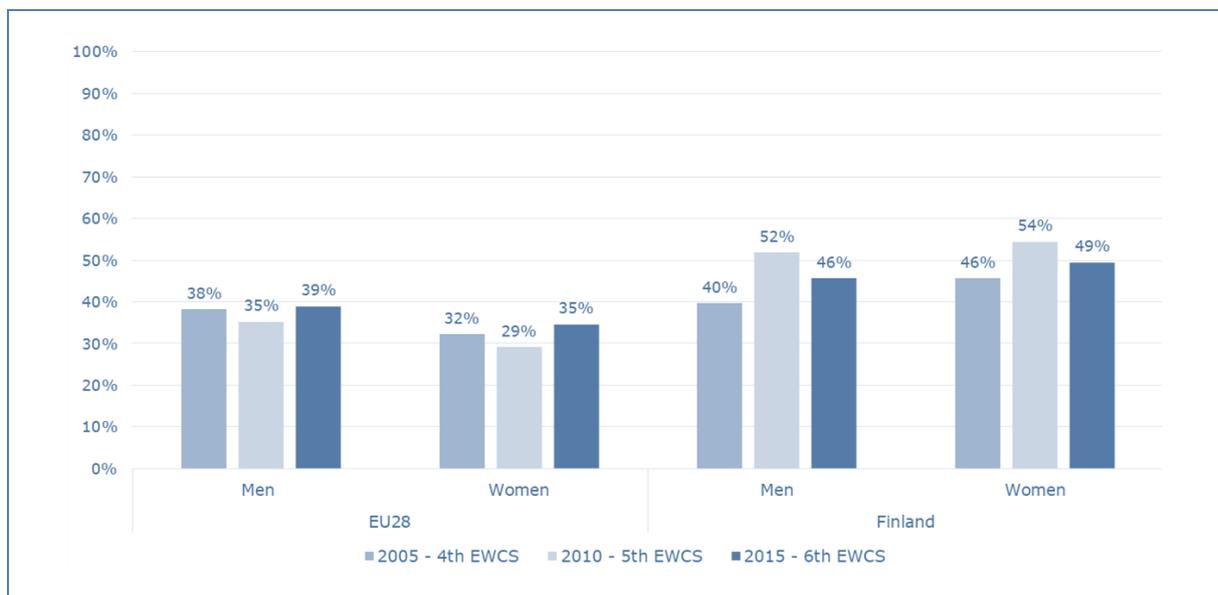
2 Prevalence of MSDs

2.1 Self-reported MSDs

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

First, Figure 2 illustrates the percentages of workers, by gender, in Finland who report that their work affects their health. Around 46 % of men and 49 % of women report that their work affects their health (data for 2015); both percentages are higher 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 Finland, by gender, in 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 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), 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 Finland. According to the available information, back pain is slightly more prevalent in Finland than in the EU-28, which is confirmed by the last two waves of European Working Conditions Survey (EWCS 2010 and 2015). In 2015, 47 % of Finnish workers reported backache in the past 12 months, whereas this percentage was 43 % in the EU-28.

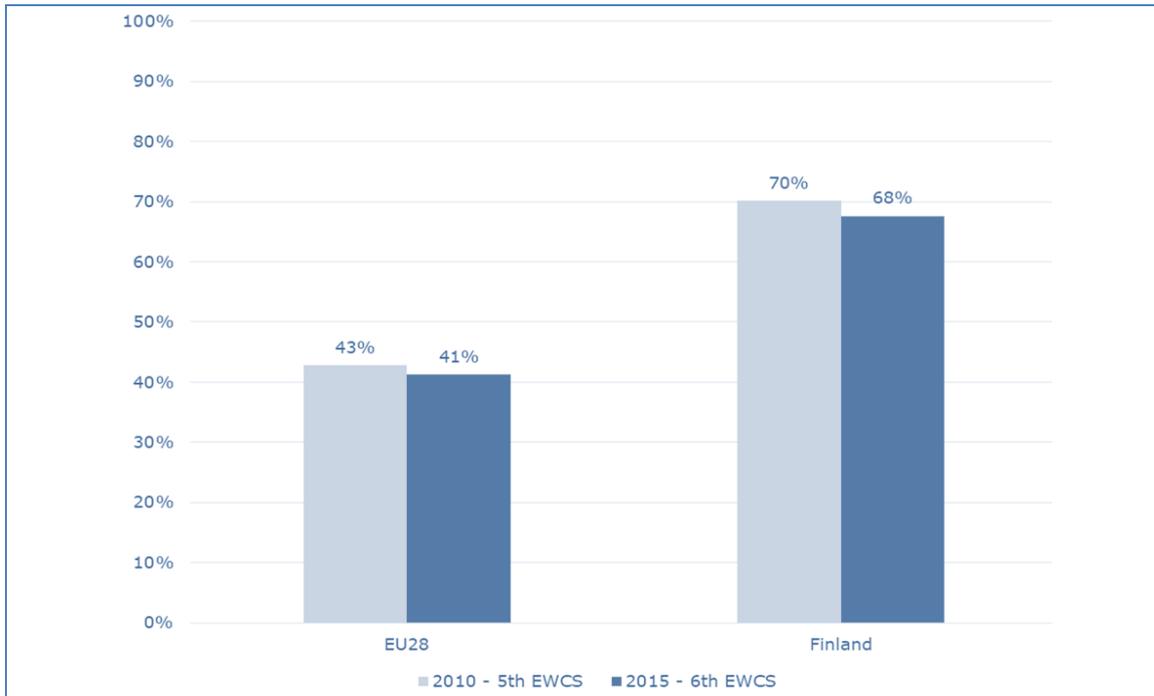
Figure 3: Percentages of workers who reported back pain in the past 12 months in the EU-28 and Finland, in 2010 and 2015



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

Figure 4 illustrates the percentages 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 Finland. According to the available data, the percentage of Finnish workers reporting this type of muscular pain was of 68 % in 2015, which was considerably higher than that in the EU-28 (41 %). The percentages for Finland have been relatively stable since 2010.

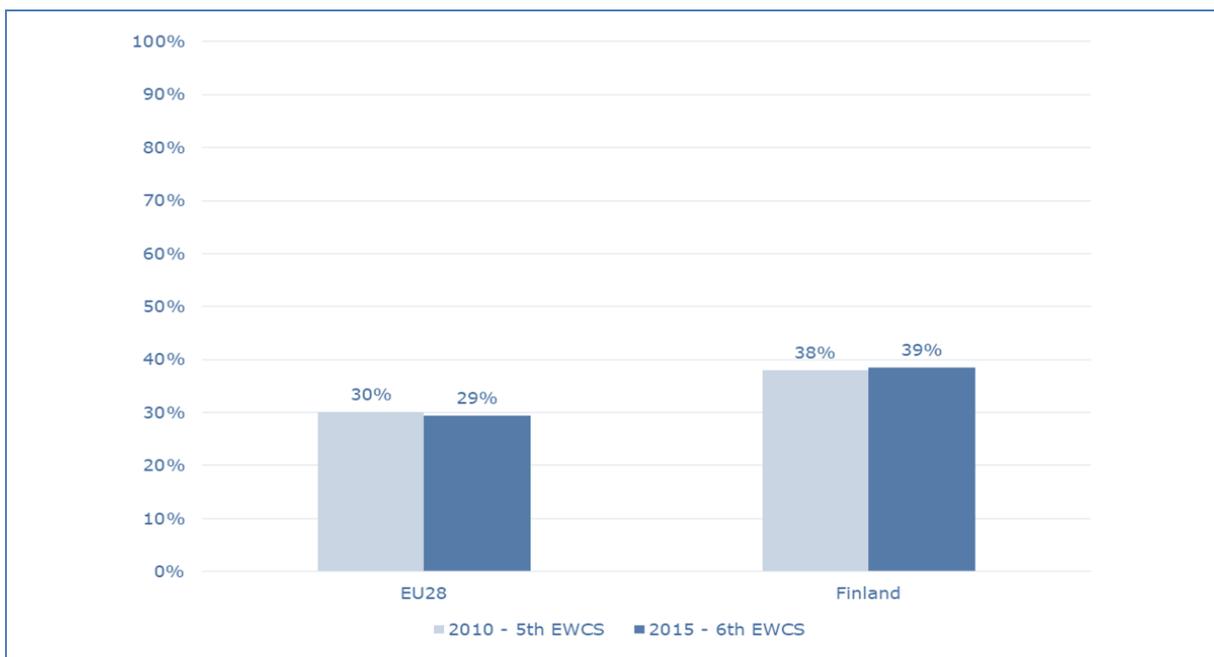
Figure 4: Percentages of workers who reported muscular pains in the shoulders, neck and/or upper limbs in the past 12 months in the EU-28 and Finland, in 2010 and 2015



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 Finland. The available data show that the percentage of Finnish workers reporting being affected by this type of muscular pain was 39 % in 2015, which was higher than the EU-28 average (29 %). In addition, no significant differences are apparent between 2010 and 2015.

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



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

The data set out above can be complemented by national information ⁽⁵⁾ regarding the Finnish people who have suffered MSD-related disorders in the past 30 days. The available data show that back-related problems are the most common cause of pain (affecting more than 50 % of the population), followed by shoulder and neck pain (see Table 1). Interestingly, women seem to be more affected by these MSD-related disorders than men; these disorders also seem to be more prevalent among older people, irrespective of gender. Nevertheless, and in some cases (i.e. neck pain), this problem is also particularly relevant among the youngest age groups.

Table 1: Prevalence of various types of MSDs in the past 30 days (%), 2017

Type of MSD	Males						Females					
	30-39	40-49	50-59	60-69	70-79	80+	30-39	40-49	50-59	60-69	70-79	80+
Back pain	49.5	50.2	43.4	41.5	34.3	45.3	50.7	44.4	45.6	47.2	51.6	56.0
Neck pain	39.3	44.0	38.0	33.4	26.5	32.4	59.1	52.7	51.3	46.9	43.6	40.5
Shoulder pain	28.6	39.2	41.9	39.8	33.4	38.6	29.3	33.6	40.4	44.9	45.9	48.4
Knee pain	13.1	19.9	27.2	25.2	21.2	35.1	9.7	17.5	26.4	30.9	33.1	47.9

Note: Data for the population aged 30 and over

Source: Päivikki Koponen, Katja Borodulin, Annamari Lundqvist, Katri Sääksjärvi ja Seppo Koskinen, toim. Health, functional capacity and welfare in Finland – FinHealth 2017 study, National Institute for Health and Welfare (THL), Report 4/2018 (available at: <http://www.julkari.fi/handle/10024/136223>)

2.2 MSD-related occupational diseases

National data ⁽⁶⁾ provide information on the numbers of people affected by MSDs that are treated or detected by a doctor. The available data show that ‘back illness’ is one of the main illnesses detected in Finland; in 11.7 % of the Finnish population, this illness has been treated or detected by a doctor (see Table 2). Given this, this type of illness is the fourth most prevalent in Finland, surpassed only by hay fever/allergic rhinitis, high blood pressure/hypertension and elevated blood cholesterol (16.3 %, 14.9 % and 12.5 %, respectively). The prevalence of health consultation for back pain does not differ between men and man (11.8 % and 11.5 %, respectively), but it is particularly prevalent among the oldest age groups (individuals aged 45 years or over) for both gender groups.

⁽⁵⁾ Päivikki Koponen, Katja Borodulin, Annamari Lundqvist, Katri Sääksjärvi ja Seppo Koskinen, toim. Health, functional capacity and welfare in Finland – FinHealth 2017 study, National Institute for Health and Welfare (THL), Report 4/2018. Available at: <http://www.julkari.fi/handle/10024/136223>

⁽⁶⁾ National Institute for Health and Welfare (THL), ‘Health behaviour and health among the Finnish population’ (‘Suomalaisen aikuisväestön terveyskäyttäytyminen ja terveys — AVTK’), 2014. Available at: <https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/finsote-tutkimus/aiemmat-tutkimukset/suomalaisen-aikuisvaeston-terveyskayttaytyminen-ja-terveys-avtk->

Table 2: Prevalence of selected illnesses (treated or detected by a doctor) in the past year (%), by sex and age, 2014

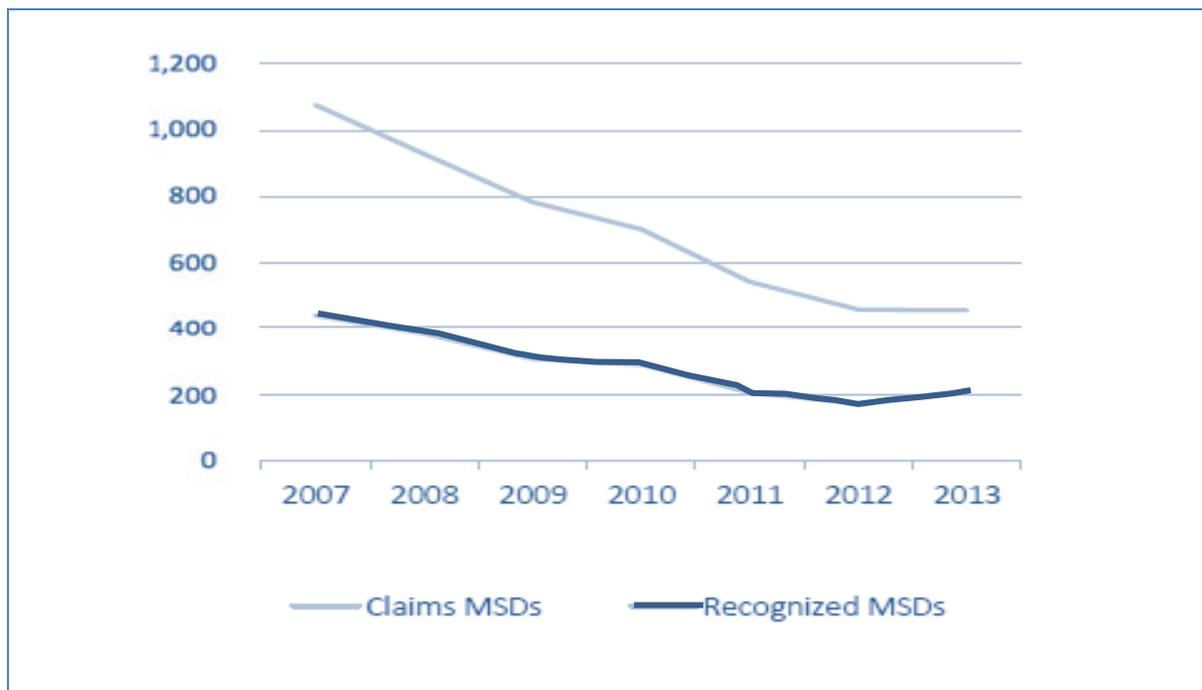
Illness	Total	Males						Females					
		15-24	25-34	35-44	45-54	55-64	Average	15-24	25-34	35-44	45-54	55-64	Average
High blood pressure, hypertension	14.9	0.7	1.1	9.4	21.2	34.6	17.1	0.4	0.0	5.7	16.5	30.9	13.2
Elevated blood cholesterol	12.5	0.7	3.4	10.4	17.2	30.3	15.5	1.3	0.8	2.0	11.1	26.4	10.3
Diabetes	5.4	2.0	1.1	1.0	7.7	12.5	6.1	1.8	1.7	3.0	4.2	10.1	4.8
Myocardial infarction	0.6	0.0	0.0	0.0	1.5	1.8	0.9	0.0	0.4	0.0	0.3	1.0	0.4
Angina pectoris	1.1	0.0	0.0	0.5	1.8	3.7	1.6	0.0	0.0	0.0	0.3	2.7	0.8
Cancer	1.0	0.0	0.0	0.5	0.0	2.8	0.9	0.0	0.4	0.3	2.4	1.5	1.1
Rheumatic arthritis	1.6	0.0	0.6	1.0	2.6	2.1	1.5	0.4	0.0	0.3	2.4	3.5	1.6
Back illness	11.7	1.3	5.7	7.9	17.6	16.2	11.5	2.2	5.4	10.1	15.9	19.0	11.8
Emphysema, chronic bronchitis	1.2	0.7	0.0	0.5	0.7	1.8	0.9	0.9	0.8	1.3	1.2	2.5	1.5
Depression	6.3	2.0	9.2	4.5	5.9	5.2	5.4	6.7	7.0	7.0	6.9	7.4	7.0
Other mental problem	2.8	0.7	4.6	1.5	2.2	0.6	1.8	8.0	4.5	4.0	1.5	2.0	3.6
Asthma	5.7	2.7	4.0	6.4	4.0	4.9	4.5	6.2	5.4	5.7	5.4	8.9	6.5
Hay fever or allergic rhinitis	16.3	15.3	12.6	17.8	13.2	9.2	13.1	24.0	21.5	18.5	16.5	16.5	18.8
Food allergy	4.2	4.7	4.6	3.0	2.6	0.6	2.7	10.7	6.2	4.4	4.8	3.0	5.3
Gastric disease	3.2	0.0	0.6	1.0	4.4	3.4	2.3	1.3	1.2	3.7	5.7	5.2	3.8
None of the diseases mentioned above	52.3	78.0	67.8	62.4	46.2	35.5	53.6	60.0	64.0	60.4	47.0	36.0	51.4

Source: National Institute for Health and Welfare, Health Behaviour and Health among the Finnish Adult Population, 2014

In addition, according to the available data ⁽⁷⁾ on MSDs reported and recognised as occupational diseases, in 2013 there were 209 cases recognised in Finland, out of a total of 1,811 recognised occupational diseases (approximately a 12 % of the total). Meanwhile, the available data show that, in 2013, there was a total of 454 claims for recognition in Finland, which means that approximately 46 % of MSDs reported were recognised as occupational diseases. Approximately, 10 cases were recognised per 100,000 people insured.

The available data for the period 2007-2013 show a reduction in the number of MSDs (with the exception of last 2 years).

Figure 6: Evolution of MSDs cases reported and recognised as occupational diseases in Finland (2007-2013)



Source: Eurogip, 'Musculoskeletal disorders: What recognition as occupational diseases? A study on 10 European countries', Study report, 2016 (available at: <https://www.eurogip.fr/en/news/4427-msds-what-recognition-as-occupational-diseases-in-europe>)

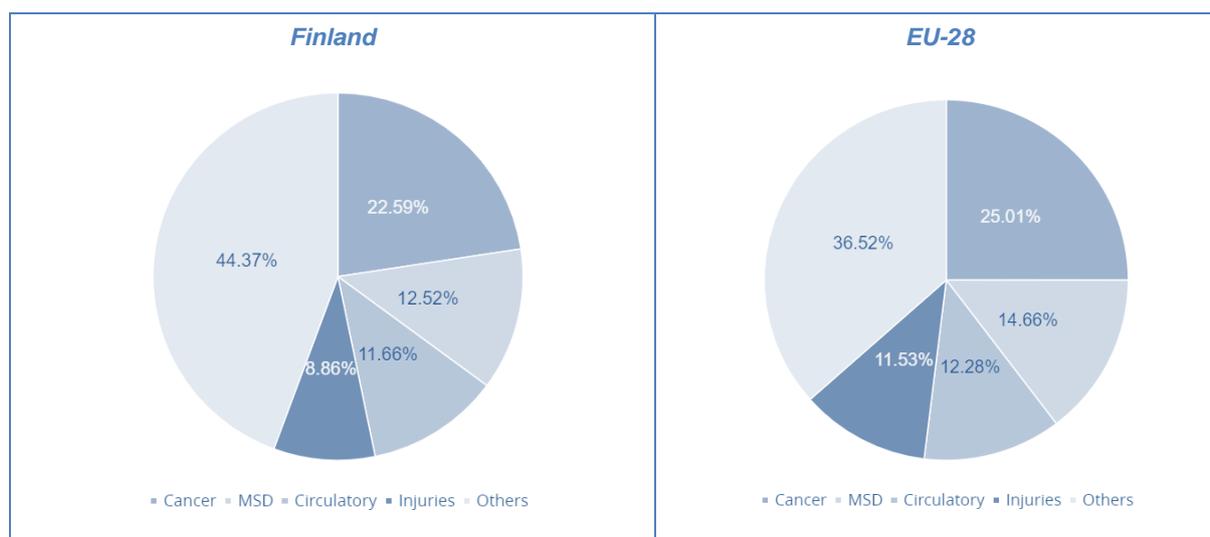
⁽⁷⁾ Eurogip, 'Musculoskeletal disorders: What recognition as occupational diseases? A study on 10 European countries', Study report, 2016. Available at: <https://www.eurogip.fr/en/news/4427-msds-what-recognition-as-occupational-diseases-in-europe>

3 Impact of MSDs

3.1 Health outcomes

With regard to costs and burdens related to MSDs, the available data⁽⁸⁾ on DALY rates show that the number of years of life lost and lived with disability resulting from work-related MSDs represent 12.52 % 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 Finland and the EU-28, 2017



Source: Panteia, based on EU-OSHA, data visualisation, 'The economics of occupational safety and health', 2017. Available at: <https://visualisation.osha.europa.eu/osh-costs#!/eu-analysis-illness>

The data obtained from national sources show the total amount of reimbursements paid by the Finnish social security system⁽⁹⁾ (KELA) in relation to medical expenses incurred. According to the available data for 2017, Finland incurred a total of EUR 63.8 million in medical expenses related to MSDs, of which EUR 28.6 million were reimbursed by KELA. In total, more than 1.4 million recipients benefited from 3.1 million MSD-related prescriptions; the cost per MSD-related prescription was EUR 20.9 and the average reimbursement per prescription was EUR 9.4 (all data for 2017; see Table 3)⁽¹⁰⁾. A comparison with other categories of diseases shows that the largest proportion of prescriptions was for diseases related to the cardiovascular and nervous system (13.4 million and 11.0 million, respectively), followed by diseases related to the alimentary tract/metabolism, diseases related to the respiratory system and diseases related to the musculoskeletal system (5.8 million, 4.2 million and 3.1 million, respectively). Meanwhile, with regard to the level of reimbursements per prescription, MSD-related prescriptions receive a reimbursement of EUR 9.4 per prescription, which is clearly one of the lowest levels when compared with the other diseases identified.

⁽⁸⁾ EU-OSHA, data visualisation, 'The economics of occupational safety and health', 2017. Available at: <https://visualisation.osha.europa.eu/osh-costs#!/eu-analysis-illness>

⁽⁹⁾ Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto', several years. Available at: <https://www.kela.fi/web/en/statistical-database-kelasto>

⁽¹⁰⁾ KELA reimburses the cost of medicines, clinical nutrients and emollient creams prescribed for the treatment of a person's illness.

Table 3: Reimbursements of medical expenses, for various categories of diseases, 2017

ATC category	Recipients (*)	Prescriptions	Expenses (EUR million)	Reimbursements (EUR million)	Costs/prescription (EUR)	Reimbursements/prescription (EUR)
A Alimentary tract and metabolism	1,143,949	5,830,114	317.2	225.6	54.4	38.7
B Blood and blood forming organs	416,581	1,513,592	172.0	134.2	113.7	88.6
C Cardiovascular system	1,556,724	13,358,890	291.5	138.4	21.8	10.4
D Dermatological	458,638	908,387	23.6	9.2	26.0	10.2
E Reimbursements for emollients	277,184	622,927	16.9	7.2	27.1	11.6
G Genital urinary system and sex hormones	435,155	1,705,661	76.9	34.5	45.1	20.2
H Systemic hormonal preparations, excl. sex hormones and insulins	543,903	1,974,750	47.6	34.6	24.1	17.5
J Anti-infective for systemic use	1,528,531	2,673,632	62.4	28.0	23.3	10.5
L Antineoplastic and immunomodulation agents	139,354	720,079	391.4	376.3	543.5	522.5
M Musculoskeletal system	1,355,145	3,047,935	63.8	28.6	20.9	9.4
N Nervous system	1,615,351	11,000,272	326.8	215.5	29.7	19.6
P Ant parasitic products, insecticides and repellents	98,756	165,657	3.5	1.6	20.9	9.9
R Respiratory system	1,083,650	4,189,088	159.2	88.0	38.0	21.0
S Sensory organs	328,522	1,061,498	38.1	24.6	35.9	23.1
V Various	3,686	12,830	3.2	2.6	251.0	205.4
9 Unknown	34,312	116,978	13.0	10.0	111.2	85.2
0 TOTAL	3,805,016	4,8902,290	2006.9	1358.9	41.0	27.8

(*) One recipient can be affected by several diseases at the same time

Source: Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto, several years (available at: <https://www.kela.fi/web/en/statistical-database-kelasto>)

With regard to expenditure on rehabilitation (data for 2017, provided by KELA; see Tables 4 and 5), the available data show that total MSD-related expenditure amounts to EUR 41,502,000, or 10.9 % of the total, the third largest amount after rehabilitation expenditures incurred for mental/behavioural disorders and diseases of the nervous system (EUR 200,596,000 and EUR 56,014,000, or 52.6 % and 14.7 %, respectively). The available data also provide information on how these rehabilitation expenditures are disaggregated by different types of rehabilitation (vocational, medical, psychotherapy, etc.).

Table 4: Information on rehabilitation expenditures in 2017, provided by KELA, by disease category (EUR 1,000)

Types of diseases	Rehabilitation services									
	Total	Costs per type of rehabilitation							Travel costs	Rehabilitation allowance
		Total	Total	Vocational rehabilitation	Medical rehabilitation for persons with severe disabilities	Rehabilitative psychotherapy	Discretionary rehabilitation	Total		
Certain infectious and parasitic diseases	607	582	582	29	458	-	95	0	25	
Neoplasms	3,589	3,282	3,281	268	2,058	15	940	2	306	
Endocrine, nutritional and metabolic diseases	5,073	4,513	4,509	734	2,259	34	1,482	4	560	
Mental and behavioural disorders	200,596	182,158	181,797	15,523	88,224	66,874	11,176	362	18,438	
Diseases of the nervous system	56,014	53,618	53,573	1,691	46,823	67	4,992	45	2,397	
Diseases of the eye and adnexa	3,648	3,270	3,268	968	1,287	2	1,011	2	378	
Diseases of the ear and mastoid process	3,823	3,456	3,450	648	2,321	12	469	6	367	
Diseases of the circulatory system	21,575	20,917	20,895	626	15,338	11	4,920	22	658	
Diseases of the respiratory system	2,045	1,380	1,380	423	219	26	712	0	665	
Diseases of the skin and subcutaneous tissue	1,259	381	381	239	9	7	126	0	878	
Diseases of the musculoskeletal system and connective tissue	41,502	31,834	31,833	8,856	5,938	249	16,791	1	9,668	
• Inflammatory polyarthropathies (M05, M06, M08)	5,179	4,627	4,626	336	2,884	11	1,395	0	552	
• Arthrosis (M15-M19)	5,488	4,347	4,347	1,467	162	21	2,697	0	1,141	
• Spondylopathies (M45, M46)	1,435	1,921	1,921	259	242	12	509	0	414	
• Other dorsopathies (M50-M51)	6,697	4,974	4,974	1,379	504	38	3,052	0	1,723	
• Other soft tissue disorders (M79)	1,223	895	895	306	80	18	491	0	328	
• Other dorsopathies (M53-M54)	9,082	6,647	6,647	2,306	171	81	4,089	0	2,435	
Congenital malformations, deformations and chromosomal abnormalities	18,743	18,094	18,054	526	16,881	14	633	39	649	
Symptoms, signs and abnormal clinical and laboratory findings not classified elsewhere	3,124	2,978	2,953	156	2,633	5	159	25	145	
Injury, poisoning and certain other consequences of external causes	8,822	7,902	7,899	728	6,184	23	964	3	920	
Other categories	2,732	2,122	2,120	319	925	43	834	2	610	
Uncategorised	8,542	203	203	20	33	59	178	0	8,339	
Total	381,693	336,691	336,179	31,754	191,590	67,441	45,480	512	45,002	

Source: Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto, several years (available at: <https://www.kela.fi/web/en/statistical-database-kelasto>)

Table 5: Rehabilitation services arranged by KELA and related to MSDs: number of recipients and procedures, and total expenditure, 2017

Rehabilitation services	Recipients	Expenditure (EUR)	Number of procedures	Costs (EUR per procedure)
Vocational rehabilitation for people with functional impairment	4,715	8,856,027	5,079	1,743.7
-Basic education	33	8,722	33	264.3
-Vocational education	303	82,896	303	273.6
-Higher education	179	55,847	179	312.0
-Assistive devices	15	17,813	15	1,187.5
-Rehabilitation aimed at maintaining capacity for work	1,759	3,539,393	1,759	2,012.2
-KIIILA vocationally oriented rehabilitation activities	961	1,270,049	961	1,321.6
-Start-up grant for self-employment	2	5,777	2	2,888.6
-Vocational rehabilitation courses	268	1,213,706	268	4,528.8
-Evaluation of the type of rehabilitation needed	900	1,411,191	900	1,568.0
-Job and training try-outs	37	0	37	0.0
-Job coaching	71	238,001	71	3,352.1
-Vocational rehabilitation supporting integration into work	370	771,783	412	1,873.3
· Work try-out	297	553,626	297	1,864.1
· Job coaching	90	173,158	90	1,924.0
· Work try-out and job coaching	25	44,999	25	1,800.0
Intensive medical rehabilitation	1,099	5,938,076	1,381	4,299.8
-Multidisciplinary individual rehabilitation	220	1,335,000	219	6,095.9
· Rheumatic and musculoskeletal diseases in children and adults	29	217,08	29	7,485.5
· Other types of multidisciplinary individual rehabilitation	191	1,117,920	190	5,883.8
-Group-based courses geared towards specific diseases	13	44,381	13	3,413.9
· Rehabilitation courses	4	16,228	4	4,056.9
· Adaptation training courses	9	28,153	9	3,128.1
-Neuropsychological rehabilitation	5	19,519	5	3,903.7
-Psychotherapy	15	31,599	10	3,159.9
-Occupational therapy	104	278,494	96	2,901.0

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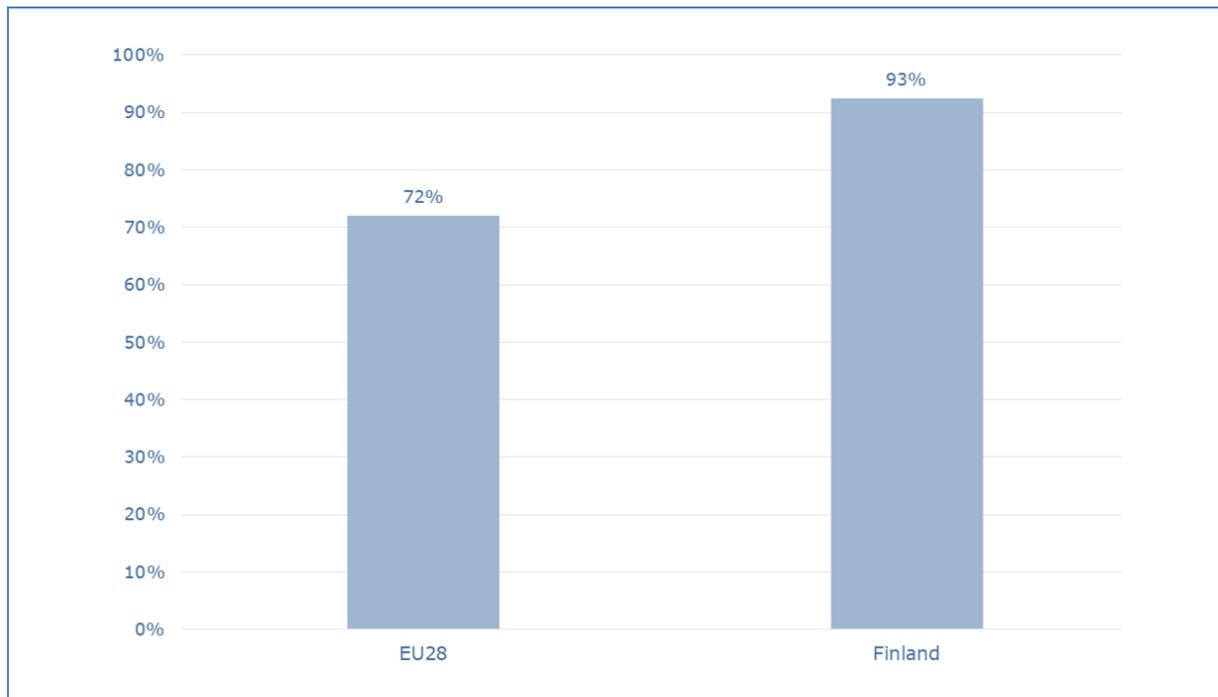
Rehabilitation services	Recipients	Expenditure (EUR)	Number of procedures	Costs (EUR per procedure)
-Speech therapy	15	47,231	13	3,633.1
-Music therapy	4	19,232	4	4,808.0
-Physical therapy	1,055	4,152,631	1,020	4,071.2
-Open-care rehabilitation	1	9,990	1	9,990.0
Rehabilitative psychotherapy	163	248,822	130	1,914.0
-Psychotherapy for adults	157	236,428	125	1,891.4
-Psychotherapy for adolescents	6	12,394	5	2,478.8
Discretionary rehabilitation	11,936	16,791,305	11,952	1,404.9
-Multidisciplinary individual rehabilitation	1,768	4,139,267	1,768	2,341.2
· Rheumatic and musculoskeletal diseases in children and adults	33	198,838	33	6,025.4
· Other types of multidisciplinary individual rehabilitation	1,735	3,940,429	1,735	2,271.1
-Group-based courses geared towards specific diseases	9,651	12,038,769	9,655	1,246.9
· Vocationally oriented medical rehabilitation courses	247	151,419	247	613.0
· Courses for people with musculoskeletal diseases	6,768	8,011,416	6,767	1,183.9
· Courses for economically inactive older people with multiple diseases	719	1,014,131	719	1,410.5
· Mental health rehabilitation courses	71	99,466	71	1,400.9
· Other rehabilitation courses	1,851	2,762,338	1,851	1,492.3
-Adaptation training courses	506	576,038	506	1,138.4
· Other adaptation training courses	506	576,038	506	1,138.4
-Rehabilitation aimed at maintaining capacity for work	15	17,772	15	1,184.8
-Neuropsychological rehabilitation	2	1,029	2	514.7
-Development activity	6	18,430	6	3,071.6
Total	17,605	31,834,229	18,542	1,716.9

Source: Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto, several years (available at: <https://www.kela.fi/web/en/statistical-database-kelasto>)

3.2 Employment and work outcomes

A very large number of Finnish employees (93 %) work in companies that support employees to return to work after long-term sickness. This percentage is much higher than in the EU-28 (72 %) (data from ESENER 2 ⁽¹⁾ 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 Finland, 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.

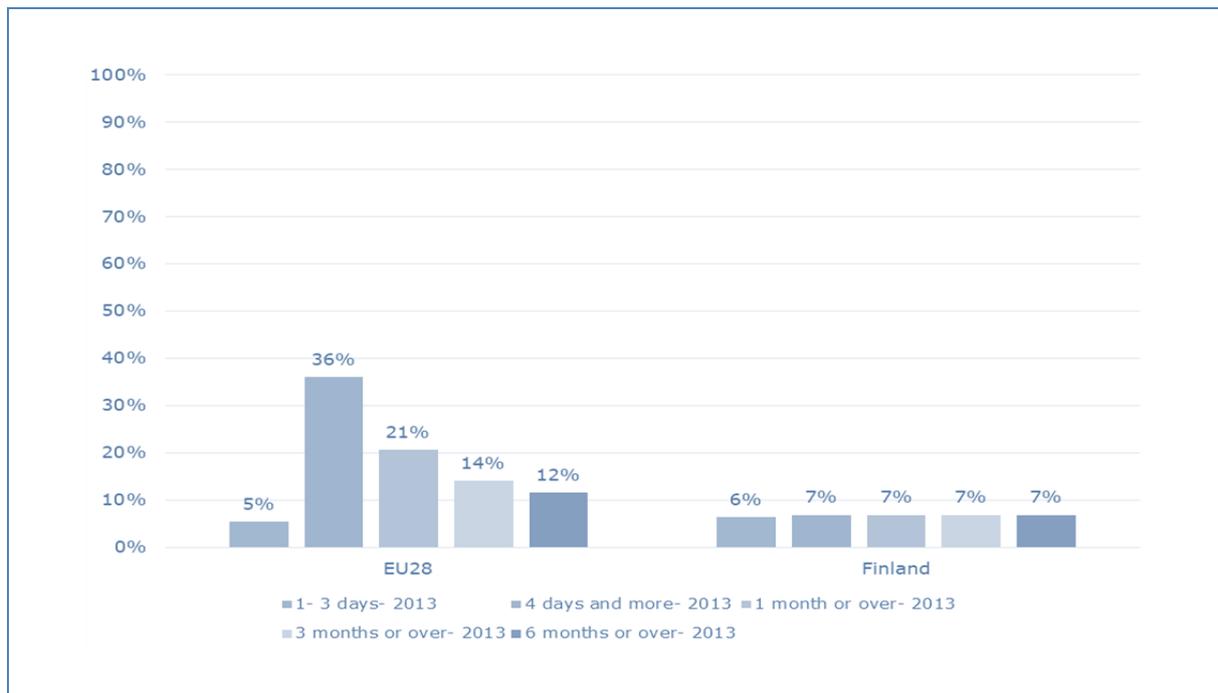
Source: Panteia, based on ESENER 2 data

Figure 9 is based on publicly available data from the Labour Force Survey (LFS) ⁽¹²⁾ 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 Finland in 2013. The available data show that up to 7 % of Finnish workers reported a period of 4 days or over off work, in comparison with 36 % in the EU-28. Moreover, 7 % of Finnish 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.

⁽¹⁾ EU-OSHA, Second European Survey of Enterprises on New and Emerging Risks (ESENER 2). Information about the survey is available at: <https://osha.europa.eu/en/facts-and-figures/esener>

⁽¹²⁾ Eurostat, European Union 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>

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



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

People affected by MSDs represent a large proportion of recipients of different benefits and services provided by the Finnish social security system (KELA). Thus, 17,605 individuals in Finland in 2017 received rehabilitation services arranged by KELA as a result of MSDs (see Table 6). This amounts to approximately 16.2 % of the total number of recipients, and this figure was only surpassed by the number of people affected by mental/behavioural disorders (65,413 individuals or 60.2 % of the total). The importance of MSDs as ‘demanders’ of rehabilitation services was maintained throughout the period 2010-2017, although their relative weight has reduced since 2010.

Table 6: Recipients of rehabilitation services arranged by KELA, by type of disease, 2010-2017

Type of disease	2010	2011	2012	2013	2014	2015	2016	2017
Musculoskeletal system and connective tissue	24,778	24,849	25,343	27,792	29,304	29,648	23,490	17,605
Mental and behavioural disorders	31,794	35,340	38,648	42,110	46,953	51,878	58,039	65,413
Nervous system	9,758	9,833	9,743	9,879	10,617	10,862	10,762	10,029
Circulatory system	4,662	4,524	4,578	4,768	5,601	5,613	4,951	4,426
Asthma	697	707	728	715	902	929	781	572
Diabetes	1,003	1,094	1,134	1,120	1,417	1,435	1,236	957
Other diseases	11,008	10,970	10,974	12,479	12,313	11,847	10,484	9,668
Total	83,700	87,317	91,148	98,863	107,107	112,212	109,743	108,670

Source: Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto', several years (available at: <https://www.kela.fi/web/en/statistical-database-kelasto>)

Meanwhile, the numbers of recipients of various types of allowance also show the importance of MSDs as a reason for needing such support. According to the available data (see Table 7), diseases of the musculoskeletal system and connective tissue are the fourth most common reason, in terms of number of recipients, for receiving the disability allowance for persons aged 16 years or over ⁽¹³⁾ and the care allowance for pensioners ⁽¹⁴⁾, with 1,068 and 22,889 recipients reported in 2017 (or 8.2 % and 10.4 % of the total number of recipients in 2017).

⁽¹³⁾ This allowance is intended to provide support in everyday life, work and studies for persons aged 16 years or over who have a disability or chronic illness. A person may be entitled to a disability allowance if his or her functional ability is impaired for at least a year due to disability or illness. Impaired functional ability means that the person experiences difficulties while taking care of themselves and coping with activities in daily life, such as household chores and work or studies.

⁽¹⁴⁾ The care allowance for pensioners is intended to provide support for pensioners with a disability or chronic illness as regards their daily life, functional ability, rehabilitation and care. The allowance can be granted to people with a disability or chronic illness who are in full-time retirement.

Table 7: Number of recipients of the disability allowance for people aged 16 years and over and the care allowance for pensioners, by diagnosis, 2010-2017

Diagnosis	2010	2011	2012	2013	2014	2015	2016	2017
Disability allowance for people aged 16 years and over								
Neoplasms	256	254	248	230	261	271	301	296
Mental and behavioural disorders	1,583	1,867	2,105	2,426	2,815	3,651	4,044	4,116
Diseases of the nervous system	1,338	1,302	1,271	1,272	1,277	1,444	1,564	1,524
Diseases of the ear and mastoid process	1,532	1,491	1,479	1,469	1,450	1,482	1,525	1,534
Diseases of the musculoskeletal system and connective tissue	981	953	945	918	931	1,015	1,070	1,068
Other diseases	4,753	4,574	4,456	4,284	4,191	4,417	4,569	4,459
Total	10,443	10,441	10,504	10,599	10,925	12,280	13,073	12,997
Care allowance for pensioners								
Neoplasms	5,832	6,047	6,021	6,174	6,157	6,325	5,897	5,686
Mental and behavioural disorders	54,630	55,082	54,838	55,057	56,070	59,895	62,087	64,519
Diseases of the nervous system	56,467	60,476	63,062	66,281	66,721	63,324	59,549	55,767
Diseases of the circulatory system	41,003	40,648	39,895	39,392	38,975	38,731	36,963	35,476
Diseases of the musculoskeletal system and connective tissue	28,170	27,762	27,079	26,650	26,183	25,933	24,329	22,889
Other diseases	39,785	39,678	39,040	38,864	38,822	38,876	37,559	36,330
Total	225,887	229,693	229,935	232,418	232,928	233,084	226,384	220,667

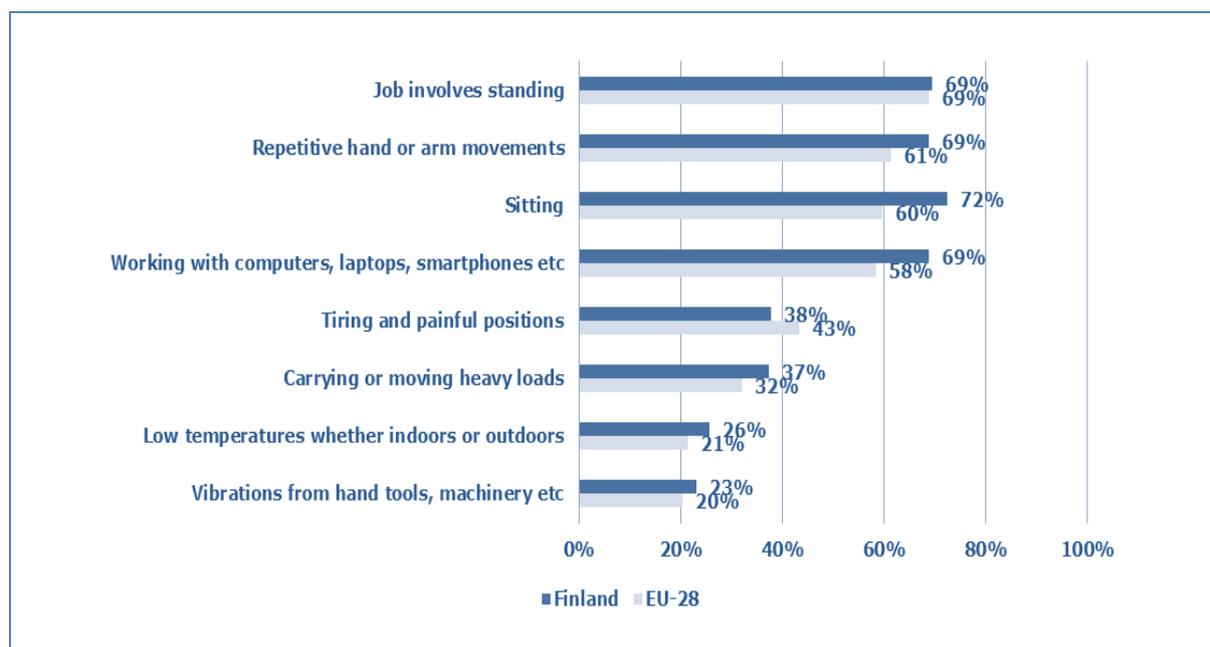
Source: Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto, several years. Available at: <https://www.kela.fi/web/en/statistical-database-kelasto>

4 Risk factors for MSDs

4.1 Physical factors at work

A large percentage of Finnish employees are exposed to physical factors at work that may put them at risk of MSDs (see Figure 10). More precisely, 72 % of employees work in establishments where jobs involve working in sitting positions, whereas 69 % work in jobs that involve working in standing positions, repetitive hand/arm movements and working with computers/laptops. Other physical risks such as working in tiring/painful positions, carrying/moving heavy loads, low temperatures and the presence of vibrations are less prevalent.

Figure 10: Percentages of employees working in establishments where there are certain physical risk factors in Finland and in 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 relative importance of the different physical risk factors is similar in Finland to in the EU-28, with the exception of the risk linked to sitting positions (which is particularly relevant in Finland). In addition, the available data show that Finnish employees are more exposed than their EU counterparts to most of the physical risks identified — particularly working with computers/laptops, jobs involving sitting and repetitive hand/arm movements — whereas Finnish employees are less exposed than their EU counterparts to working in tiring/painful positions.

The data set out above can be complemented by national data ⁽¹⁵⁾ that show that work is very demanding physically for 6.9 % of Finnish workers (see Table 8); this percentage is much higher among men than women (12.2 % versus 3.0%, respectively). In addition, for 19.7 % and 19.3 % of Finnish workers, work involves 'quite a lot of walking and lifting'; this perception is much more prevalent among

⁽¹⁵⁾ National Institute for Health and Welfare (THL), 'Health behaviour and health among the Finnish population' ('Suomalaisen aikuisväestön terveystietäytyminen ja terveys — AVTK'), 2014. Available at: <https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/finsote-tutkimus/aiemmat-tutkimukset/suomalaisen-akuusvaeston-terveyskayttaytyminen-ja-terveys-avtk->

women than men. From an age perspective — irrespective of gender — there is not a significant relationship between this perception of physically demanding work and age.

Table 8: Degree of physical burden of respondent's job, by sex and age (% of respondents among workers), 2014

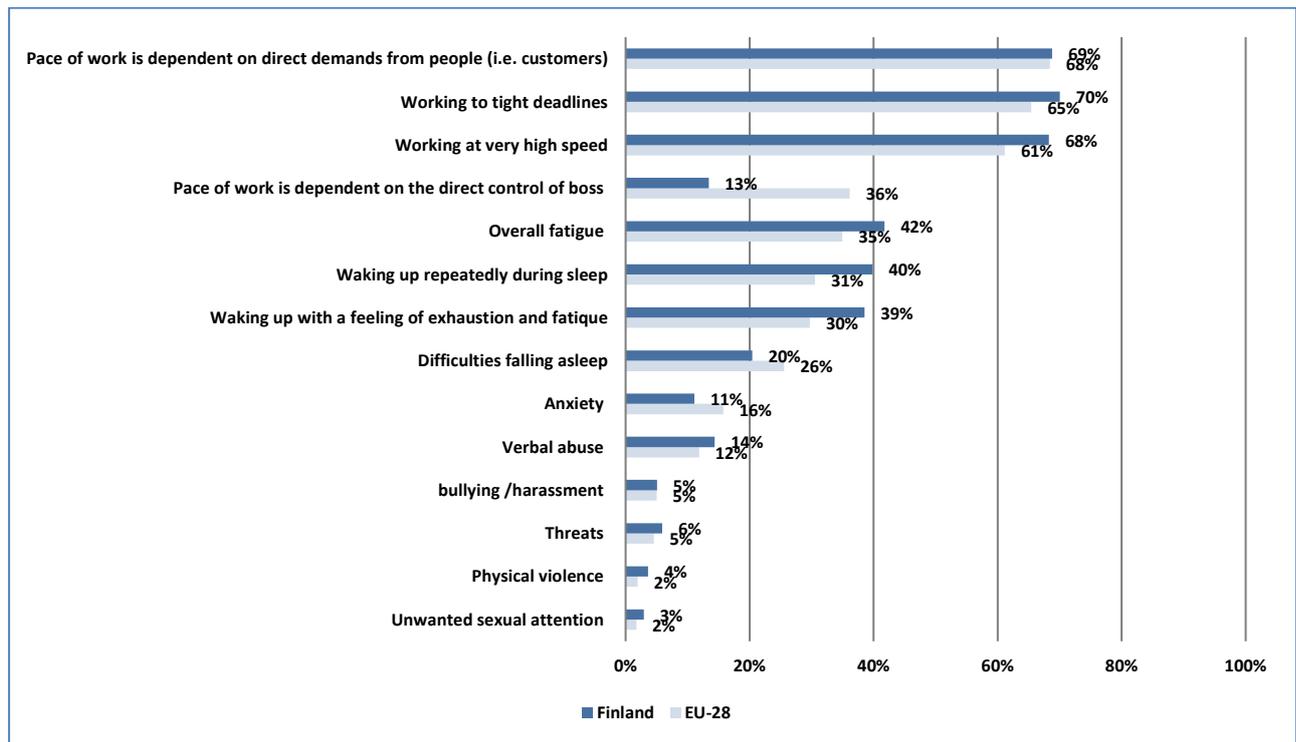
Description	Total	Males					Females					Total	
		15-24	25-34	35-44	45-54	55-64	Total	15-24	25-34	35-44	45-54		55-64
Job mainly involves sitting	54.2	67.4	55.2	53.0	46.0	56.2	54.3	59.3	57.0	51.0	46.0	58.8	54.1
Work involves quite a lot of walking	19.7	3.7	16.2	20.7	19.9	15.5	16.2	15.7	17.4	24.7	29.9	20.3	22.2
Work involves a lot of walking and lifting	19.3	13.3	17.4	16.2	20.3	17.2	17.3	22.7	23.0	20.9	20.4	18.2	20.7
Work is very demanding physically	6.9	15.6	11.4	10.1	13.8	11.0	12.2	2.3	2.6	3.4	3.7	2.7	3.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: National Institute for Health and Welfare (THL), 'Health behaviour and health among the Finnish population' ('Suomalaisen aikuisväestön terveyskäyttäytyminen ja terveys — AVTK'), 2014 (available at: <https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/finsote-tutkimus/aiemmat-tutkimukset/suomalaisen-aikuisvaeston-terveyskayttaytyminen-ja-terveys-avtk->);

4.2 Organisational and psychosocial risk factors

Organisational and psychosocial risk factors also play a role as potential triggers of MSDs (see Figure 11). The most relevant of these factors among Finnish employees relate to tight deadlines, the pace of work being dependent on other people's demands and working at very high speed (between 70 % and 68 % of Finnish employees work in establishments where these risks are present). Other relatively important risks include overall fatigue and difficulties with sleep (e.g. waking up repeatedly during sleep and waking up feeling exhausted).

Figure 11: Percentages of employees working in establishments where there are certain organisational/psychosocial risk factors in Finland and in 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 most relevant organisational and psychosocial risk factors are similar in Finland and in the EU-28. The available data show that Finnish employees are generally more exposed than their EU counterparts to the three most important risks and indeed most of the risks identified, whereas the pace of work being under the direct control of the boss, difficulties with falling asleep and anxiety seem to be less prevalent in Finland than in the EU as a whole.

4.3 Sociodemographic risk factors

Taking into account the socioeconomic status of the respondents, the available national data show that white-collar workers, particularly those with the highest skill levels (upper white-collar workers), are the workers who report both the best levels of health and the lowest levels of physically demanding jobs (see Table 9). As a result, up to 79 % of these workers report a fairly good or good health status, compared with 73 % of lower white-collar workers and 65 % of blue-collar workers. Meanwhile, 28 % of upper white-collar workers report that their work is physically demanding, lower than the equivalent figures, 56 % and 85 %, for lower white-collar workers and blue-collar workers, respectively.

Table 9: Percentages of Finnish respondents who reported a fairly good/good health status and who reported that their work was physically demanding, by socioeconomic status, 2014

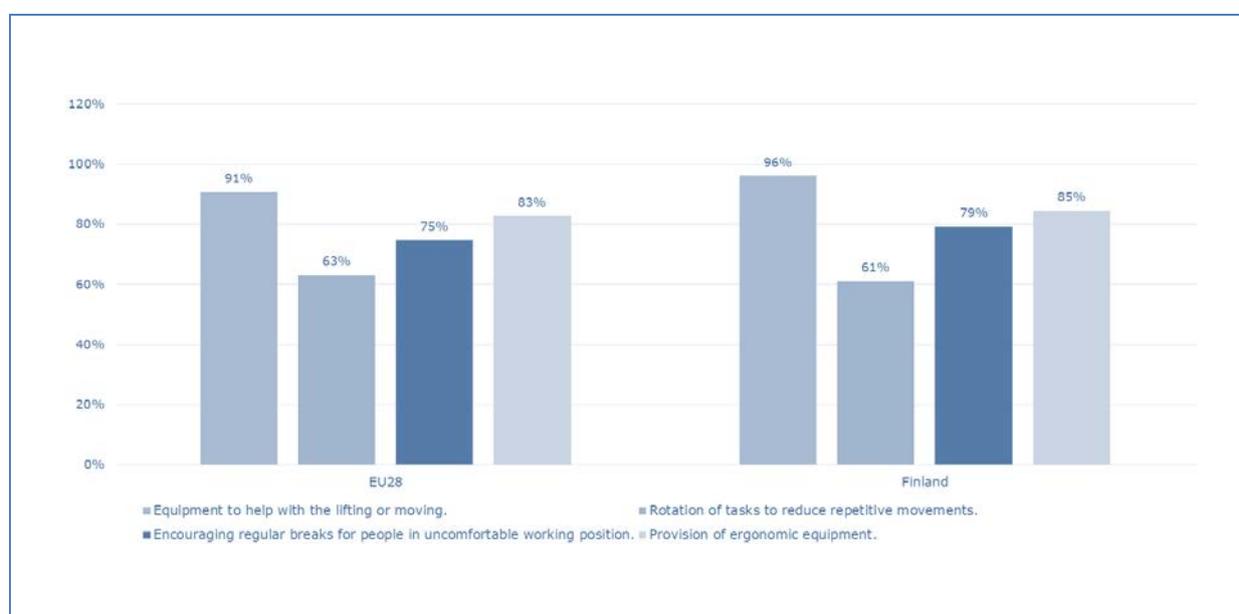
Socioeconomic status	Fairly good/good health status			Physically demanding work		
	Average	Men	Women	Average	Men	Women
Employer, entrepreneur	75	72	80	53	58	46
Farmer	63	68	50	100	100	100
Upper white-collar worker	79	82	77	28	21	35
Lower white-collar worker	73	71	74	56	56	56
Blue-collar worker	65	64	68	85	83	89

Source: National Institute for Health and Welfare, Health Behaviour and Health among the Finnish Adult Population, 2014

5 Prevention of MSDs

A high proportion of Finnish companies report implementing measures to prevent MSDs within their establishment: 96 % of employees work in companies where equipment to help with lifting or moving is provided, and 85 % work in companies where ergonomic equipment is provided. Moreover, 79 % of Finnish employees work in companies that encourage regular breaks for people working in uncomfortable positions and 61 % work in companies where rotation of tasks has been introduced to reduce repetitive movements (data for 2014; see Figure 12). In all cases, these percentages are higher than the EU-28 averages, with the exception of rotation of tasks, for which the EU-28 average is slightly higher (63 %).

Figure 12: Percentages of employees working in establishments where certain preventive measures are in place, EU-28 and Finland, 2014

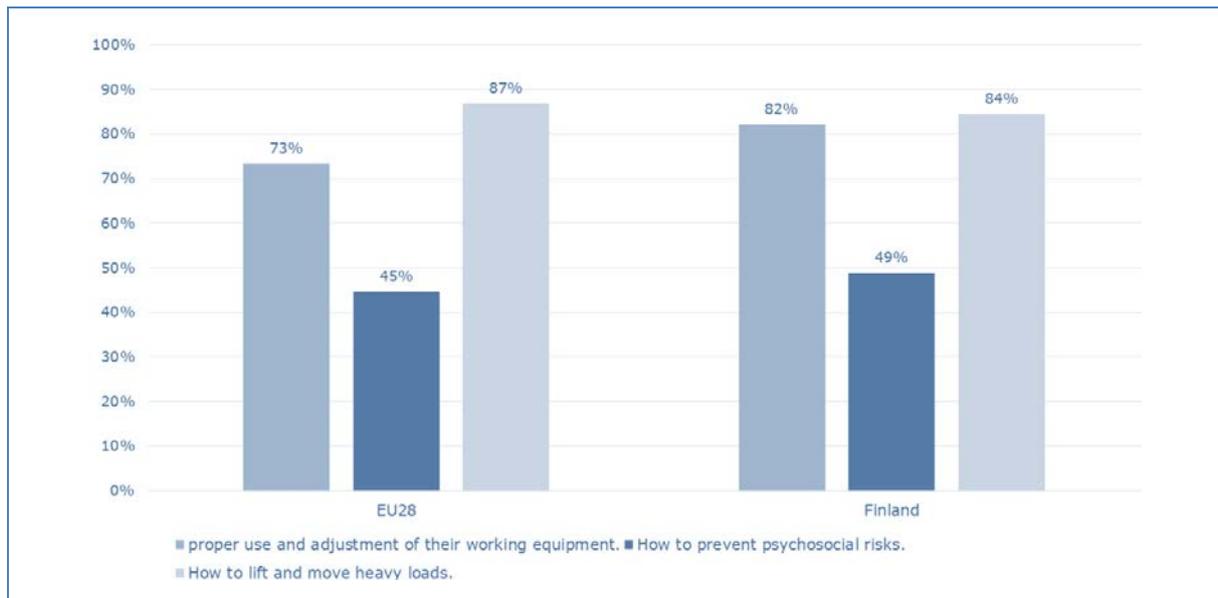


Note: Data are weighted with the employee-proportional weighting factor. This weighting factor controls for the disproportional nature of the national samples, is scaled to the number of employees instead of the number of establishments in the universe, and allows for international analysis. ESENER covers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

Source: Panteia, based on ESENER 2 data

As shown in Figure 13, 84 % of Finnish employees work in companies where training on how to lift/move heavy loads is provided, 82 % work in companies where training on the proper use and adjustment of work equipment is provided, and 49 % work in companies where training on how to prevent psychosocial risks is provided (data for 2014). These percentages are higher than the EU-28 averages in all cases, with the exception of training on how to lift/move heavy loads (87 % in the EU-28).

Figure 13: Percentages of employees working in establishments where training is provided in the EU-28 and Finland, 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

Available national data on the Finnish Fit for Life campaign ⁽¹⁶⁾ show that, generally speaking, some specific groups seem to be more difficult to reach than others through public health promotion campaigns, such as men and blue-collar workers (see Table 10).

⁽¹⁶⁾ The Finnish Fit for Life campaign is a national initiative funded by the Ministry of Education and Culture and the Ministry of Social Affairs and Health (see <https://www.kkiohjelm.fi/>). The campaign aims to increase well-being and enhance the physical activity levels of people of working age. The goal is to encourage and help sedentary adults to adopt a physically active way of life, reduce their sedentary lifestyle and increase their physical activity with regard to commuting. The campaign has been running since 1995.

Table 10: Percentage of Finnish adult population familiar with the Fit for Life campaign, by gender and socioeconomic status, 2014

Socioeconomic status	Total	Males	Females
Employer, entrepreneur	33	23	46
Farmer	51	44	67
Upper white-collar worker	48	40	55
Lower white-collar worker	50	33	55
Blue-collar worker	30	25	37
Total	38	28	46

Source: National Institute for Health and Welfare, Health Behaviour and Health among the Finnish Adult Population, 2014

6 Main national data sources on MSDs

- Data source 1: National Institute for Health and Welfare (THL), 'Health behaviour and health among the Finnish population' ('Suomalaisen aikuisväestön terveystietäminen ja terveys — AVTK'), 2014 (available at: <https://thl.fi/fi/tutkimus-ja-kehittaminen/tutkimukset-ja-hankkeet/finsote-tutkimus/aiemmat-tutkimukset/suomalaisen-aikuisvaeston-terveyskayttayminen-ja-terveys-avtk->);

Access to the relevant data is also possible from the following source: Sotkanet, 'Statistical information on welfare and health in Finland', several years ('Tilastotietoja suomalaisten terveydestä ja hyvinvoinnista'). Available at: www.sotkanet.fi. Sotkanet aims to bring together welfare statistics from different sources and make them easily accessible to the population.

- Data source 2: Finnish Centre for Pensions' Registers (Eläketurvakeskuksen rekisterit). Access to the relevant data is also possible from the following source: Sotkanet, 'Statistical information on welfare and health in Finland' ('Tilastotietoja suomalaisten terveydestä ja hyvinvoinnista') (available at: www.sotkanet.fi)
- Data source 3: Finnish Social Insurance Institute (Kansaneläkelaitos — KELA), 'Statistical database Kelasto', several years (available at: <https://www.kela.fi/web/en/statistical-database-kelasto>)

Access to the relevant data is also possible from the following source: Sotkanet, 'Statistical information on welfare and health in Finland' ('Tilastotietoja suomalaisten terveydestä ja hyvinvoinnista') (available at: www.sotkanet.fi)

- Data source 4: Finnish Worker's Compensation Centre (Tapaturmavakuutuskeskus — TVK), 'Official statistics on accidents at work and occupational diseases', 2017 (available at: <https://www.tvk.fi/en/information-service-and-publications/>)
- Data source 5: Statistics Finland, 'Quality of work life', 2014 (available at: http://www.stat.fi/til/tyoolot/index_en.html)

The Quality of Work Life Surveys are conducted in several rounds — the last survey was carried out in 2013 and the next one is expected in December 2019.

- Data source 6: Finnish Ministry of Economic Affairs and Employment, 'Finnish Working Life Barometer' ('Työolobarometri 2018 — ennakkotiedot'), Helsinki, 2019 (available at: <http://julkaisut.valtioneuvosto.fi/handle/10024/161439>)
- Data source 7: Statistics Finland (Tilastokeskus) (available at: https://www.stat.fi/index_en.html); There are also published general records for occupational accidents (available at: https://www.stat.fi/til/ttap/index_en.html and http://pxnet2.stat.fi/PXWeb/pxweb/en/StatFin/StatFin_tym_ttap/)
- Data source 8: Päivikki Koponen, Katja Borodulin, Annamari Lundqvist, Katri Sääksjärvi ja Seppo Koskinen, toim. Health, functional capacity and welfare in Finland – FinHealth 2017 study, National Institute for Health and Welfare (THL), Report 4/2018 (available at: <http://www.julkari.fi/handle/10024/136223>)

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