



Well-Being through workplace health promotion interventions by European enterprises

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ABSTRACT

Well-being and in particular the differences that may exist in the adopted workplace interventions by European enterprises have not yet been addressed in depth by the literature. The objective of this article is to make a comparison between European enterprises in relation to workplace health promotion interventions (WHPI). Five WHPI have been studied: Healthy nutrition interventions, sports activities after working hours, back exercises at work, prevention of addictions and procedures to return to work after a long-term sickness. An exploratory and descriptive study was carried out. The sample was extracted from the ESENER-3 datasets (EU-OSHA, 2019). In total, 45,420 establishments were interviewed. Results show that, differences between countries in terms of the intensity and type of WHPI can be found. Factors that could help explain this heterogeneity could be, on the one hand, the sociocultural context of each country and on the other hand, work environment.

1. Introduction

The EU Framework Program for Research and Innovation for 2014 to 2020 (European Commission, 2011) includes as one of its priorities to address the challenges related to the health, demographic change and well-being of European citizens. Well-being can be defined as peoples' positive evaluations of their lives (Diener & Seligman, 2004). However, Occupational Health and Safety (OHS) systems have tended to be more oriented to prevent traditional risks than to promote well-being (Magnavita, 2018). It was not until the early 2000s that in the definition of workers' health the concept of well-being was included (Lee et al., 2016).

Workplace is considered as the appropriate environment to carry out health promotion interventions. The reason for this is that to promote people's health, not only a change in behavior is needed, but also a supportive environment (Birk Jørgensen et al., 2016). Thus, the amount of time people spend at work and the possibility of reaching to a large population make the workplace a fruitful place for health promotion (Hutchinson & Wilson, 2012).

Despite the fact that an increasing number of enterprises are choosing to invest in employees' well-being, some authors suggest that, no clear evidence of the effects that such investment measures are

having on employees' health can be found (Song & Baicker, 2019). Long-term monitoring is also suggested by the literature as an essential tool to check the real effectiveness of the measures to promote well-being (Brand et al., 2017; Gerhardt et al., 2019; Liu et al., 2012).

Changes in work environments are making it possible to work anywhere and turning our society into a 24-hours working one (Siltaloppi et al., 2009). This new scenario affects psychosocial work factors, which have been associated with poor well-being (Schütte et al., 2014). The introduction of new technologies bring new risks for workers that demand improvements to reach a good level of safety and health at work and specifically to face the NERs (New and Emerging Risks).

However, new technologies and in particular social networks are beginning to be used by enterprises as a tool for health and well-being promotion among their employees (Cho et al., 2018; Laroche et al., 2020).

Previous studies have shown that differences in OSH management can be found between the different EU member countries (Bevan, 2015; Daniels, 2004; Leka et al., 2008; Magnavita, 2018; Schütte et al., 2014). More, specifically, psychological well-being has been found to vary significantly across European countries (Schütte et al., 2014). In a study of worksite health promotion in nine European countries work environment was suggested as one of the reasons that may explain why,

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despite the fact that an increasing number of enterprises are offering health promotion activities, few employees are taking part in them (van der Put & van der Lippe, 2020). The national legal framework has also been found critical for workplace health promotion interventions (WHPI) differences among countries (Sorensen et al., 2021).

Workplace health promotion research in Nordic countries has been addressed by the literature; however, most of the studies were focused on preventing rather than on promoting positive health measures (Torp & Vinje, 2014). Well-being and health promotion interventions in Small and Medium sized enterprises have also been studied by the literature, but there is still a need to be further researched (Gerhardt et al., 2019).

Well-being and in particular the differences that may exist in the adopted workplace interventions by European enterprises have not yet been addressed in depth by the literature. The objective of this article is to make a comparison between European enterprises in relation to WHPI in order to determine how those interventions are managed by them. Five WHPI have been studied: Healthy nutrition interventions, sports activities after working hours, back exercises at work, prevention of addictions and procedures to return to work after a long-term sickness.

For this purpose, a sample was extracted from the ESENER-3 datasets (EU-OSHA, 2019). It has been observed that the most widespread WHPI on average is procedures to return to work after a long-term sickness, followed by physical and sports activities after working hours. Some behavioral patterns among enterprises depending on their country have been also identified. The article is structured as follows: In the first part, we introduce the literature on well-being and WHPI. In the second part, we illustrate the methodology. Third, the main findings of the study are detailed.

2. Well-Being and WHPI

The World Health Organization (WHO) defines health as *a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity* (World Health Organization, 2014). Occupational well-being, can be defined using both subjective and objective indicators of mental, physical and work related well-being (World Health Organization, 2004; Zacher & Schmitt, 2016).

Actions related to health promotion are based on knowledge which comes from different areas: sociology, psychology, social marketing, communication, management and medicine (Tzenalis & Sotiriadou, 2010). Workplace health promotion is a strategy to improve the health and well-being of people at work (Richter et al., 2010). Comparing to OHS interventions, WHPI are voluntary, (Gerhardt et al., 2019) can take place at a personal, organizational or work environment (Richter et al., 2010) and applied at the workplace or elsewhere. An example of WHPI that could be applied both in the enterprise and externally are the ones aimed at improving eating habits. However, it is important to note that WHPI cannot replace OHS interventions.

WHPI should be multidimensional and incorporate physical and mental outcomes (Carmichael et al., 2016). WHPI that have been studied in this article are: interventions to promote healthy nutrition, the prevention of addictions, interventions to promote sports activities and back exercises, and procedures to return to work after a long-term sickness.

2.1. WHPI to promote healthy nutrition and to prevent addictions

Interventions to promote healthy nutrition in the workplace have the advantage of being able to reach people from different social and educational backgrounds (Maes et al., 2012). Thus eating behavior in the workplace can be changed through environmental interventions to reduce calorie ingestion and increase fruit and vegetable consumption (Allan et al., 2017).

Some studies have stated that, eating well can have an impact on worker's well-being (Gallagher et al., 2015; Stanislawka et al., 2017). However, literature also suggests, that only moderate evidence of the

effectiveness of workplace healthy nutrition interventions can be found (Maes et al., 2012; Song & Baicker, 2019).

Nutrition related health problems may lead to absenteeism and therefore to a loss of productivity (Van Duijvenbode et al., 2009). Thus, some studies suggest that, employees with an unhealthy lifestyle are less productive (Rongen et al., 2013; Williden et al., 2012).

Possible bad habits workers may have related to alcohol and drug consumption can also have an impact on well-being. Alcohol consumption in Eastern European countries for example, has led to higher mortality rates (Powles et al., 2005). Some authors have also linked alcohol consumption to harassment and abuse at work (Richman et al., 2002). Literature has also demonstrated that occupational stress can increase alcohol consumption and cause emotional problems (Trastorza et al., 2016; Quick & Henderson, 2016) and that a direct relationship can be found between the number of working hours and the excessive consumption of alcohol (Virtanen et al., 2015).

2.2. WHPI to promote sports activities outside working hours and back exercises at work

Along with eating, health interventions can improve occupational well-being in other ways by improving worker's physical activity. Sedentary work and the lack of physical activity are two characteristics of modern work in which health interventions can have an impact. Digitalisation and telework can make work more sedentary which, can increase the risk of poor postures and obesity among other diseases (Wilmot et al., 2012). The promotion of back exercises, stretching or other physical exercise at work is one of the measures that can be taken by enterprises in order to improve worker's well-being. Thus, the promotion of physical activity among workers can have benefits not only for their health but also for the organization itself (Black & Frost, 2011).

There are studies in the literature that report an inverse association between physical activity and presenteeism (Brown et al., 2013; Mutz et al., 2020; VanWormer et al., 2011; Walker et al., 2017). A lack of physical activity could also lead to a decrease in work performance (Elfering et al., 2018).

2.3. Procedures to return to work (RTW) after a Long-Term sickness

Long-term sickness absence can have important consequences not only for workers and their families but also for the society (Waddell & Burton, 2006). OHS strategies should therefore include RTW procedures (Botti et al., 2022). Thus, existing literature has already linked RTW procedures to workers' well-being (McLellan, 2017, Pagán-Castaño et al., 2020). Musculoskeletal disorders, cardiovascular diseases, cancers and common mental disorders are the four most frequent causes of disability leave (Gragano et al., 2018). Some studies have already confirmed that RTW can improve cancer survivors' quality of life (Mols et al., 2005; Tamminga et al., 2016). Thus, literature has shown that, participants in RTW group programs for people with musculoskeletal disorders, tend to introduce changes in their lifestyles that improve their well-being (Hamnes et al., 2017).

Motivational interviewing, work accommodation offers and contact between healthcare provider and the enterprise have demonstrated to be useful in the RTW procedures (Aasdahl et al., 2018; Franche et al., 2005). However, the benefits of RTW programs still remain uncertain (Vogel et al., 2017).

3. Materials and methods

The objective of this study is to identify if there are significant differences between European enterprises in the implementation of WHPI depending on the country where they are located. To this end, an exploratory and descriptive study was carried out in order to get a picture of WHPI in European countries.

The starting hypothesis is that significant differences in WHPI could

be found depending on the European country in which the enterprise is located.

3.1. Universe and sample

The sample was extracted from the ESENER-3 (Third European Survey of Enterprises on New and Emerging Risks) (EU-OSHA, 2019) datasets, carried out in 2019.

Within each establishment, the targeted respondent was defined as “the person who knows best about health and safety in this establishment”. In total, 45,420 establishments were interviewed. All in all, the universe is estimated to comprise about 6.4 million establishments and roughly 181 million employees in the 33 countries covered the EU28 as well as Iceland, North Macedonia, Norway, Serbia and Switzerland.

Table 1 shows that 41% of those interviewed were owner of a firm, managing director or site manager. Nearly 24% of the interviewed were workers in OHS functions and 17% managers without specific OHS tasks.

The universe of ESENER-3 includes both private and public establishments with 5 or more employees from almost all sectors of activity. Table 2 shows the weight of the final sample obtained for each country with respect to the reference universe. Countries with the highest sample representation are Cyprus (CY), Malta (MT) and Luxembourg (LU). As for the sampling error, it ranges between 2.1% and 4.6% for universes larger than 100,000 elements, which can be considered acceptable for extrapolating the results to the reference population. Table 3

The sampling method used in ESENER-3 was a stratified random sampling through a matrix composed of 19 types of economic activities contemplated in the NACE (Statistical classification of economic

activities in the European Community) (Eurostat, 2020) and 4 sizes of establishments, resulting in 76 cells per economic activity section and per size of establishment or business.

In Table 4, the sample has been distributed by country and enterprise size according to the number of employees. It can be seen that, 31.8% of the sample are micro-enterprises (5 to 9 employees), followed by small enterprises (10 to 49 employees) with the 42.1%. Medium-sized enterprises (between 50 and 249 employees) account for 17.34% and finally large enterprises (with more than 249 employees) account for the 8.81%. The countries with the highest number of enterprises in the sample are Spain, Germany, France, Italy, Poland and the United Kingdom. In contrast, the countries with the lowest representation in the sample are Croatia, Serbia, Iceland, Bulgaria, Latvia, Estonia and Slovakia, with a representation of less than 2% of the total sample.

3.2. Selected variables

Several items from the ESENER-3 questionnaire were selected and considered as simple variables in order to associate them (Table 5). These variables are polytomous, with affirmative and negative response options, in addition to the “no response” option.

The country variable has been considered as the independent variable and the rest of the variables dependent, since the aim of this study is to find out whether the country in which the enterprise is located can significantly condition or not WHPI.

4. Results

Before the results of this study are presented, the methodology used

Table 1
Interviewed workers classified by work position.

	Owner of a firm, managing director, site manager	Manager without specific OSH tasks	Manager with specific OSH tasks	OSH specialist without managerial function	Employee representative in charge of OSH	Another employee in charge of the subject	External OSH consultant	No answer	Total
AT	623	465	73	114	116	106	4	2	1,503
BE	452	150	112	365	219	195	6	7	1,506
BG	311	43	3	199	16	179	1	3	755
CH	844	276	29	181	24	138	2	8	1,502
CY	343	68	109	129	17	78	1	12	757
CZ	561	268	162	282	51	201	9	18	1,552
DE	877	351	333	347	95	248	6	7	2,264
DK	743	114	119	165	248	109	3	12	1,513
EE	379	102	57	105	15	97	2	1	758
EL	780	250	15	144	13	297	2	0	1,501
ES	453	278	33	482	51	925	31	13	2,266
FI	750	181	154	189	173	50	1	7	1,505
FR	748	330	11	160	65	850	1	86	2,251
HR	269	65	31	202	29	117	0	27	740
HU	626	500	15	114	35	206	7	1	1,504
IE	847	545	190	87	51	238	5	36	1,999
IS	379	224	87	30	13	14	0	6	753
IT	641	119	23	334	99	1,026	6	3	2,251
LT	344	76	54	124	64	82	9	1	754
LU	262	99	11	93	97	200	1	10	773
LV	336	123	31	116	15	128	4	3	756
MK	381	125	102	44	9	90	1	0	752
MT	155	162	16	41	36	40	2	1	453
NL	707	223	60	233	135	143	2	18	1,521
NO	1,030	288	192	150	215	71	1	4	1,951
PL	1,162	374	33	361	28	271	2	19	2,250
PT	567	314	49	227	28	300	6	2	1,493
RO	606	254	15	235	75	297	13	5	1,500
RS	197	210	10	86	63	172	11	2	751
SE	754	310	89	121	146	84	1	7	1,512
SI	401	266	77	114	29	166	6	8	1,067
SK	235	165	14	55	48	199	6	34	756
UK	800	556	227	178	137	260	5	88	2,251
Total	18,563	7,874	2,536	5,807	2,455	7,577	157	451	45,420

Source: Technical Report of ESENER-3.

Table 2

Composition of the universe, distributed by countries, enterprises and employees (figures in thousands).

Country	Establishment +5 employees	Employees	Country	Establishment +5 employees	Employees
AT	134	3,308	IT	674	13,892
BE	115	3,684	LT	42	1,071
BG	82	2,204	LU	12	343
CH	176	4,330	LV	33	756
CY	14	251	MK	18	489
CZ	108	4,048	MT	8	170
DE	1,206	37,477	NL	171	5,523
DK	96	2,418	NO	102	2,222
EE	18	530	PL	333	12,037
EL	119	2,037	PT	137	3,256
ES	458	12,106	RO	157	6,090
FI	70	1,815	RS	47	1,369
FR	682	19,979	SE	143	3,903
HR	42	1,111	SI	21	711
HU	109	3,648	SK	59	1,886
IE	68	1,524	UK	904	26,676
IS	6	6,148	Total	6,365	181,012

Source: Technical Report of ESENER-3.

Table 3

Sample size, reference population, sample fraction and sampling error by country.

Country	Sample	Universe	S/U %*	Sampling Error%	Country	Sample	Universe	S/U %*	Sampling Error %
AT	1,503	3,308,000	0.045	2.5	IT	2,251	13,892,000	0.016	2.1
BE	1,506	3,684,000	0.041	2.5	LT	754	1,071,000	0.070	3.6
BG	755	2,204,000	0.034	3.6	LU	773	343,000	0.225	3.5
CH	1,502	4,330,000	0.035	2.5	LV	756	756,000	0.100	3.6
CY	757	251,000	0.302	3.6	MK	752	489,000	0.154	3.6
CZ	1,552	4,048,000	0.038	2.5	MT	453	170,000	0.266	4.6
DE	2,264	37,477,000	0.006	2.1	NL	1,521	5,523,000	0.028	2.1
DK	1,513	2,418,000	0.000	2.5	NO	1,951	2,222,000	0.088	2.2
EE	758	530,000	0.143	3.6	PL	2,250	12,037,000	0.019	2.1
EL	1,501	2,037,000	0.074	2.5	PT	1,493	3,256,000	0.046	2.5
ES	2,266	12,106,000	0.019	2.1	RO	1,500	6,090,000	0.025	2.5
FI	1,505	1,815,000	0.083	2.5	RS	751	1,369,000	0.055	3.6
FR	2,251	19,979,000	0.011	2.1	SE	1,512	3,903,000	0.039	2.5
HR	740	1,111,000	0.067	3.6	SI	1,067	711,000	0.150	3.0
HU	1,504	3,648,000	0.041	2.5	SK	756	1,886,000	0.040	3.6
IE	1,999	1,524,000	0.131	2.2	UK	2,251	26,676,000	0.008	2.1
IS	753	6,148,000	0.012	3.6	Total	45,420	181,012,000	0.025	0.5

Source: Technical Report of ESENER-3.

Elaboration: Made by authors.

* Sampling fraction.

to extract the results will be explained.

In the first step, the variables related to health promotion interventions (Q158, from 1 to 4 and Q161) which in the ESENER-3 database contain three response options: affirmative, negative and no response, were dichotomized, so that the no response was eliminated. With the remaining enterprises, the percentage of enterprises that responded affirmatively to the implementation of health promotion interventions was calculated.

In a second step, taking as a starting point that the affirmative answer option is valued with 1 point and the negative with 2, a T-test was performed for independent samples for each country. The mean of each country was compared with the mean resulting from the remaining 32 countries, taking into account that a total of 33 countries are analyzed. From this analysis, the level of statistical significance was obtained, which was considered relevant as long as it was equal to or less than 0.05, which corresponds to a confidence level equal to or greater than 95%.

The next step was to identify those countries that stand out for the implementation of WHPI and those that show significant differences with respect to the global average.

With regard to WHPI to promote healthy nutrition (Q158_1), Table 6 shows that Slovenia (SI), Ireland (IE), Iceland (IS) and Finland (FI) stand

out with a percentage of implementation of more than 50% of the enterprises, which also present significant differences with respect to the average of the rest of the countries, considering that the average implementation is 38%. However, the country that stands out for a low percentage of implementation, in less than 25% of enterprises, is the Czech Republic with a 22%. It should also be mentioned that several countries do not differ in a statistically relevant way in terms of the average implementation, such as Austria (AT), Belgium (BE), Denmark (DK), Norway (NO) and Sweden (SE). Table 7 Table 8

In relation to WHPI to promote sports activities outside working hours (Q158_3), it can be stated that it is one of the interventions with the highest degree of implementation, since the maximum percentage of implementation is around 80% in some countries. Thus, the average implementation rate is 42%. Sweden (SE) with 85%, Finland (FI) with 79%, Slovenia (SI) with 68% and Iceland (IS) with 63% stand out for their high percentage. However, Italy (IT) with 15%, Cyprus (CY) with 17%, France (FR) with 21% and Greece (EL) with 24% can be cited for their low level of implementation. Countries such as Bulgaria (BG), Czech Republic (CZ), Croatia (HR), Luxembourg (LU), Latvia (LV), North Macedonia (MK) and the Netherlands (NL) do not differ significantly in terms of averages from the overall average of all countries.

In WHPI related to the practice of back exercises to prevent

Table 4
Sample size, by country and number of employees.

Country	5–9	10–19	20–49	50–99	100–149	150–249	+250	Total
AT	522	349	258	136	56	45	137	1,503
BE	327	343	377	141	84	66	168	1,506
BG	254	156	132	68	30	25	90	755
CH	539	330	259	140	59	44	131	1,502
CY	244	184	167	69	35	26	32	757
CZ	304	319	345	234	77	82	191	1,552
DE	552	478	482	243	108	101	300	2,264
DK	405	357	350	143	60	54	144	1,513
EE	244	162	159	94	31	20	48	758
EL	613	322	294	124	41	37	70	1,501
ES	769	522	406	204	84	73	208	2,266
FI	482	377	292	102	60	41	151	1,505
FR	732	509	377	204	93	99	237	2,251
HR	214	102	200	73	39	39	73	740
HU	535	327	290	132	54	46	120	1,504
IE	602	584	449	170	55	42	97	1,999
IS	216	177	180	89	40	29	22	753
IT	924	505	389	173	65	64	131	2,251
LT	242	142	141	89	36	26	78	754
LU	192	171	159	90	45	43	73	773
LV	294	145	152	59	32	20	54	756
MK	264	156	124	94	24	26	64	752
MT	89	93	112	65	22	29	43	453
NL	448	336	314	113	83	62	165	1,521
NO	692	473	418	135	62	59	112	1,951
PL	764	378	492	201	77	83	255	2,250
PT	574	366	138	164	61	71	119	1,493
RO	446	373	260	122	53	60	166	1,500
RS	230	131	154	85	28	35	88	751
SE	463	338	312	146	60	67	126	1,512
SI	316	229	168	163	64	41	86	1,067
SK	209	192	175	80	26	28	46	756
UK	758	465	446	232	101	72	177	2,251
Total	14,459	10,091	8,991	4,377	1,845	1,655	4,002	45,420

Source: Technical Report of ESENER-3.

Elaboration: Made by authors.

Table 5
Selected items.

Topic	Item
Country	Austria (AT), Belgium (BE), Bulgaria (BG), Croatia (HR), Cyprus (CY), Czech Republic (CZ); Denmark (DK), Estonia (EE), Finland (FI), France (FR), Germany (DE), Greece (EL), Helvetic Confederation (CH), Hungary (HU), Ireland (IE), Island (IS), Italy (IT), Latvia (LV), Lithuania (LT), Luxembourg (LU), Malta (MT), Netherlands (NL), North Macedonia (MK), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Serbia (RS), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), United Kingdom (UK)
Q158.1	Measures for health promotion: Healthy nutrition.
Q102gr	People working at the establishment
Q113	The role in the workplace
Q158.2	Measures for health promotion: prevention of addiction
Q158.3	Measures for health promotion: sport activities outside working hours
Q158.4	Measures for health promotion: back exercise at work.
Q161	Is there a procedure to support employees returning to work after a long-term sickness absence?

Source: Technical Report of ESENER-3.

Elaboration: Made by authors.

musculoskeletal disorders (Q158.4), Latvia (LV) stands out with 62% of implementation, followed by Finland (FI) and Slovenia (SI) with 59% and Spain with 51%. The average implementation is 34%. Countries with low implementation percentages are Cyprus (CY) with 10%, Greece (EL) with 11%, Italy (IT) with 16% and Hungary (HU) with 19%. Few countries have an average that does not differ significantly from the global average, among them Austria (AT), Lithuania (LT) and Serbia (RS).

The last measure that has been analyzed is procedures to RTW after a long term sickness. This type of procedure is the most widespread of all

the WHPI studied, with the percentage of implementation in many countries exceeding 90%, as is the case in the United Kingdom (UK), Sweden (SE), the Netherlands (NL), Ireland (IE), Finland (FI), Germany (DE), followed by Denmark (DK) and Norway (NO), which exceed 80%. The average implementation rate is 59%. Countries with the lowest levels of implementation are Croatia (HR), Lithuania (LT), Estonia (EE), Czech Republic (CZ), Latvia (LV), Hungary (HU), Iceland (IS) and Poland (PL), which do not reach 40% of implementation. Finally, it should be noted that some countries' averages do not differ significantly from the global average, as is the case of Austria (AT), Cyprus (CY), France (FR) and Malta (MT).

Finally, in Table 9 a synthesis of the previous results is presented by placing each country in its corresponding quartile. In addition, a column with an average between the previous quartiles has been added so that the degree of implementation of WHPI can be observed. It can be stated, that countries that obtain an average value equal to or higher than 3 are those that stand out for their higher percentage of implementation, the first being Finland (FI), followed by Slovenia (SI), Denmark (DK), Norway (NO), Sweden (SE), Romania (RO) and United Kingdom (UK). On the other hand, countries that stand out for a lower level of implementation are Cyprus (CY), Poland (PL), Czech Republic (CZ), Hungary (HU), Slovakia (SK), Italy (IT), Hungary (HU) and France (FR).

In Table 10, the level of implementation of RTW processes by country has been represented. This variable is presented separately from the previous ones because only enterprises with more than 50 employees have been taken into account, unlike the previous variables, which take into account those with more than 5 employees. Germany, Denmark, Finland, the Netherlands, Norway, Sweden and the United Kingdom stand out for their higher level of implementation. In contrast, countries with the lowest levels of implementation are the Czech Republic, Estonia, Croatia, Hungary, Lithuania, Latvia, Poland and Serbia.

Table 6

Analysis of proportions of enterprises that implemented WHPI to promote healthy nutrition (Q158_1) and to prevent addictions (Q158_2).

Country	Q158_1				Q158_2			
	Firms	Implemented	%	Sig. Bil.	Firms	Implemented	%	Sig. Bil.
AT	1,496	581	38.83	0.760	1,494	591	39.55	0.104
BE	1,498	658	43.92	0.760	1,503	766	50.96	0.000
BG	745	258	34.63	0.008	749	255	34.04	0.000
CH	1,496	541	36.16	0.013	1,497	546	36.47	0.000
CY	748	211	28.20	0.000	750	258	34.40	0.000
CZ	1,534	341	22.22	0.000	1,538	381	24.77	0.000
DE	2,252	808	35.87	0.001	2,252	763	33.88	0.000
DK	1,496	573	38.30	0.461	1,502	701	46.67	0.000
EE	755	244	32.31	0.000	758	186	24.53	0.000
EL	1,491	661	44.33	0.000	1,497	736	49.16	0.000
ES	2,241	991	44.22	0.000	2,242	975	43.48	0.062
FI	1,491	767	51.44	0.000	1,492	931	62.39	0.000
FR	2,232	675	30.24	0.000	2,242	952	42.46	0.389
HR	733	221	30.15	0.000	733	324	44.20	0.151
HU	1,493	428	28.66	0.000	1,496	727	48.59	0.000
IE	1,987	1,178	59.28	0.000	1,986	781	39.32	0.000
IS	744	418	56.18	0.000	746	243	32.57	0.035
IT	2,243	700	31.20	0.000	2,248	1,158	51.51	0.000
LT	744	211	28.36	0.000	750	330	44.00	0.180
LU	769	266	34.59	0.007	769	302	39.27	0.186
LV	755	257	34.03	0.003	755	239	31.65	0.000
MK	746	285	38.20	0.003	749	360	48.06	0.000
MT	453	200	44.15	0.034	453	185	40.83	0.745
NL	1,512	649	42.92	0.003	1,509	541	35.85	0.000
NO	1,925	757	39.32	0.921	1,927	721	37.41	0.000
PL	2,232	615	27.55	0.000	2,238	668	29.84	0.000
PT	1,486	713	47.98	0.000	1,483	659	44.43	0.025
RO	1,489	731	49.09	0.000	1,493	797	53.38	0.000
RS	742	224	30.18	0.000	746	314	42.09	0.777
SE	1,498	583	38.91	0.810	1,495	616	41.20	0.761
SI	1,065	646	60.65	0.000	1,061	558	52.59	0.000
SK	736	249	33.83	0.002	744	246	33.06	0.000
UK	2,238	1,043	46.60	0.002	2,232	957	42.87	0.206

Source: ESENER-3 data base.

Elaboration: made by the authors.

Likewise. Almost 50% of the countries are in the first and second quartiles, with a homogeneous representation between the quartiles.

5. Discussion

Some studies in the literature show that there are significant differences in aspects related to OHS management between European countries (Cantonnet et al., 2019; Magnavita, 2018). However, despite the fact that an increasing number of enterprises are deciding to invest in promoting well-being, and that workplace is considered as the appropriate environment for health promotion interventions (Birk Jørgensen et al., 2016) the literature has not yet analyzed this subject in depth. In comparison, more studies on prevention than on well-being promotion can be found (Torp and Vinje, 2014).

Five WHPI have been analyzed in this study: Healthy nutrition interventions, sports activities after working hours, back exercises at work, prevention of addictions and procedures to return to work after a long-term sickness.

Some studies suggest that, employees with an unhealthy lifestyle are less productive (Rongen et al., 2013; Williden et al., 2012) and therefore WHPI would have benefits not only for employees' health but also for enterprise's productivity.

It can be stated that, differences in the level of implementation as well as in the type of WHPI among enterprises in European countries can be found. The few cross-country comparative studies on WHPI show that the absence of long-term monitoring of the data would be one of the major difficulties faced by the literature when entering into an in-depth study of WHPI (Brand et al., 2017; Gerhardt et al., 2019; Liu et al., 2012).

Finally, with reference to the starting hypothesis, it can be stated,

that differences between the 33 countries in terms of the intensity and type of the implemented WHPI can be found. However, it can be observed, that countries with a low level of implementation in some of the WHPI (located in the first quartile) may have high levels of implementation in other ones. Italy (IT) and Hungary (HU), for example, stand out in the implementation of the addictions prevention interventions. The Czech Republic (CZ) stands out, in the implementation of sports activities outside working hours. This fact indicates that the adoption of WHPI by enterprises is being implemented in a heterogeneous manner, and that no typical pattern or behavior has been found.

The contribution of this paper is that for the first time, a comparative study on WHPI among 33 European countries has been carried out. However, one of the weaknesses of this study is the lack of data for long-term monitoring of the analyzed enterprises. It would be interesting that as a future line of research a comparison on WHPI with ESENER-2 datasets could be developed.

6. Conclusion

It has been observed that the most widespread WHPI on average is procedures to return to work after a long-term sickness, followed by physical and sports activities after working hours. The fact that only enterprises with more than 50 employees have been asked about this procedure could be one of the reasons why it is the most widely implemented. The literature has shown that the size of enterprises influences aspects related to OHS management (Cantonnet, Aldasoro, & Iradi, 2019; Gerhardt et al., 2019) and could therefore also influence WHPI.

On the other hand, some behavioral patterns among enterprises depending on their country have been also identified:

Table 7

Analysis of proportions of enterprises that implemented sports activities outside working hours (Q158_3) and back exercises (Q158_4).

Country	Q158_3				Q158_4			
	Firms	Implemented	%	Sig. Bil.	Firms	Implemented	%	Sig. Bil.
AT	1,499	567	37.82	0.005	1,498	479	31.97	0.069
BE	1,501	504	33.57	0.000	1,501	464	30.91	0.006
BG	751	304	40.47	0.646	744	280	37.63	0.047
CH	1,499	554	36.95	0.000	1,496	328	21.92	0.000
CY	750	129	17.20	0.000	747	77	10.30	0.000
CZ	1,540	663	43.05	0.157	1,545	385	24.91	0.000
DE	2,259	1,020	45.15	0.000	2,254	825	26.60	0.013
DK	1,504	772	51.32	0.000	1,505	597	39.66	0.000
EE	755	451	59.73	0.000	755	364	48.21	0.000
EL	1,499	366	24.41	0.000	1,498	166	11.08	0.000
ES	2,240	735	32.81	0.000	2,242	1,156	51.56	0.000
FI	1,501	1,193	79.48	0.000	1,498	890	59.41	0.000
FR	2,245	490	21.82	0.000	2,239	709	31.66	0.010
HR	738	309	41.86	0.750	735	337	45.85	0.000
HU	1,500	519	34.60	0.000	1,494	286	19.14	0.000
IE	1,993	750	37.63	0.001	1,990	788	39.59	0.000
IS	751	480	63.91	0.000	748	314	41.97	0.000
IT	2,248	339	15.08	0.000	2,247	378	16.82	0.000
LT	748	308	41.17	0.000	748	262	35.02	0.604
LU	770	235	30.51	0.249	770	194	25.19	0.000
LV	756	421	55.68	0.496	754	475	62.99	0.000
MK	749	286	38.18	0.932	747	188	25.16	0.000
MT	452	192	42.47	0.018	453	129	28.47	0.008
NL	1,510	638	42.25	0.444	1,511	363	24.02	0.000
NO	1,945	1,041	53.52	0.000	1,937	933	48.16	0.000
PL	2,241	850	37.92	0.001	2,242	593	26.44	0.000
PT	1,486	482	32.43	0.000	1,489	431	28.94	0.000
RO	1,491	536	35.94	0.000	1,491	607	40.71	0.000
RS	745	360	48.32	0.000	743	234	31.49	0.119
SE	1,509	1,291	85.55	0.000	1,503	703	46.77	0.000
SI	1,065	730	68.54	0.000	1,063	527	59.57	0.000
SK	749	344	45.92	0.011	746	129	17.29	0.000
UK	2,235	818	36.59	0.000	2,226	824	37.01	0.004

Source: ESENER-3 data base.

Elaboration: made by the authors.

Table 8

Analysis of proportions of enterprises that implemented procedures to return to work after a long-term sickness.

Country	Q161				Country				
	Firms	Implemented	%	Sig. Bil.		Firms	Implemented	%	Sig. Bil.
AT	360	225	62.50	0.389	IT	410	222	54.14	0.000
BE	453	349	77.04	0.000	LT	220	41	18.63	0.000
BG	202	108	53.46	0.002	LU	234	136	58.11	0.043
CH	359	252	70.19	0.020	LV	161	54	33.54	0.000
CY	142	81	57.04	0.069	MK	202	104	51.48	0.000
CZ	556	166	29.85	0.000	MT	152	96	63.15	0.701
DE	743	679	91.38	0.000	NL	421	391	92.87	0.000
DK	393	334	84.98	0.000	NO	358	306	85.47	0.000
EE	183	47	25.68	0.000	PL	583	226	38.76	0.000
EL	242	105	43.38	0.000	PT	408	236	57.84	0.005
ES	540	317	58.70	0.004	RO	383	289	75.45	0.000
FI	349	330	94.55	0.000	RS	229	92	40.17	0.000
FR	615	405	65.85	0.516	SE	392	379	96.68	0.000
HR	203	83	4.88	0.000	SI	341	183	53.66	0.000
HU	335	123	36.71	0.000	SK	167	78	46.70	0.000
IE	350	325	92.85	0.000	UK	575	562	97.73	0.000
IS	174	67	38.50	0.000					

Source: ESENER-3 data base.

Elaboration: made by the authors.

- Countries with a high implementation level (above the median) of WHPI, in all or most of the measures analyzed.
- Countries whose enterprises only implement some measures and have a low implementation level in the rest of them.
- Countries whose enterprises have a low (below the median) implementation level in all the measures analyzed.

Factors that could help explain this heterogeneity could be, on the one hand, the sociocultural context of each country (different rates of addictions, sedentary lifestyles or problems of overweight). Cultural differences between EU member countries have shown that even workers' perceptions change depending on the country in which they work (Daniels, 2004). On the other hand, work environment has also been suggested as one of the reasons that may explain why few

Table 9

Positioning of countries in the quartiles and average global positioning (Businesses with greater than 5 employees).

Country	Q158_1	Q158_2	Q158_3	Q158_4	Mean
AT	3	2	2	3	2,50
BE	3	4	1	2	2,50
BG	2	1	2	3	2,00
CH	2	2	2	1	1,75
CY	1	1	1	1	1,00
CZ	1	1	3	1	1,50
DE	2	1	3	2	2,00
DK	3	3	4	3	3,25
EE	2	1	4	4	2,75
EL	4	4	1	1	2,50
ES	3	3	1	4	2,75
FI	4	4	4	4	4,00
FR	1	3	1	2	1,75
HR	1	3	3	4	2,75
HU	1	4	1	1	1,75
IE	4	2	2	3	2,75
IS	4	1	4	3	3,00
IT	1	4	1	1	1,75
LT	1	3	3	2	2,25
LU	2	3	1	2	2,00
LV	2	1	4	4	2,75
MK	2	4	3	1	2,50
MT	3	2	3	2	2,50
NL	3	2	3	1	2,25
NO	3	2	4	4	3,25
PL	1	1	2	2	1,50
PT	4	3	1	2	2,50
RO	4	4	2	3	3,25
RS	1	3	3	3	2,50
SE	3	2	4	4	3,25
SI	4	4	4	4	4,00
SK	2	1	3	1	1,75
UK	4	3	2	3	3,00

Source: ESENER-3 data base.

Elaboration: made by the authors.

Table 10

Positioning of countries in the quartiles and about the implementation of a procedure to support employees returning to work after a long-term sickness absent (Businesses with > 50 employees).

Country	Quartile	Country	Quartile
AT	3	IT	2
BE	3	LT	1
BG	2	LU	3
CH	3	LV	1
CY	2	MK	2
CZ	1	MT	3
DE	4	NL	4
DK	4	NO	4
EE	1	PL	1
EL	2	PT	2
ES	3	RO	3
FI	4	RS	1
FR	3	SE	4
HR	1	SI	2
HU	1	SK	2
IE	4	UK	4
IS	1		

Source: ESENER-3 data base.

Elaboration: made by the authors.

employees take part in WHPI (van der Put and van der Lippe, 2020). Thus, it should not be ignored that, as is the case with OHS, the legal framework also influences WHPI (Sorensen et al., 2021). Countries with the longest tradition in the generation of regulations on OHS may have implemented policies and regulations aimed at improving occupational well-being to a greater extent. Risk awareness differences between countries could also explain those differences.

Changes that are taking place in the labour market such as the high percentage of temporary workers, an aging working force, sedentary work and the lack of physical activity due to the introduction of new technologies are turning the demands of the labour market to the workers even more complex. For this reasons, the promotion of WHPI would be advisable for both, public institutions and private enterprises.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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