How are Healthy and Sustainable Workplaces for Professionals with Chronic Diseases?

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ABSTRACT

The economic and sociodemographic challenges arising from the globalisation of work and raising the retirement age should determine a joint effort towards greater protection of the health and safety of workers in the workplace contributing to the achievement of the United Nations SDGs. The main objective of this paper is to understand and characterize the healthy work environment of organizations during the COVID-19 pandemic, and specially better understand the relationship between the dimensions of the healthy work environment and the health situation of the professional (having or not a chronic disease) and its influence of health on work performance. Thus, it is intended to identify positive and negative factors related to healthy workplaces for professionals with chronic disease. Quantitative, cross-sectional and comparative study. It represents a national sample collected in Portugal by the Portuguese Lab for Healthy Workplaces during the years 2022 and 2023.The study involved 4551 participants, 2795 (63,1%) were female. The workers' age ranged between 18 and 73 years, with a mean of 44.8 years and standard deviation of 10.80, 1349 participants (29.8%) reported having a chronic disease. The Healthy Workplaces Ecosystems Tool was used. Comparing the workers with and without chronic illness in the different dimensions of healthy workplaces, was find that, in general, there are statistically significant differences between the groups. Professionals with a chronic illness report more difficulties and higher risks, with the exception of the telework dimension. Professionals with chronic disease present higher risk behaviours and difficulties in managing stress. Can be concluded that that telework can act as a protective factor for people with chronic diseases, allowing them to reconcile the difficulties caused by the disease with the continuity of the work activity and the support promoted by the work context.

Keywords: Chronic diseases; healthy workplaces; wellbeing; occupational health; mental health.

INTRODUCTION

The relevance of promoting professionals' well-being and quality of life has been recognised worldwide, and supported by professionals in the field of health, researchers, and economists [1,2,3,4,5,6, 7].

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Grote and Guest [8] suggest that in addition to a healthy and safe work environment, aspects such as the development of skills, social integration, representativeness and respect for rights, the social relevance of work, considering the total life (balance between professional and personal life), adequate and fair compensation, flexibility and individual proactivity must be added to the factors related to quality of working life (QWL). The authors propose a multi-level model that integrates Human Resources Management (HRM) practices at the level of the organisation's work and at the interface between work and the lives of professionals outside work. A multilevel approach takes into account the context where professionals work and live [9].

The multilevel model presented by Guest [10] and Grote and Guest [8] includes antecedents of professionals' well-being and integrates the principles associated with a positive working relationship. In terms of HRM practices associated with well-being, these include the promotion of investment in professionals, involvement at work, a positive physical and social environment, communication/giving voice, and organizational support. Well-being and positive work relationship (reflected in trust, fairness, safety, psychological contract, and high quality of life at work), in addition to being influenced by perceptions of HRM practices, are also influenced by well-being and quality of life (psychological, social and physical). All these factors will be reflected in individual, professional and organisational performance.

Eurofound [11] focuses on the links between social dialogue, working conditions, quality of work and their impact on organisational performance. Through the analysis of six case studies, it was possible to conclude that there is a clear link between performance and quality of work and training, skills, and employability. Health, safety, and wellbeing contributes to an increase in performance and productivity of around 20% as it decreases sickness, sickness absence and associated costs. Healthier organizations are concerned with lifestyles, ageing, corporate culture including staff leadership, staff development, work-life balance, mental health and stress, wellness, Corporate Social Responsibility (CSR), nutrition and health [12].

Professionals with higher risk related to their well-being and quality of life at work can be identified, namely women [13, 14, 15, 16, 17, 18] professionals with lower educational level and economic difficulties [19, 20] and professionals with chronic disease [12].

There is an increase in chronic non-communicable diseases, often preventable diseases, such as diabetes, obesity, some types of oncological disease, which in most cases, result from the lifestyle and health behaviours of the population and increase morbidity and mortality and decrease the quality of life [21].

With the increase in retirement age and the increasingly earlier onset of chronic diseases or long-term illness, organisations and professionals face more challenges in reconciling well-being at work and productivity. Managing and promoting health in the workplace requires an approach that combines improvements in the organisation and work environment with the active participation of professionals with and without chronic disease [12].

An organisational culture that promotes health and well-being should be fostered. Risk factors for health and quality of life should be identified and eliminated or, when it is not possible to eliminate them, structures and practices should be implemented to support and promote quality of life and health in the organisation and minimise the impact of risks [21, 22, 23, 24].

The core principles of workplace health-promoting organisation are: (a) organisational commitment to improving the health of professionals; (b) effective communication and information strategies; (c) involving professionals in decision-making; (d) promoting an organisational culture based on teamwork; (e) taking into account the health status of professionals in the organisation of tasks and processes; (f) integrating health at the centre of the organisation's policies and practices; (g) recognising that the organisation has an impact on people and that this impact should be associated with health and well-being [12].

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European Network for Workplace Health Promotion [12] (p.35) recommends introducing the following criteria or quality standards for workplace health to achieve long-term positive change: (a) Key stakeholders in the process should take responsibility; (b) Human Resources should provide effective support for workplace health initiatives; (c) Requirements to complete health documentation should be met and workers should have access to specialist services; (d) Health and safety risks should be assessed and controlled; (e) There should be a systematic approach to coordinating interventions to retain workers with chronic diseases or facilitate their return to work.

The COVID-19 pandemic has brought great challenges to society and to organisations. Uncertainty, instability, restrictions, periods of confinement, and teleworking have had an impact on people's lives and on work.

Disadvantaged populations in terms of physical, psychological, and social health have been even more affected and with increased psychosocial risks of work [25, 26, 27]. People with chronic diseases such as diabetes, hypertension, cardiovascular disease, obesity, and chronic pulmonary obstruction are more vulnerable to SARS-CoV-2 and tend to have higher levels of morbidity and mortality when they get sick [28].

In a study by Lahav [29], the author concluded that many of the participants reported experiencing at least one psychiatric symptom related to COVID-19. Being younger, female, not being in a relationship, having a below average income, being diagnosed with COVID-19 or other disease, living alone during the outbreak, having a close one in a high-risk group and a negative self-assessment of their health status, were associated with high levels of stress and distress. Individuals previously exposed to trauma had higher levels of anxiety, depression and post-traumatic stress compared to individuals without such a history or with survivors on noncontinuous traumatic events.

During the COVID-19 Pandemic the mortality and morbidity of people with chronic disease was higher [30]. Added to this are social isolation, changes to health routines and the worsening of the financial situations. Disease prevention, monitoring and control actions and access to health services were also affected by COVID-19 [31, 32, 33, 34].

Mental health is also highly affected with the COVID-19. The main reported mental health problems are stress, anxiety, depression, insomnia, denial, anger, and fear. Children and elderly, females, people with chronic diseases, front-line workers and people with existing mental illness are among the most vulnerable in this context [35, 29, 33].

Telework can have advantages for professionals and employers as it can contribute to increased productivity and work-life balance., However it is important to be aware of the possible disadvantages and increased psychosocial risks at work and related to the physical environment [36].

Steidelmüller et al. [37] in a study conducted with professionals with chronic disease conclude that there is a positive association between presentism and telework. They also conclude that professionals with higher levels of job control show more presentism than those with moderate job control. This difference is even clearer in people with health problems.

Some professionals prefer teleworking or working from home when they are in a more acute situation of illness. Some professionals with chronic disease, prefer to adapt their work to being on sick leave. Working from home can have a therapeutic effect as it gives structure, distracts the person from the illness and they feel recognised for their work and supported by colleagues and management [38].

The economic challenges arising from the globalisation of work and production should determine a joint effort (state, companies, workers, and society) towards greater protection of the health and safety of workers

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in the workplace (including risk prevention) and greater investment in the quality of life and work and in improving the productivity of companies, contributing to the achievement of the United Nations SDGs [39].

Psychosocial risks associated with work threaten occupational health and safety (OSH), mental and physical health, and the safety of professionals. They are related to psychological and social conditions in the workplace, including organisational culture, attitudes, values, beliefs and daily practices. These risks increase the likelihood of accidents, mental illness, musculoskeletal injuries, conflicts and violence in the workplace [40-44].

The present and future challenges in labour world should also pursues the Sustainable Development Goals (SDGs) [39], with a multidisciplinary approach, from an ecological perspective, focusing on the following SDGs specifically:

Goal 3: Health and well-being, which aims to ensure good health and well-being for all. Promote mental health and well-being. Mental health is a dynamic concept that must be understood and interpreted on a continuum, which includes experiences that range from optimal states of well-being to states of psychological distress and dysfunction [45]. The mental health and quality of life of professionals is associated with greater motivation, healthy commitment, better performance, and lower absenteeism and presenteeism, fewer accidents at work, less burnout and turnover. The project's tasks and actions contribute to psychological health literacy and well-being, in terms of psychoeducation, health and safety literacy, emotional literacy, self-awareness, self-regulation and other socio-emotional competences, which help prevent and promote the biopsychosocial and environmental health of workers and families. Goal 5: Gender equality, advocates tackling all forms of discrimination and gender-based violence. Ensure the full and effective participation of women and equal leadership opportunities. The diagnosis will make it possible to identify differences and possible disadvantages for women. Possible inequalities related to psychosocial risks at work, remuneration, health, unequal opportunities, violence, and harassment will be integrated and reflected in the actions developed. Goal 8: Decent work and economic growth, which is about ensuring inclusive and sustainable economic development. Achieving higher levels of economic productivity through diversification, technological modernisation, and innovation. Decent work is linked to pay and safety at work. With working conditions related to accidents at work, work-related illnesses, working hours, psychosocial environment, labour relations, work content, perception of justice, psychological safety and effective worker participation, reconciliation of personal and working life, respect, and decent contingent actions in specific situations, such as chronic and/or prolonged incapacitating illness, support for family/informal carers, reintegration after leave, harassment or other situations. It is also essential to prepare organisations and workers for the new challenges of the future, such as aging, green jobs, digital work and/or digital platforms, work with new forms of work organisation, remote, hybrid or teleworking, artificial intelligence, work, and generational challenges. Goal 16 - Promote peaceful and inclusive societies and effective, accountable, and inclusive institutions at all levels. Reduce labour violence, develop effective, accountable, and transparent institutions, responsible, inclusive, participatory, and representative decision-making based on scientific evidence and safe worker participation. Promote equality and access to justice, strengthen institutions and workers in the fight against corruption, discrimination, and injustice in any form for sustainable development.

In short, we know that professionals with chronic illnesses are at greater risk at work and have been more affected by COVID-19. This study allows us, in a single research moment, to understand the relationship between the different systems of the work ecosystem that are not studied together. From an ecological perspective, we integrated variables from the organisation, the psychosocial environment, the physical environment, and the organisation's relationship with the surrounding community. We compared the perception of professionals with and without chronic illness in relation to each of the dimensions and the relationship between them and their lifestyle and health. This ecological vision using the WHO model on Healthy Workplaces is a research gap to which we believe we can contribute with this study.

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Thus, this study aims to deepen our knowledge of the healthy work ecosystem of professionals with chronic illnesses. We intend to compare professionals with and without chronic illness in their perception of the different dimensions of a healthy work environment. We also compared the perception of quality of life, health behaviors and stress management skills in both groups of professionals.

The main objective of this study is to understand and characterise the relationship between the dimensions of the healthy work environment and the health situation of the professional (having or not a chronic disease) and its influence of health on work performance. Thus, it is intended to identify protective and risk factors for healthy workplaces for professionals with chronic disease.

MATERIALS AND METHODS

Study design and participants

Cross-sectional study, using a national convenience sample. The study involved 4551 participants, 2795 (63,1%) were female. The workers' age ranged between 18 and 73 years, with a mean of 44.8 years and standard deviation of 10.80.

The great majority of the participants (61.4%) reported being married or living with a partner, 27.1% single, 10.6% divorced or separated and 0.9% widowed. 65.9 reported having children. As regards education, 38.9% have completed secondary education (mandatory schooling, 12 years), 38.8% have a degree and 22.3% have a Master's or PhD degree. Regarding their health condition, 4549 participants (70.2.%) reported not having chronic diseases and 1349 (29.8%) reported having a chronic disease.

Procedure

The instrument was submitted and approved by the Ethics Committee of the Hospital of Espírito Santo of Évora. For data collection, organisations from different activity sectors, from different regions of the country and of different sizes were contacted. The sample was by convenience. Both governmental and non-governmental organisations were invited to participate in the survey. The organisations were selected according to their relationship with Portuguese Lab for Healthy Workplaces (LABPATS), so as to include organisations from different regions of the country and different sectors of activity, such as public administration, health, education, social, services and retail and banking. We also tried to include organisations of different sizes. Of the 50 organisations invited, 45 agreed to take part, but 40 organisations managed to participate within the timeframe of this study. LABPATS collects data permanently throughout the year. The organisations that agreed to participate received the instrument through a link and disseminated it internally among their workers. The link gave access to the explanation of the study, contact of the researchers for clarification of doubts, information on confidentiality, anonymity, and the voluntary nature of the participation. The participant only had access to the beginning of the instrument after signing the informed consent. The instrument used integrates sociodemographic issues of characterization of workers and was based on the assessment instrument of the Management and Quality of Health Organizations [46-48] and the Model of Healthy Workplaces proposed by the World Health Organization [23].

The Healthy Workplace Ecosystems Instrument (EATS) comprises a total of 62 items organized into 9 dimensions based on the Healthy Workplaces model proposed by the World Health Organization [23]. The Ethics and Values dimension has 8 items ($\alpha = .91$), the Commitment to Leadership has 6 items ($\alpha = .95$), the Workers' Involvement has 7 items ($\alpha = .89$), the Psychosocial Risks at Work related to work content and relationships with leadership has 12 items ($\alpha = .91$), the Psychosocial Risks at Work related to Well-being and Mental Health has 5 items ($\alpha = .86$), the Physical environment has 5 items ($\alpha = .92$), teleworking has 3 items ($\alpha = .82$), the Community Involvement has 12 items ($\alpha = .90$) and Resources for Personal Health has 4 items ($\alpha = .83$). All questions have a 5-point Likert-type scale [49]. The Cronbach's alpha levels obtained for

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each factor show that they have adequate internal consistency (between .82 and .95). A health behaviours assessment scale was used with 4 items [49] related to eating behaviours, stress levels, sleep habits and physical activity, which has adequate internal consistency (α = .70). The 4-item version of the Stress Perception Scale (EPS) was used to assess the degree to which an individual evaluates their life situations as stressful [50,51] which in the present study revealed adequate internal consistency (α =.77).

Telework was surveyed with the question asked was:"Are you teleworking?", with answer hypotheses: yes, no or hybrid situation.

Absenteeism was measured through the following question: "How often have you missed work due to illness?" with a 5-point likert scale ranging from rarely to very often.

To assess health and quality of life, 2 questions were used: "To what extent are you satisfied with your quality of life" and "To what extent are you satisfied with your health", both items taken from the WHOQOL-Bref with 5-point Likert-type scale [52]. The variable perception of health and quality of life has a minimum value of 2 and a maximum value of 10, which in the present study revealed adequate internal consistency (α = .84).

After confirming the normality of the sample, descriptive statistics were used, as well as comparisons between groups using the T-test and a linear regression analysis was carried out using the SPSS statistics software.

Since the sample size is large, the differences in absolute terms may not be very large. To mitigate this, the statistical significance of the differences and the effect size are presented.

RESULTS

Regarding their health condition, 29.8% of the participants reported having a chronic disease. As for the level of capacity that this disease causes, on a scale of 0 to 10, with 0 being very incapacity and 10 no incapacity, participants present a mean of 6.80 and a standard deviation of 3.32. Results revealed that 28.5% of the participants reported a level of incapacity between 0 and 5. Regarding absenteeism, 18.2% of the participants reported that health problems made it difficult to carry out their work. The perception of health and quality of life has a minimum value of 2 and a maximum value of 10, a mean of 7.15 and a standard deviation of 1.80.

Crossing the percentage of participants who have a chronic disease and participants who state that their health affects their performance at work, it was possible to verify that 11.4% of the participants without a chronic disease have high levels of absenteeism and 34.4% of the professionals with a chronic disease have high levels of absenteeism.

Statistically significant gender differences were not found regarding the frequency of chronic disease (X^2 = 0.43; n.s.), 29.6% of women e 28% of men report having a chronic disease.

Statistically significant differences were found between age groups regarding the frequency of chronic disease (X^2 = 24.48; $p<0.001$). 20.7% of professionals aged up to 35 years, 29.5% of professionals between 36 and 50 years and 36.3% of professionals aged 51 years and over report having a chronic disease.

Comparing the workers with and without chronic disease in the different dimensions of healthy workplaces (see table 1), it was found that, in general, there are statistically significant differences between the groups. Professionals with a chronic disease report more difficulties and higher risks, except for the telework dimension, in which there are no statistically significant differences between the groups.

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Table 1. Descriptive Statistics and Comparison analysis according to health condition

	Descriptive statistics				*t*-test & Significance
	$\bar{M}$	*SD*	$\bar{M}$	*SD*	
	Without CD			With CD	
1. Ethics and Values	3.46	0.86	3.25	0.88	$t = 4.47$, $p < .001$
2. Commitment of Leadership	3.28	1.00	3.01	1.05	$t = 4.96$, $p < .001$
3. Employee Involvement	3.74	0.79	3.57	0.86	$t = 3.74$, $p < .001$
4. Psychosocial Risk Factors at Work - Leadership and work content	3.81	0.72	3.61	0.73	$t = 5.19$, $p < .001$
5. Psychosocial Risk Factors at Work– Mental Health	2.99	0.98	3.31	0.89	$t = -6.16$, $p < .001$
6. Physical environment	3.50	0.97	3.26	0.95	$t = 4.68$, $p < .001$
7. Telework	3.44	1.07	3.31	1.12	$t = 1.50$, $p >$ ns
8. Community Engagement	3.67	0.65	2.88	0.70	$t = 3.76$, $p < .001$
9. Personal Health Resources	2.88	0.92	2.72	0.93	$t = 3.18$, $p < .001$

Comparing the workers with low and high absenteeism in the different dimensions of healthy workplaces (see table 2), it was found that, in general, there are statistically significant differences between the groups. Professionals with a high absenteeism report more difficulties and higher risk in all dimensions when compared with Professionals with a low absenteeism.

Table 2. Participants' characteristics and health indicators by health condition

	Descriptive statistics				T-test & Significance
	$\bar{M}$	*SD*	$\bar{M}$	*SD*	
	Low absenteeism			High Absenteeism	
1. Ethics and Values	3.43	0.94	3.24	0.89	$t = 3.41$, $p < .001$
2. Commitment of Leadership	3.24	1.09	3.03	1.01	$t = 3.32$, $p < .001$
3. Employee Involvement	3.74	0.86	3.46	0.85	$t = 5.43$, $p < .001$
4. Psychosocial Risk Factors at Work - Leadership and work content	3.80	0.70	3.54	0.69	$t = 5.91$, $p < .001$
5. Psychosocial Risk Factors at Work– Mental Health	3.00	0.87	3.46	0.86	$t = -7.75$, $p < .001$
6. Physical environment	3.50	0.93	3.15	0.80	$t = 5.93$, $p < .01$
7. Telework	3.44	0.93	3.21	0.96	$t = 2.30$, $p < .05$
8. Community Engagement	3.66	0.70	3.50	0.64	$t = 3.40$, $p < .001$
9. Personal Health Resources	2.88	0.87	2.64	0.63	$t = 4.07$, $p < .001$

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Table 3 shows a comparison of the characterization of health behaviours, stress management and perception of health and quality of life between professionals with and without chronic disease. It was found that professionals with chronic disease present higher risk behaviours when compared to professionals without these health conditions.

Regarding stress management, it is also verified that professionals with chronic disease have more difficulties in managing stress when compared to professionals without chronic disease.

Table 3. Descriptive Statistics and Comparison analysis according to absenteeism

	Without CD	With CD	t/p
Variables (scale of measurement)	Mean (SD)	Mean (SD)	
Health Behaviours	12.35(2.84)	11.41(2.97)	t= 5.95; <.001
Stress Management	2.43(0.72)	2.58(0.75)	t= -3.68; <.001
Health & Quality of Life	7.44(1.62)	6.44(2.02)	t= 9.75; <.001

Table 4 shows a comparison of the characterization of health behaviours, stress management and perception of health and quality of life in relation to absenteeism level.

It was found that professionals with high level of absenteeism present higher risk behaviours and more difficulties in managing stress when compared to professionals with low level of absenteeism.

Table 4. Participants' characteristics and health indicators by level of absenteeism

	Low absenteeism	High Absenteeism	t/p
Variables (scale of measurement)	Mean (SD)	Mean (SD)	
Health Behaviours	12.29(2.87)	11.10(2.88)	t= 6.59; <.001
Stress Management	2.40(0.72)	2.82(0.68)	t= -9.79; <.001
Health & Quality of Life	7.38(1.68)	6.11(1.96)	t= 10.58; <.001

Result revealed that what best explains the health and quality of life of people without chronic diseases is their stress management. The model obtained for participants without chronic disease is robust ($F(15, 616) = 23.53$; $p<.001$) and has an explanatory value of 36%.

It was found that what best explains the health and quality of life of people with chronic illnesses, in terms of healthy workplaces, is Ethics and Values, Commitment of Leadership and Telework, as well as health behaviours and stress management. The model obtained for participants with chronic disease is robust ($F 15, 233) = 18.31$; $p< .001$) and has an explanatory value of 54% (Table 5).

The model has a higher explanatory value for the perception of health and quality of life in participants with chronic disease than in participants without chronic disease. Stress management and health behaviours help explain the perception of health and quality of life for both groups (participants with and without chronic disease). For participants without chronic disease, they are also explained by Employee Involvement, Physical environment, and Community Engagement. In turn, for participants with chronic disease, the perception of health and quality of life is also explained by Gender, Psychosocial Risk Factors at Work - Leadership and work content and Personal Health Resources.

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Table 5. Linear regression for relationship between Health & Quality of Life and sociodemographic characteristics, dimensions of healthy work environments and health behaviours, separately for the group with and without chronic disease

		Non-standard coefficients		Standardized coefficients		
		B	Standard error	*β*	*t*	*p*
Without chronic disease	(Constant)	4.22	0.68		6.18	<.001
	Gender (1 – Female)	0.07	0.12	0.02	0.58	(n.s.)
	Age	-0.01	0.01	-0.04	-1.13	(n.s.)
	Ethics and Values	-0.08	0.14	-0.04	-0.57	(n.s.)
	Commitment of Leadership	0.12	0.12	0.07	1.05	(n.s.)
	Employee Involvement	0.22	0.10	0.11	2.16	<.05
	Psychosocial Risk Factors at Work - Leadership and work content	0.05	0.13	0.02	0.39	(n.s.)
	Psychosocial Risk Factors at Work– Mental Health	-0.11	0.07	-0.07	-1.62	(n.s.)
	Physical environment	0.19	0.07	0.101	2.55	<.01
	Telework	-0.04	0.05	-0.03	-0.75	(n.s.)
	Community Engagement	0.29	0.12	0.11	2.37	<.001
	Personal Health Resources	-0.03	0.07	-0.02	-0.44	(n.s.)
	Stress Management	-0.40	0.09	-0.18	-4.36	<.001
	Health Behaviours	0.16	0.02	0.29	7.71	<.001
With chronic disease	(Constant)	2.18	10.18		1.85	<.05
	Gender (1 – Female)	-0.43	0.22	-0.09	-1.94	<.05
	Age	-0.01	0.01	-0.04	-0.85	(n.s.)
	Ethics and Values	0.12	0.26	0.05	0.44	(n.s.)
	Commitment of Leadership	0.06	0.21	0.03	0.28	(n.s.)
	Employee Involvement	0.07	0.17	0.03	0.39	(n.s.)
	Psychosocial Risk Factors at Work - Leadership and work content	0.49	0.24	0.17	2.00	<.05
	Psychosocial Risk Factors at Work– Mental Health	-0.17	0.12	-0.08	-1.37	(n.s.)
	Physical environment	0.01	0.12	0.00	0.06	(n.s.)
	Telework	0.13	0.09	0.07	1.44	(n.s.)
	Community Engagement	0.19	0.21	0.06	0.90	(n.s.)
	Personal Health Resources	0.25	0.12	0.11	2.06	<.05
	Stress Management	-0.46	0.15	-0.17	-3.00	<.001
	Health Behaviours	0.22	0.04	0.30	5.88	<.001

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DISCUSSION

The results reveal that almost one third of the professionals have a chronic disease. The level of disability is relatively low, however about 28.5% report a reduced capability. About one fifth of the participants report that their health affects their performance and accomplishment of their work. It should be noted that not all participants who report that their health affects their work report having a chronic disease. 11.4% report that they do not have a chronic disease but that their health affects their work. There were no gender differences in relation to the frequency of chronic disease. About age, older professionals are the ones who most often report having a chronic disease. Comparing the workers with and without chronic disease in the different dimensions of healthy workplaces, it was found that, in general, there were statistically significant differences between the groups. Professionals with a chronic Disease report more difficulties and higher risks, except for the telework dimension, in which there are no statistically significant differences between the groups. The same applies to the level of absenteeism, since people who report that their health condition affects the performance of their work present more difficulties and higher risks, with the exception of the dimension of teleworking, in which there are no statistically significant differences between the groups. Sometimes professionals are afraid to report that they have a chronic disease or a disease that disturbs the development of their work. This aspect is very distressing for professionals and affects their performance, work relationships, and may worsen their health status. The European Network for Workplace Health [12] argues that there should be a safe climate that allows professionals to report their health condition without fear of reprisals or discrimination. Many people consider the teleworking experience during the COVID-19 pandemic very positive or at least better than they expected. In addition, many would like to continue some teleworking in the future. Identified challenges include low technologic literacy, team cohesion maintenance and communication while working at a distance, poor limits setting between working and non-working hours. Benefits identified include less travelling time/traffic jams, more time with loved ones, higher autonomy, and greater flexibility [53].

The comparison of health behaviours, stress management and perception of health and quality of life in relation to health conditions and absenteeism level reveals that professionals with chronic disease and professional with high level of absenteeism present higher risk behaviours, less stress management skills and more negative perception about health and quality of live when compared to professionals without chronic disease and to professionals with low level of absenteeism. Professionals with chronic disease or other illnesses that affect their work present a higher risk in terms of health, quality of life and stress management. The Stress management and health behaviours help explain the perception of health and quality of life for both groups (participants with and without chronic disease). For participants without chronic disease, they are also explained by Employee Involvement, Physical environment, and Community Engagement. In turn, for participants with chronic disease, the perception of health and quality of life is also explained by Gender, Psychosocial Risk Factors at Work - Leadership and work content and Personal Health Resources. The results highlight the importance of promoting well-being and managing work-related stress for all professionals [54]. The results showed that professionals with chronic disease highlighted the importance of a psychosocial work environment with fewer risks in terms of the relationship with the leadership and placed greater value on the access to health resources, namely greater investment in health promotion activities and access to health resources outside the organisation, among others.

The multi-level model presented by Guest [10] and Grote and Guest [8] includes antecedents of practitioner well-being and integrates the principles associated with a positive working relationship.

Eurofound [11] focuses on the links between social dialogue, working conditions, quality of work and their impact on organisational performance. Through analysis of six case studies, it concludes that there is a clear link between performance and quality of work and training, skills, and employability. Training emerges as the factor with the greatest impact on performance improvement. Health, safety, and well-being contribute to an increase in performance and productivity of around 20 per cent as they reduce sickness, sickness absence and associated costs. The study concludes that an organisation with well-developed flexible work-life

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balance policies has a positive impact on performance, and leads to greater ease of recruitment and retention, greater dedication of staff when needed, fewer accidents and errors and higher job satisfaction. Chronic disease has a significant impact at the work level in terms of participation, working hours, turnover, and early retirement [55,56].

The impact of Pandemic COVID-19 on the bio-psycho-social health of chronically ill professionals will continue in the post-pandemic period. COVID-19 monopolised health systems and other systems such as the social field, with disease prevention and management taking a back seat. On the other hand, the extent of the after-effects left by COVID-19, namely in terms of early diagnosis, the aggravation of previous illnesses or additional chronic diseases, is still unknown. Health, social and labour systems have a fundamental role in the diagnosis, adjustment, planning and implementation of measures to address the impact of the pandemic in the area of chronic disease now and in the future [57].

A study conducted by [58] with 952 professionals with chronic disease during the COVID-19 pandemic concluded that these professionals showed very high levels of fear, worsening of their health situations, and eating problems. Women showed higher levels of risk. The authors argue that these professionals must have the necessary conditions to work from home and/or have flexibility at work, in order to respect their limitations and allow them not to feel removed from their professional life. Managers and supervisors should consider that working from home in acute periods of illness can promote health and be an alternative to sick leave. In these cases, professionals should be supported and given the opportunity to adapt to work taking into account their health situation [59].

Eurofound [11] concludes that an organization with flexible and well-developed policies that promote work-life balance has a positive impact on performance. In addition, it leads to easier recruitment and retention of professionals, greater dedication of professionals, when necessary, fewer accidents and errors and greater job satisfaction. Promoting the wellbeing, health, and work participation of people with chronic disease will increase their employability, productivity and quality of life. On the other hand, will decrease absenteeism and occupational health costs [58].

The European Network for Workplace Health Promotion [12] makes some recommendations for managers, namely (1) to promote trusting and honest communication between management and professionals about their health status; (2) to assess the specific needs of professionals with chronic disease or other health conditions affecting work; (3) to involve professionals in assessing needs and defining and planning programmes to manage health status at work; (4) to implement integrated actions with well-defined roles that include management, professionals with and without disease, health professionals, social, labour and health authorities among other relevant stakeholders; (5) to ensure maintenance and sustainability of health promotion and wellbeing services and resources, (6) to rigorously and systematically evaluate programme results and implement necessary continuous improvements.

It becomes essential to consider the ecosystem and work environments that influence the health of professionals with chronic disease and consequently influence their quality of life and performance [22, 23, 60].

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