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Healthcare workers' protection and psychological safety during the COVID-19 pandemic in Spain

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Dear Editor in Chief,

We appreciate all the recommendations of the reviewers to improve this manuscript. In this way, we have modified the text with the required enhancements.

The text below describes all improvements.

We would like to thank again you for your consideration throughout the revision process.

Yours faithfully,

The authors.

REVIEWER 1

The alterations made by the author correspond to the presented suggestions. These two details should be reviewed:

1. ...aims, abstract and introduction “to analyse/ to assess”, do not have the same interpretation.

Thank you for noticing. We have checked this wording mistake. We have used “to analyse” for the Aims in the Abstract and at the end of the Introduction.

2. "APA style has been checked and & has been added": A comma is missing before &.

We have checked the use of commas along the text in adherence to APA style.

Also, we have revised all in-text citations and reference list to check appropriateness.

Healthcare workers' protection and psychological safety during the COVID-19 pandemic in Spain

Abstract

Aims: to analyse the relationship between work engagement, sense of coherence, and psychological distress levels in Spanish health professionals who were active during the COVID-19 pandemic lockdown.

Background: Work Engagement and Sense of Coherence can help professionals to cope with work-related psychological distress due to the harsh conditions of the COVID-19 working environment.

Methods: cross-sectional observational study of 1459 healthcare professionals. The Utrecht Work Engagement Scale, the Sense of Coherence Scale and Goldberg's General Health Questionnaire were distributed and analyzed with descriptive and multiple linear regression methods.

Results: High levels of work engagement, especially in the *dedication* dimension, of sense of coherence, in particular in the *meaningfulness* dimension, and psychological distress were obtained. Significant correlations ($p<0.001$) were identified between all the variables.

Conclusions: Work engagement and sense of coherence correlated positively with each other, and both negatively with psychological distress. So, healthcare professionals, despite presenting psychological distress, perceive their work satisfactorily and positively despite the severity of the situation and the harsh conditions.

Implications for Nursing Management: Sense of coherence and work engagement are protective factors against psychological distress. Preventive measures for professionals should go through the dimensionalization of the problem and the adaptation of practical measures for daily management.

Keywords: Healthcare professionals; Work engagement; Sense of coherence; Psychological distress; COVID-19

Introduction

The COVID-19 pandemic has triggered an unprecedented health crisis that has posed a difficult challenge for health systems. The absence of treatment, the ease and speed of contagion, the high figures of affected people, the severity of the disease, and the limitations of resources have made the situation difficult to manage (Walton et al., 2020). Health professionals are working in harsh conditions, under pressure, overloaded, and with a huge sense of vulnerability and lack of protection (Santarone et, 2020). The working environment has been perceived by workers as a threat due to constant exposure to the disease, fear of contagion and transmission of the virus to a family member (Lai et al., 2020). These conditions have a strong impact on the mental health of health workers, causing them anxiety, depression, insomnia (Pappa et al., 2020), post-traumatic stress (Preti et al., 2020), physical and mental exhaustion, as well as fear or emotional disorders (Kang et al., 2020).

Maintaining the psycho-emotional well-being of frontline health workers and building up their resilience is crucial in addressing and containing COVID-19 (Chen et al., 2020). In this sense, Work Engagement (WE) and Sense of Coherence (SOC) are two competencies that can help professionals cope with work-related psychological distress (PD) and contribute to their well-being and health (Malagon-Aguilera et al., 2019).

Schaufeli et al. (2002) described WE as a positive and satisfying attitude related to work that is characterised by vigour, dedication, and absorption. Vigour is characterised by high levels of energy, mental endurance, effort and persistence. Dedication refers to the importance, enthusiasm, inspiration, pride, and challenge that work represents. Absorption is characterised by being totally concentrated and happily absorbed in work, (García-Sierra et al., 2016).

The SOC is described as an ability to understand a situation, perceive it as manageable, and mobilise resources to develop an effective response (Barańczuk, 2019). The SOC is made up of three dimensions, comprehensibility, manageability and meaningfulness. Comprehensibility is the ability to understand and deal with situations. Manageability is the perception of available resources are adequation to the demands. Meaningfulness is the importance of experiences and motivation to fight against challenges (Kretowicz & Bieniaszewski, 2015).

For all of the above, this study aims to analyse the relationship between work engagement, sense of coherence, and psychological distress levels in Spanish health professionals who were active during the COVID-19 pandemic lockdown.

Methods

Design.

A cross-sectional descriptive and analytical study was conducted to obtain a quantitative approach of the concepts studied and explore possible relationships between them. The purpose of the descriptive study was to estimate the magnitude and distribution of the variables at a given time, in addition to measuring other characteristics of the population, such as epidemiological variables. In the analytical part, the variables of interest and potential risk factors were simultaneously collected in a defined population. The prevalence of the results in those exposed to each risk factor was then compared with the prevalence in those not exposed. In this study, an observational approach was followed, which means that the researcher only observed the concepts as described by the participants, without intervention (Grove & Gray, 2018).

Participants.

The study was conducted in Spain, nationwide, including all regions. When data collection was completed, the total number of diagnosed cases of COVID-19 in Spain was 207.634, and 23.190 deaths (Department of Health of the Spanish Government, 2020).

The established inclusion criteria were to be an active healthcare professional who have worked in a clinical setting during the pandemic caused by coronavirus and over 18 years of age. This way, non-active healthcare professionals (retired, on leave, or unemployed) or those who work from home (teachers, researchers, or managers) were excluded. Through a convenience sampling system, a multidisciplinary sample consisting of physicians, nurses and other healthcare professionals was gathered. To determine the sample size, a 95% confidence, 2.6% precision and 15% adjustment for losses were considered, finally obtaining a sample of 1459 professionals.

Instruments

The sociodemographic variables included were sex, age, marital status, level of studies, employment status, professional profile, level of care, type of work centre, and years of experience. These variables were collected through a self-elaborated questionnaire designed for this purpose.

The WE variable was assessed with the Utrecht Work Engagement Scale in its short version, UWES-9 (Schaufeli et al., 2006). This is an assessment questionnaire designed to evaluate WE and consists of nine items that are assessed with a Likert scale from 0 to 6, in which 0 refers to never and 6 is the usual value (always/every day). The nine items were grouped into the three dimensions of WE: vigour, dedication and absorption. The UWES-9 is a validated instrument. For this study, a Cronbach alpha of 0.924 was obtained considering the instrument as a whole, as well as internal consistency indexes of α=0.843 for the vigour dimension, α=0.861 for dedication, and α=0.794 for the absorption dimension.

The SOC variable was assessed with the Sense of Coherence Scale SOC-13 in its Spanish version (Virués-Ortega et al., 2007). It is an assessment instrument made up of thirteen items whose response range evaluates the frequency of certain experiences through a Likert scale of 1 to 7, in which 1 is less frequent and 7 is most common. The scale score range can vary from 13 to 91. Items are grouped into the three dimensions of the SOC: meaningfulness, comprehensibility and manageability. This study obtained a Cronbach's Alpha index of 0.824, considering the instrument as a whole. The internal consistency indexes presented by the different dimensions were α=0.591 for meaningfulness, α=0.690 for comprehensibility, and α=0.611 for manageability.

The PD variable was assessed with Goldberg's General Health Questionnaire (GHQ-12) (Goldberg et al., 1997). This is a self-managed scale made up of twelve items that evaluate the presence of PD. Each of the items consists of a Likert-type response scale of four options, scoring 0 the first two options and 1 point the remaining ones. The total score on the scale can range from 0 to 12 points, being a higher score indicative of a higher level of PD. The internal consistency index obtained in this study was α=0.818.

Procedure

This study was carried out in the context of state of alarm and confinement decreed by the Spanish government as a contingency measure in the face of the spread of the virus. Due to this situation and so as to minimise interpersonal contact and consequent risks, data collection was carried out online through the Qualtrics platform®. Sample selection was carried out through non-probabilistic sampling. The dissemination of the survey was carried out through personal contacts and distribution lists of collaborating professional bodies. Data collection lasted from March 26 to April 26, 2020.

Data analysis

A descriptive analysis of the variables was then carried out using frequency, mean, and standard deviation depending on the type of variable. In order to identify statistically significant differences, bivariate analyses were carried out including Student's T-test, Analysis of Variance ANOVA (with Bonferroni test for multiple comparisons), and correlations, depending on the type of variable. In addition, measures related to the size of effect were included: Cohen's d and Partial Eta Squared. To study the relationship between scales and its dimensions, Pearson's correlations were used. Finally, to analyse the role of WE and SOC as protective factors of PD a multiple linear regression analysis (controlling by sex) using the Enter method was performed. Prior to the analysis, a diagnosis of collinearity was performed, obtaining values of variance inflation factor (VIF)< 3.5 and values of tolerance > 0.2. For its part, the Durbin Watson statistic provided a value of 1,936, being within the recommended range of values to assume the assumption of independence of errors. All statistical analyses were performed with the IBM SPSS 26.0 software.

Ethical considerations

The development of this work complied with all the ethical principles set out in the Helsinki Declaration. Participants were previously informed and gave their consent to voluntarily participate. Participants received written information about the purpose and procedure of the study, as well as

the voluntary nature of participating in the study and assured of their anonymity at all times. At the beginning of the questionnaire, potential participants were requested to answer to two questions confirming they were within the acceptable age (18 years and above) to participate in the study and another tick to confirm they understood the aim and requirements of the study and that they were confirming their agreement to participate in the study. Subjects involved in the study were not exposed to any risk. This study has been approved by the Research Ethics Committee, [redacted] [redacted] Department of Health, reference number [redacted].

Results

Sociodemographic characteristics

The sample consisted of 80.9% of women and 19.1% of men. The average age of the participants stood at 41.03 years (SD=11.21). Sociodemographic characteristics are summarized in **Table 1**.

[Insert table 1]

Work Engagement, Psychological Distress and Sense of Coherence

Table 2 details the mean scores and typical deviations from participants' responses to the questions contained in the UWES-9, GHQ-12, and SOC-13 scales. In the same way, the total scores, as well as those relating to the dimensions that make up each of the instruments, are provided.

[Insert table 2]

Relationship between sociodemographic variables and Work Engagement, Psychological Distress and Sense of Coherence

The results of the bivariate analysis between the overall scores obtained on the scales and each of the sociodemographic variables are detailed in **Table 3**. Significant differences were found in WE ($t=2.328$; $p<0.005$; $d=0.159$), PD ($t=-0.6227$; $p<0.001$; $d=0.197$) and SOC ($t=3.049$; $p<0.005$; $d=0.204$) by sex. As far as the professional profile is concerned, nurses (M=5.67;

SD=2.98) showed significantly higher scores (p<.001) in PD as compared to physicians (M=4.71; SD=3.14) and other healthcare professionals (M=4.84; SD=2.64). However, in view of the SOC, it was the physicians who had significantly (p<.001) higher scores (M=66.68; SD=11.44) as compared to nurses (M=61.93; SD=11.78) and other healthcare professionals (M=62.97; SD=12.81).

[Insert table 3]

Relationship between Psychological Distress, Work Engagement, and Sense of Coherence

Spearman correlation analyses (**Table 4**) showed significant correlations across all scales (p<0.001 in all cases). Thus, moderate and negative correlations were identified between the GHQ-12 and UWES-9 (r -0.412; p<0.001) and between the GHQ-12 and SOC-13 (r -.530; p <.001). Based on the relationship between the UWES-9 and SOC-13 dimensions with the GHQ-12, the results again showed significant correlations (p<0.001) and negative in all cases.

[Insert table 4]

Work Engagement and Sense of Coherence as protective factors in the presence of psychological distress

Table 5 presents the linear regression model, controlling by sex, which studies the role of UWES and SOC-13 as protective factors of PD. This model provided an explained variance rate of 39.3% (F (7)=134.117; p<0.001). Based on sex, the results showed higher levels of PD among women (β=0.612; p<0.001; 95% CI=[0.302, 0.921]).

Regarding the role of the SOC-13 dimensions, the results showed that high scores in comprehensibility (β=-0.177; (<0.001; 95% CI [-0.205, -0.149]) and manageability (β=-0.069; p<0.001; 95% CI=[-0.108, -0.030]) predicted a lower level of PD among healthcare professionals. Finally, and taking into account the role of the UWES-9, higher scores in the vigour dimension (β=- 0.7521; p<0.001; 95% CI=[-0.911, -0.594]) were related to lower levels of PD. In contrast,

high scores in the absorption dimension predicted higher levels of PD (β=0.215; p .007; 95% CI=[0.059, 0.370]).

[Insert table 5]

Discussion

The objective of this study was to describe the SOC, WE and PD of healthcare workers during the COVID-19 pandemic and the relationship between the two variables. The results reveal high levels of WE, especially in the dedication dimension, SOC, in particular in the meaningfulness dimension, as well as PD. Sociodemographic characteristics such as sex, age, marital status, level of study, professional profile, and years of experience were identified, which may influence the SOC, WE and PD of healthcare professionals.

Participants in this study demonstrated a high level of WE and SOC. The most valued WE dimension was dedication, as in the study by Mason et al. (2014). The strong SOC manifested by the participants of this study resembles that described in similar previous studies such as the one by Malagon-Aguilera et al. (2019) with a SOC=67.9 (10.2) or Eriksson et al. (2019) with SOC=61.43 (0.76). Authors such as Ando & Kawano (2018) agreed that the most valued SOC dimension is meaningfulness, as revealed in this study. However, other authors differ by having identified manageability (Dębska et al., 2017) or comprehensibility (Malagon-Aguilera et al., 2019) as the most valued dimensions. On the other hand, the study population presented PD, as in previous similar studies with healthcare professionals (Luo et al., 2020; Shechter et al., 2020).

The most valued WE dimension was dedication. In this sense, healthcare professionals have demonstrated a strong professional commitment to patients during the COVID-19 pandemic, despite adverse difficulties and conditions (Salopek-Žiha et al., 2020). Frontline workers have been subjected to strong care pressure due to increased workload, severity and lack of knowledge about the disease, lack of protective equipment, risk of infection, and risk of contagion to their families (Walton et al., 2020; Santarone et al., 2020; Lai et al., 2020). These harsh conditions have had a negative effect on the mental health of healthcare workers by generating anxiety,

depression, insomnia, PD, post-traumatic stress, and burnout (Preti et al., 2020). Despite this, healthcare professionals have stood firm against COVID-19 by providing the required health care while addressing their own fears, thus demonstrating a strong sense of moral obligation (Ripp et al., 2020), strong vocation and firm values that are associated with these professions. According to Xie et al. (2016) it is expected that people with a strong vocation will be motivated to commit to their profession, since they perceive their personal mission more clearly and focus better on their objectives, with a clear sense of meaning and identity at work that encourages the development of WE (Hirschi, 2012). In particular, Ziedelis (2019) identified that perceiving work as a personal vocation allows predicting the dedication dimension of nurses' WE over the main factors of the work environment.

According to Tehranineshat et al. (2020) professional values generate an ethical climate that improves the quality of life of healthcare professionals and prevents burnout and post-traumatic stress. They have been identified as predictors of care quality and job satisfaction, motivation, organisational attachment, and work commitment (Poorchangizi et al., 2019). Previous studies have described how professional values play an important role in the feeling of fulfillment and reward of nurses, motivating them to work harder, commit to the organisation, and achieve their goals (Tehranineshat et al., 2020). The fact that healthcare professionals have manifested strong professional values could explain the high scores obtained in WE, and in particular in the dedication dimension, despite adverse working conditions (Poorchangizi et al., 2019).

The results of our study reveal a high level of SOC on the part of the participants, especially in the meaningfulness dimension, in reference to the degree to which one feels that life makes emotional sense (Kretowicz & Bieniaszewski, 2015). This perception could reflect the highly significant interpersonal relationships that healthcare professionals establish with patients. According to Mudd et al. (2020) it develops in a context of practical experience, sensitivity, and close relationships which promotes the mental well-being of both professionals and patients. Söderlund (2013) describes the relationship with patients as a significant experience of fulfillment that promotes coherence with life. In this line, Watson's Transpersonal Care theory sees the nurse-patient relationship as a subjective interaction in which the phenomenological fields of both meet

exchange experiences that allow each to broaden their world view. This mutual transformation allows him to identify new meanings and leads them to spiritual growth and harmony (Turkel et al., 2018).

With regard to sociodemographic variables influencing study variables, it was identified that nurses had higher levels of PD, coinciding with the results of previous studies (Lai et al., 2020; Yao et al., 2020). Like Cao et al. (2020) suggested, this influence could be attributable to the variability of the tasks of these professionals and the high number of patients they can assist. In addition, the risk of infection is higher for nurses due to their close and frequent contact with patients (Lai et al., 2020), and they have expressed more negative feelings regarding the pandemic, including concern about their own exposure and contagion to their relatives (Cao et al., 2020). Nursing professionals are more vulnerable to stress (Söderlund, 2013), and their high level of commitment to providing quality care to critical patients has been a major challenge in the pandemic situation (Lai et al., 2020). According to Yao et al. (2020) the higher prevalence of PD among nurses could be due to a lack of knowledge about Covid-19 and its routes of transmission and prevention measures.

On the other hand, in this study, physicians showed a significantly higher level of SOC than other professionals. This result differs from the findings by Schäfer et al. (2018) who found no significant differences between the SOC of physicians and nurses of an Intensive Care Unit. SOC among physicians has been associated with lower levels of burnout (Kawamura et al., 2018) and identified as a protective factor for well-being and life satisfaction (Buddeberg-Fischer et al., 2005), mental health, and against post-traumatic stress disorders (Schäfer et al., 2018).

The results revealed a correlation between WE, SOC, and PD of healthcare professionals. The more satisfying the participants' work experience, the better they valued the adverse experience as manageable and meaningful, and manifested lower levels of PD. These results are consistent with previous studies (Malagon-Aguilera et al., 2019). In addition, the SOC, in particular the comprehensibility and manageability dimensions as well as the vigour dimension of WE, were revealed as protective factors against PD of healthcare professionals. In contrast, the absorption dimension of WE predicted significantly higher levels of PD.

High levels of SOC can protect people from stress and are associated with better health states (del-Pino-Casado et al., 2019). Masanotti et al. (2020) described SOC as a protective factor in working environments against the generated stress, negative affectivity, psychological pressure, and burnout. According to del-Pino-Casado et al. (2019) a strong SOC is associated with less caregiver overload and PD, especially with regard to depression and anxiety. Malagon-Aguilera et al. (2019) identified that nurses with higher levels of SOC have fewer family conflicts related to work, better health, and more WE. Ando et al. (2011) study revealed that SOC helps healthcare professionals cope with moral distress and increases their job satisfaction.

With regard to the limitations of this study, some caution is recommended in the generalisation of the results, as the sample selection procedure was not randomised. A possible bias associated with the uneven distribution of the sample with respect to sex is also recognised, with female participants predominating. Another limitation that should be acknowledge are the moderate Cronbach's Alpha values for the dimensions of the SOC-13 scale obtained in this study. These results indicate a modest internal consistency, so caution is recommended in interpreting the results of SOC.

Conclusions

All three variables were correlated: WE and SOC positively with each other, and both negatively with respect to the PD. It could therefore be said that healthcare professionals, despite presenting PD, perceive their work satisfactorily and positively despite the severity of the situation and the harsh conditions. The participants expressed to be very involved in their work, conveying a feeling of importance, pride, and challenge. Healthcare professionals also understand the magnitude of the pandemic and perceive it as manageable, finding meaning and using resources to develop effective coping strategies.

SOC and WE were revealed as protective factors against the PD of healthcare staff working in the frontline during the COVID-19 pandemic. Although the identified levels of WE and SOC were high, as the pandemic situation worsens and extends in time, interventions by management

teams aimed at maintaining these protective factors are recommended to fight against stress and burnout of workers.

Implications for Nursing Management

To face psychological distress in health workers caused by the health crisis, protection factors have been identified to be provided by institutions such as organisational support, adequacy of the received training, and confidence in prevention equipment and measures. To protect the mental health of healthcare professionals from the impact of the pandemic, institutions should implement interventions aimed at creating a psychologically safe environment, strong leadership, clear organisational strategies for staff well-being, constant communication, and meaningful support for the team. Other proposed interventions include emotional support, aid groups, training in addressing traumatic and stressful situations, training in coping strategies, improving available information, and communication skills.

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Table 1. Sociodemographic variables (n=1459).

Variables	N (%)
Sex	
Male	278 (19.1)
Female	1181 (80.9)
Age [mean (SD)]	41.03 (11.21)
Marital Status	
Single	376 (25.8)
Married or living as a couple	960 (65.8)
Separated/Divorced/Widowed	123 (8.4)
Last completed studies	
Higher Sec. Educ., Vocational Training, or lower	94 (6.5)
University	903 (61.9)
Masters Degree or PhD	462 (31.7)
Employment status	
Part time	179 (12.3)
Full time	1280 (87.7)
Professional profile	
Nurse	1001 (68.6)
Physician	214 (14.7)
Other	244 (16.7)
Level of care	
Primary care	472 (32.3)
Specialised care	987 (67.7)
Type of work centre	
Public	1098 (75.3)
Private/Associated	361 (24.7)
Years of care experience	
0-5 years	281 (19.3)
5-10 years	232 (15.9)
More than 10 years	946 (64.8)

Table 2. Statistical descriptives of the UWES-9, GHQ-12 and SOC-13 scales (n=1459).

Utrecht Work Engagement Scale (UWES-9)		**General Health Questionnaire (GHQ-12)**		**Sense of Coherence Scale (SOC-13)**	
Items	**M (SD)**	**Items**	**M (SD)**	**Items**	**M (SD)**
1. At my work, I feel bursting with energy	3.58 (1.46)	1. Have you been able to concentrate well on what you were doing?	2.71 (0.69)	1. Do you have the feeling that you really don´t care about what is going on around you?	5.99 (1.50)
2. At my job, I feel strong and vigorous	4.01 (1.33)	2. Have your worries made you lose a lot of sleep?	2.97 (0.89)	2. Has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well?	3.71 (1.41)
3. I am enthusiastic about my job	3.92 (1.54)	3. Have you felt that you are playing a useful role in life?	1.63 (0.70)	3. Has it happened that people whom you counted on disappointed you?	4.15 (1.48)
4. My job inspires me	4.04 (1.48)	4. Have you felt capable of making decisions?	2.01 (0.65)	4. Until now your life has had: no clear goals – very clear goals and purpose	5.98 (1.09)
5. When I get up in the morning, I feel like going to work	3.44 (1.72)	5. Have you felt constantly overwhelmed and stressed?	3.14 (0.78)	5. Do you have the feeling that you are being treated unfairly?	4.62 (1.84)
6. I feel happy when I am working intensely	3.87 (1.56)	6. Have you had the feeling that you cannot overcome your difficulties?	2.35 (0.91)	6. Do you have the feeling that you are in an unfamiliar situation and don´t know what to do?	4.46 (1.81)
7. I am proud of the work that I do	4.97 (1.18)	7. Have you been able to enjoy your normal daily activities?	2.89 (0.81)	7. Doing the things you do every day is: a source of deep pleasure and satisfaction – a source of pain and boredom	5.26 (1.40)
8. I am immersed in my work	4.31 (1.28)	8. Have you been able to adequately cope with your problems?	2.38 (0.66)	8. Do you have very mixed-up feelings and ideas?	4.97 (1.83)
9. I get carried away when I´m working	4.19 (1.36)	9. Have you felt unhappy or depressed?	2.65 (0.97)	9. Does it happen that you experience feeling that you would rather not have to endure?	4.57 (2.00)
		10. Have you lost confidence in yourself?	1.79 (0.93)	10. Many people, even those with a strong character, sometimes feel like losers in certain situations. How often have you felt this way in the past?	4.87 (1.44)

		11. Have you thought that you are worthless?	1.33 (0.71)	11. When certain events occurred, have you generally found that: you overestimated or underestimated their importance-you assessed the situation correctly?	3.64 (1.90)
		12. Do you feel reasonably happy considering all the circumstances?	2.33 (0.72)	12. How often do you have the feeling that there is little meaning in the things you do in your daily life?	5.18 (1.59)
				13. How often do you have feelings that you are not sure you can control?	5.34 (1.61)
UWES-9 Total (over 6 points)	4.04 (1.14)	GHQ-12 Total (over 12 points)	5.39 (2.98)	SOC-13 Total (from 13 to 91 points)	62.80 (12.02)
Vigour	3.67 (1.32)			Meaningfulness	22.42 (3.78)
Dedication	4.31 (1.25)			Comprehensibility	21.37 (6.03)
Absorption	4.13 (1.18)			Manageability	18.99 (4.36)

Table 3. Association between sociodemographic variables and Work Engagement, Psychological Distress, and Sense of Coherence (n=1459).

Variables	N (%)	UWES-9			GHQ-12			SOC-13		
		M (SD)	Statistics	d/η^2	M (SD)	Statistics	d/η^2	M (SD)	Statistics	d/η^2
Sex										
Male	278 (19.1)	4.18 (1.14)	2.328*	0.159	3.06 (0.18)	-6.227**	0.197	64.77 (12.07)	3.049*	0.204
Female	1181 (80.9)	4.00 (1.13)			2.91 (0.84)			62.34 (11.96)		
Age [mean (SD)]	41.03 (11.21)	.039			-.131**			.185**		
Marital Status										
Single	376 (25.8)	4.04 (1.08)	.671	0.001	5.36 (2.72)	.234	0.000	60.05 (12.09)	13.803**	0.019
Married or living as a couple	960 (65.8)	4.02 (1.16)			5.38 (3.04)			63.86 (11.65)		
Separated/Divorced/Widowed	123 (8.4)	4.15 (1.16)			5.56 (3.26)			62.80 (12.02)		
Last completed studies										
Higher Sec. Educ., Vocational Training or lower	94 (6.5)	4.14 (1.29)	1.709	0.002	5.22 (2.82)	1.464	0.002	60.80 (13.62)	8.121**	0.011
University	903 (61.9)	3.99 (1.13)			5.49 (3.00)			62.09 (11.75)		
Master's degree or PhD	462 (31.7)	4.10 (1.12)			5.22 (2.98)			64.60 (12.00)		
Employment status										
Part time	179 (12.3)	3.97 (1.19)	-.891	0.070	5.39 (3.04)	-.011	0.000	63.15 (12.21)	.411	0.033
Full time	1280 (87.7)	4.05 (1.13)			5.39 (2.97)			62.75 (11.99)		
Professional profile										
Nurse	1001 (68.6)	4.01 (1.13)	1.494	0.002	5.67 (2.98)	14.483**	0.020	61.93 (11.78)	14.032**	0.019
Physician	214 (14.7)	4.04 (1.13)			4.71 (3.14)			66.68 (11.44)		
Other	244 (16.7)	4.15 (1.18)			4.84 (2.64)			62.97 (12.81)		

Level of care										
Primary care	472 (32.3)	4.04 (1.17)	.169	0.009	5.19 (3.05)	-1.720	0.097	63.47 (12.30)	1.463	0.082
Specialized care	984 (67.7)	4.03 (1.12)			5.48 (2.94)			62.48 (11.87)		
Type of work centre										
Public	1098 (75.3)	4.01 (1.13)	-1.449	0.088	5.53 (3.01)	3.098*	0.188	62.66 (12.12)	-.780	0.047
Private/Associated	361 (24.7)	4.11 (1.15)			4.97 (2.87)			63.23 (11.69)		
Years of care experience										
0-5 years	281 (19.3)	4.07 (1.01)	.443	0.001	5.70 (2.84)	3.640	0.005	59.07 (11.96)	19.150**	0.026
5-10 years	232 (15.9)	4.08 (1.19)			5.64 (2.65)			62.29 (11.43)		
More than 10 years	946 (64.8)	4.02 (1.16)			5.23 (3.09)			64.03 (11.95)		

*p <.005; **p<.001

Table 4. Correlation coefficients between Work Engagement, Psychological Distress, and Sense of Coherence

	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.UWES-9	**--**	.916**	.927**	.884**	-.412**	.404**	.427**	.319**	.302**
2. Vigour		--	.792**	.693**	-.469**	.412**	.375**	.355**	.318**
3. Dedication			--	.738**	-.368**	.378**	.428**	.281**	.283**
4. Absorption				--	-.277**	.308**	.363**	.228**	.219**
5.GHQ-12					--	-.530**	-.324**	-.539**	-.435**
6.SOC-13						--	.863**	.897**	.751**
7. Manageability							--	.666**	.527**
8. Comprehensibility								--	.489**
9. Meaningfulness									--

**$p<.001$

Table 5. Multiple linear regression on Psychological Distress

					β CI 95%	
	β	SE	t	*p*	Inf.	Sup.
Sex (ref. male)	0.612	0.158	3.877	<.001	0.302	0.921
SOC-13. Meaningfulness	0.012	0.021	0.603	.547	-0.028	0.053
SOC-13. Comprehensibility	-0.177	0.014	-12.465	<.001	-0.205	-0.149
SOC-13. Manageability	-0.069	0.020	-3.491	<.001	-0.108	-0.030
UWES-9. Vigour	-0.752	0.081	-9.321	<.001	-0.911	-0.594
UWES-9. Dedication	-0.099	0.090	-1.096	.273	-0.276	0.078
UWES-9. Absorption	0.215	0.079	2.707	.007	0.059	0.370
Constant	12.029	0.411	29.303	<.001	11.224	12.834