

Burnout in Portuguese Healthcare Professionals: An Analysis at the National Level

Burnout em Profissionais da Saúde Portugueses: Uma Análise a Nível Nacional



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ABSTRACT

Introduction: Burnout is a psychological syndrome, characterized by a state of high emotional exhaustion, high depersonalization and low personal accomplishment, which leads to erosion of personal, professional and health values. This study reports the incidence of burnout in Portuguese Healthcare professionals.

Material and Methods: Burnout in Portugal's health professionals was assessed with the Maslach Burnout Inventory - Human Services Survey, using a zero (never) to six (always) ordinal scale, on a sample of 1 262 nurses and 466 physicians with mean age of 36.8 year (SD = 12.2) and 38.7 (SD = 11.0), respectively. Participants came from all national districts (35% Lisbon, 18% Oporto, 6% Aveiro, 6% Setúbal, 5% Coimbra, 5% Azores and Madeira), working in hospitals (54%), Families' Health Units (30%), Personalized Health Units (8%) and other public or private institutions (8%).

Results: Analysis of MBI-HSS scores, stratified by district, revealed that both types of professionals had moderate to high levels of burnout (M = 3.0, SD = 1.7) with no significant differences between the two groups. Vila Real (M = 3.8, SD = 1.7) and Madeira (M = 2.5, SD = 1.5) were the regions where burnout levels were higher and lower, respectively. Burnout levels did not differ significantly between Hospital, Personalized Health Units and Families' Health Centers. Professionals with more years in the function were less affected by Burnout ($r = -0.15$). No significant association was observed with the duration of the working day ($r = 0.04$). The strongest predictor of burnout was the perceived quality of working conditions ($r = -0.35$).

Discussion: The occurrence of the burnout syndrome in Portuguese health professionals is frequent, being associated with a poor working conditions perception and reduced professional experience. The incidence of the burnout syndrome shows regional differences which may be associated with different and suboptimal conditions for health care delivery. Results suggest the need for interventions aimed at improving working conditions and initial job training of health professionals, as requisites for a good professional practice and personal well-being.

Conclusions: At the national level, between 2011 and 2013, 21.6% of healthcare professionals showed moderate burnout and 47.8% showed high burnout. The perception of poor working conditions was the main predictor of burnout occurrence among the Portuguese health professionals.

Keywords: Burnout, Professional; Health Personnel; Portugal.

RESUMO

Introdução: O *burnout* é uma síndrome psicológica, caracterizada por elevada exaustão emocional, elevada despersonalização e baixa realização profissional, que conduz à erosão dos valores pessoais, profissionais e de saúde. Este estudo reporta a prevalência do *burnout* em profissionais de saúde Portugueses.

Material e Métodos: Os níveis de *burnout* foram estimados pelo *Maslach Burnout Inventory - Human Services Survey* numa escala ordinal de zero (nunca) a seis (sempre) pontos. A amostra foi constituída por 1 262 enfermeiros e 466 médicos com médias de idade de 36,8 anos (DP = 12,2) e 38,7 (DP = 11,0), respetivamente. Os participantes foram provenientes de todos os distritos nacionais (35% Lisboa; 18% Porto; 6% Aveiro, 6% Setúbal, 5% Coimbra; 5% regiões autónomas), com atuação em meio hospitalar (54%), centros de saúde (Unidade de Saúde Familiar - 30%; Unidades de Cuidados de Saúde Primários - 8%) e outras instituições públicas/privadas (8%).

Resultados: A análise dos níveis de *burnout* revelou que ambas as categorias profissionais apresentaram níveis moderados a elevados de *burnout* (M = 3,0; DP = 1,7) não sendo significativas as diferenças entre as duas profissões. Vila Real (M = 3,8; SD = 1,7) e a Madeira (M = 2,5; DP = 1,5) são as regiões onde os níveis de *burnout* são mais e menos elevados, respetivamente. Os níveis de *burnout* não diferiram significativamente entre Hospitalares, Unidades de Cuidados de Saúde Personalizados e Unidades de Saúde Familiares. Os profissionais com maior tempo na função são menos acometidos por *burnout* ($r = -0,15$) não ocorrendo associação significativa com a duração da jornada de trabalho ($r = 0,04$). A má qualidade das condições de trabalho foi o melhor preditor do *burnout* ($r = -0,35$).

Discussão: A ocorrência da síndrome de *burnout* em profissionais de saúde portugueses é frequente, estando associada à percepção de más condições de trabalho e à menor duração do tempo de serviço. A incidência de *burnout* apresenta diferenças regionais que podem estar associadas ao aumento do *stress* imposto pelo exercício da profissão em condições sub-ótimas para a prestação dos cui-

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dados de saúde. Os resultados alertam para a necessidade de intervenções para melhorar as condições de trabalho e formação inicial dos profissionais de saúde de forma a garantir a qualidade do serviço prestado aos utentes e o bem-estar pessoal destes profissionais.

Conclusões: A nível nacional, entre 2011 e 2013, 21,6% dos profissionais de saúde apresentaram *burnout* moderado e 47,8% *burnout* elevado. A perceção de más condições de trabalho foi o principal preditor da ocorrência de *burnout* nos profissionais de saúde Portugueses.

Palavras-chave: Esgotamento Profissional; Pessoal de Saúde; Portugal.

INTRODUCTION

Burnout is an English medical term meaning 'burning to exhaustion' and was originally proposed by the American psychoanalyst professor of German origin Herbert Freudenberg¹ having noted it in himself and in his colleagues when working for the *free-clinic movement*. According to Freudenberg's definition, *burnout* is a "state of mental and physical exhaustion caused by one's professional life" referred to a set of clinical signs and symptoms related to physical and emotional collapse occurring upon exhaustion of all the available energy, resources or forces aimed to deal with tasks of 'helping' others. Despite the presence of different theoretical frameworks, the most used in Psychology is the one by Maslach and Jackson.^{2,3} According to these authors, burnout is a multifactorial disorder involving emotional exhaustion, dehumanisation/depersonalisation and poor work achievement that may affect people with occupations that demand constant interaction with others. Burnout syndrome was described by Ferreira and Lucca⁴ as reflecting an ongoing process with feeling of inadequacy and the lack of resources to cope with work. When not properly managed, a strong physical and emotional wear may arise, associated to physical symptoms such as headaches, dizziness, dyspnoea and sleep disorders. It is also associated to psychological disorders with emotional lability, anger and anxiety as well as difficult social interaction. Low productivity and labour conflicts, psychotropic drug-dependence, reduced achievement in work and in personal life, following a spiral of distress, may lead to suicide in severe cases.^{5,6}

According to Gil-Monte⁷ burnout syndrome is a Public Health issue, considering its implications of physical and mental health and its involvement in quality of life. In a 2011 study by the American Academy of Orthopaedic Surgeons, 87% out of more than 2,000 North-American physicians described as severely stressed and in burnout on a regular working day.⁸ Burnout syndrome has been therefore considered a very relevant Occupational Health problem affecting healthcare professionals. Those presenting with burnout syndrome usually have a reduced quality of professional performance, with a higher probability of medical error, higher absenteeism rates, lower commitment with work and with employers, reduced job satisfaction, more frequent sick leaves, higher personal suffering and increased interpersonal conflicts involving supervisors, colleagues and family, alcohol and psychotropic drug abuse and lower levels of physical activity and health lifestyle.^{3,9,10}

The first studies on burnout syndrome exclusively regarded welfare-related professions, such as social assistants, nurses and psychologists.¹¹ A wider range of welfare-related professions (teachers, policemen, firemen, etc.)¹²⁻¹⁴ as well as other non-remunerated

activities showing similar characteristics to remunerated occupations.^{15,16} Ferreira and Lucca⁴ underscored that healthcare professionals are particularly vulnerable to the development of burnout syndrome due to their daily interaction with debilitated/ill patients, apart from dealing with tense and hierarchical relationships in healthcare institutions. Their work schedule format (involving night shift working) is also referred by these authors as a possible contribution to physical, cognitive and emotional overload in healthcare professionals.

Among healthcare professionals, nurses and physicians are clearly vulnerable to the development of burnout syndrome. Although a high level of burnout in healthcare professionals is not a recent conclusion, this is more and more a current issue, considering the amount of studies on burnout syndrome, its causes, effects and prevention strategies regarding healthcare occupations, that have been published over the last few years.¹⁷⁻²⁶ For instance, a recent Portuguese study by Queirós *et al.*²⁵ held in four hospitals in Porto, aimed to identify the burnout predictors in nurses and found that gender, age, years of professional experience, work satisfaction and work/home interaction were significant predictors of the incidence of burnout in these professionals. However, apart from the study by Marcelino *et al.*²⁷ on a group of 153 general practitioners working all over the country, in which a version of a non-previously validated measurement instrument was used, we are not aware of any other study on the evaluation of burnout incidence and its predictors in physicians and nurses nationwide.

It is our view that a comprehensive and representative evaluation of burnout incidence is required in order to support more extensive public interventions in occupational health promotion. Our study aimed to evaluate (1) the levels of burnout in physicians and nurses in different professional contexts nationwide and (2) its association with social, occupational and demographic variables.

MATERIAL AND METHODS

Participants

Physicians and nurses of either gender working in Mainland Portugal and in Azores and Madeira regions were invited to participate in the study, recruited by Occupational Medicine Departments and upon disclosure within professional associations (*Ordem dos Enfermeiros*, *Associação dos Médicos de Família e Clínica Geral*, *Sindicato dos Médicos do Norte*).

The characteristics of the 1,728 professionals that agreed to participate in the study are shown in Table 1.

Participants mostly originated in hospitals and Family Health Units.

Table 1 - Participant characteristics. Portugal, 2011 - 2013.

Variable	Occupation	
	Nurse	Physician
n (%)	1,262 (73)	466 (27)
Gender (% M/F)	17/83	42/58
Workplace (% Hospital/Family Health Unit/Other)	(63/36/1)	(84/12/4)
Age (years; mean \pm standard deviation)	39 \pm 12	37 \pm 9
Length of service (mean \pm standard deviation)	12 \pm 9	11 \pm 8
Weekly hours of work (mean \pm standard deviation)	38.5 \pm 6	43 \pm 8

Only 1,685 participants indicated the municipality/autonomic region where they were working (Table 2).

The participants originated in every Portuguese municipality, mainly in Lisbon (34.5%); Porto (18.1%), Setúbal (6.1%), Aveiro (6.0%), Coimbra (5.6%) and the Azores/Madeira Autonomous Regions (5%).

Assessment instruments

The *Maslach Burnout Inventory – Human Services Survey* (MBI-HSS)²⁸ - a burnout psychological assessment instrument - has been used in more than 95% of the studies on burnout.²⁹ The version of the MBI-HSS used in our study was translated and trans-culturally adapted by the authors to Portugal and Brazil upon authorisation by the copyright holder of the instrument (MindGarden® 1986). The Portuguese version of the MBI-HSS includes 22 ordinal items reflecting three dimensions of burnout: emotional exhaustion (including nine items, as for instance 'Item 1: (I feel emotionally drained by my work) *O meu trabalho deixa-me emocionalmente esgotado*'); depersonalisation (five items, as for instance 'Item 5: (I feel I look after certain patients impersonally, as if they are objects) *Sinto que trato alguns dos meus clientes de forma impessoal*') and lack of personal achievement (eight items, as for instance 'Item 9: (Through my work, I feel that I have a positive influence on people) *Sinto que influencio positivamente a vida das pessoas através do meu trabalho*'). A seven-point ordinal response format was used, ranging from '0 - Never' to '6 - Everyday'. Given the absence of factorial validity when using the original version of the MBI-HSS in our group of participants ($\chi^2/df = 2.4$; CFI = 0.781; GFI = 0.704; TLI = 0.755, RMSEA = 0.114), a five-item short version per each dimension was produced (emotional exhaustion: items 1,3,8,14,20; depersonalisation: items 5,10,11,15,22 and personal achievement: items 9,17,18,19,21), with good factorial validity ($\chi^2/df = 3.6$; CFI = 0.957; GFI = 0.956; TLI = 0.948, RMSEA = 0.027) and high reliability ($\alpha_{\text{Exhaustion}} = 0.87$; $\alpha_{\text{Depersonalisation}} = 0.72$; $\alpha_{\text{Achievement}} = 0.82$). The overall burnout score was obtained using the factor score weights in a factorial model where burnout is defined as a second-order construct which is expressed in first-order dimensions of exhaustion ($\beta = 0.73$, $p < 0.001$), depersonalisation ($\beta = 0.76$, $p < 0.001$) and personal

Table 2 - Percentage distribution (n = 1,685) of participants per district or autonomous region where they are working. Portugal, 2011 - 2013.

District/Region	(%)
Aveiro	6.0
Beja	1.4
Braga	3.5
Bragança	1.4
Castelo Branco	1.0
Coimbra	5.6
Évora	0.6
Faro	3.1
Guarda	0.6
Leiria	2.2
Lisboa	34.5
Portalegre	0.4
Porto	8.1
Autonomous Region of Azores	2.6
Autonomous Region of Madeira	2.4
Santarém	3.1
Setúbal	6.1
Viana do Castelo	1.6
Vila Real	1.3
Viseu	2.1

achievement ($\beta = -0.69$, $p < 0.001$). The overall burnout score was then converted into burnout classes according to the recommendation by Maslach *et al.* (1986): 'With no burnout/mild burnout' for average scores <2 ; 'moderate burnout' for average scores $[2; 3[$ and 'severe burnout' for average scores ≥ 3 .

The sociodemographic characteristics of our participants, their professional careers and workplaces were obtained using a socio-demographic questionnaire.

Procedures

Participants were informed (1) that their participation was voluntary and anonymous, (2) that they could drop-out of the study at any moment, (3) that the study had only scientific objectives with no clinical intervention or individual identification of any kind. Those that agreed to participate were required to respond to a socio-demographic questionnaire and had to complete a battery of psychometric tests. Self-completion questionnaires were used between May 2011 and May 2013, in paper or in a file available from the project's website. Model invariance 'paper x internet' was shown for an equivalent version of the MBI-HSS adapted to college students.¹⁶ Our study was approved by the Ethics Committee of the *Centro Hospitalar Lisboa Norte, EPE* as well as the Ethics Committee of the *Unidade de Investigação em Psicologia e Saúde* at the ISPA-IU.

Data analysis

The psychometric qualities of the MBI-HSS were analysed through the confirmatory factorial analysis and derived statistics through maximum-likelihood estimation using the AMOS (v. 21, SPSS An IBM Company, Chicago, IL) software. Factorial validity of the measurement model was considered when the usual quality indices of adjustment of the model were $\chi^2/df \leq 2$; CFI ≥ 0.90 ; GFI ≥ 0.90 ; TLI ≥ 0.90 ; RMSEA ≤ 0.05 .³⁰ Descriptive and inferential analysis were ranked per district/autonomous region using IBM's SPSS Statistics (v. 21, SPSS An IBM Company, Chicago, IL) software. The comparisons between professionals and districts were made with a two-factor ANOVA upon validity assumption of homoscedasticity of variances. The association between burnout score and the socio-professional context variables was estimated using Pearson's correlation coefficient (r) for quantitative variables and Spearman's correlation coefficient (r_s) for ordinal variables. A 5% level of significance was used for the decision-making regarding the statistical significance of the results.

RESULTS

Levels of burnout in physicians and nurses

The percentage distribution of the levels of burnout and its average level in physicians and in nurses considering the aggregate national estimations is shown in Table 3.

The levels of burnout in physicians and in nurses was compared to its distribution per district and statistically

significant differences were found between districts (F (15,1609) = 2.04; $p < 0.05$, Power = 0.968) showing a borderline significant interaction between the occupation and the district (F (14,1609) = 1.694; $p = 0.051$, Power = 0.908). Nevertheless, no significant differences were found between the average values of burnout in physicians and in nurses (F (1;1609) = 0.212; $p = 0.645$, Power = 0.075) after considering the effects of the district and the interaction between district and occupation. The presence of a significant interaction shows that the average levels of burnout per district were different between nurses and physicians and the separate analysis per district within each professional group is therefore recommended.

The average levels of burnout in physicians and in nurses grouped according to the level of burnout (mild, moderate and severe) into the 20 Portuguese districts and autonomous regions are shown in Fig. 1.

High levels of burnout were found in 10 (50%) and in 13 (65%) of the 20 districts/autonomous regions in physicians and nurses, respectively. The districts in the Northern and in Central region of Portugal showed a higher concentration of severe burnout in nurses.

How to explain burnout?

The analysis of some social and occupational variables allows for the definition of some determinants of burnout in healthcare professionals. A statistically significant and negative correlation with the length of service was found either in nurses ($r = -0.142$, $p = 0.01$) or in physicians ($r = -0.151$; $p < 0.001$) and younger professionals (both physicians and nurses) are more affected by burnout (Fig. 2). However, no significant association between the score of burnout and working hours was observed either in nurses ($r = 0.06$; $p = 0.03$) or in physicians ($r = 0.08$; $p > 0.09$).

The differences in levels of burnout according to working places were not statistically significant either in physicians or in nurses (F (3; 1,622) = 1.319; $p = 0.267$) (Fig. 3).

The variable '*percepção das condições de trabalho*' (perception of working conditions) showed to be the best determinant of burnout in our group of participants. This variable, ranging from '1 - *Muito más*' (Very poor) to '5 - *Muito boas*' (Very good), showed a moderately significant and negative association with the levels of burnout either in nurses ($r_s = -0.34$; $p = 0.01$) or in physicians ($r_s = -0.36$; $p = 0.01$) (Fig. 4).

Finally, as regards the differences between genders, we did not find any significant differences in the average levels

Table 3 - Mean (\pm standard deviation) and distribution of the levels of burnout in physicians and in nurses nationwide per district where they are working. Portugal, 2011 - 2013; n = 1,685.

Burnout	Physician	Nurse
Mean \pm standard deviation	2.9 \pm 1.67	3.0 \pm 1.68
Mild burnout: average score < 2 (%)	32.4	29.9
Moderate burnout: average score [2;3] (%)	24.0	20.8
Severe burnout: average score \geq 3 (%)	43.6	49.4

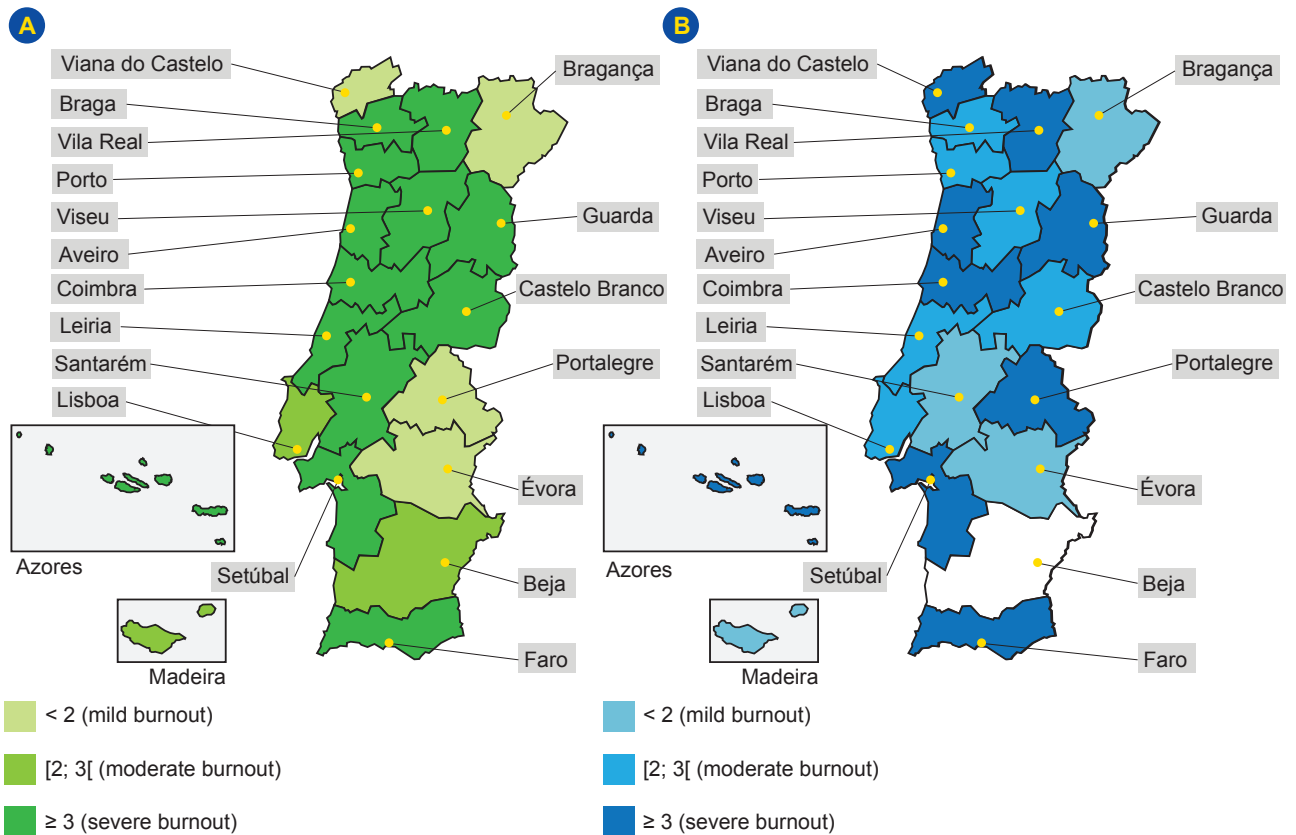


Figure 1 - Average levels of burnout per district or autonomous region, in nurses (A) and in physicians (B) (we were unable to obtain enough sample size in the district of Beja in order to reliably estimate the average level of burnout). Portugal, 2011 - 2013.

of burnout between male ($M = 2.99$, $SD = 1.69$) and female professionals ($M = 3.02$; $SD = 1.67$) ($F(1;1,726) = 0.063$; $p = 0.802$).

DISCUSSION

Our study aimed to analyse the incidence of burnout in physicians and in nurses, involving all the Portuguese districts, including the autonomous regions of Azores and Madeira. The levels of burnout between 2011 and 2013 in Portuguese physicians and nurses were significantly different according to the different Portuguese districts and autonomous regions. A great number of districts with high level of burnout in both professions was found (50% of the districts in physicians and 65% in nurses). The statistic similarity between the average levels of burnout shown by Portuguese physicians and nurses is in line with the study by Tremolada *et al.*²⁶ in which a similar high risk of burnout was found in both professions. The length of service and working conditions were significant predictors of burnout either in physicians or in nurses. Younger professionals described higher levels of burnout when compared to more experienced colleagues. These results are also in line with the results found by Bilge³¹ explained with the fact that less-experienced professionals have not had enough time to develop effective coping strategies to deal with occupational stress and are for that reason more vulnerable to the development of burnout. As regards working

conditions, Ferreira and Lucca⁴ have confirmed our results and those by Bilge³¹ and found that poor working conditions may put healthcare professionals at risk as regards burnout syndrome. This fact may relate to the increased work stress imposing sub-optimal conditions for medical or nurse

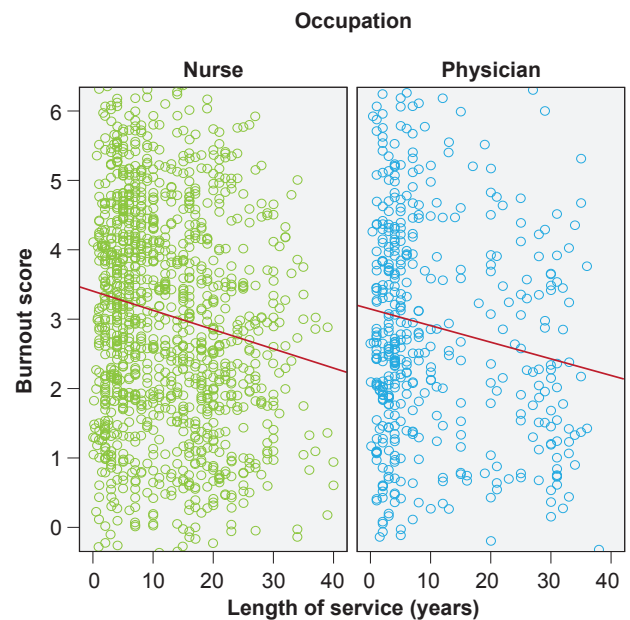


Figure 2 - Association between the overall score of burnout and the length of service (years) in nurses and in physicians

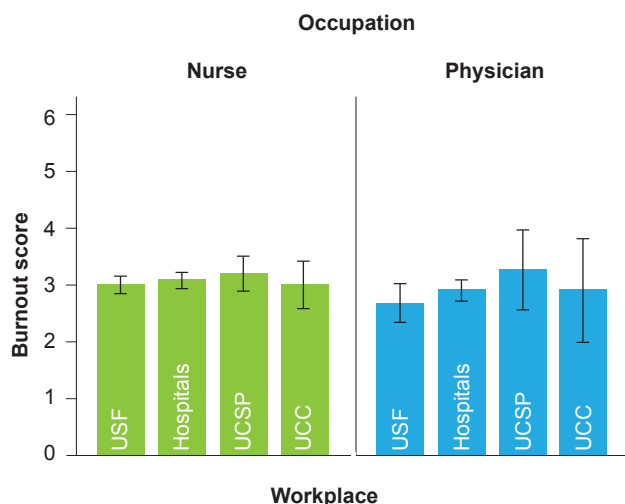


Figure 3 - Average levels (\pm 95% CI) of burnout per place of work in physicians and in nurses

USF: Family Health Unit (Unidade de Saúde Familiar); UCSP: Personalized Family Health Unit (Unidade de Cuidados de Saúde Personalizados); UCC: Long-term Care Unit (Unidade de Cuidados Continuados).

practice.³² In fact, the perception of poor working conditions was the main predictor of the incidence of burnout in our group of Portuguese healthcare professionals.

Our results call the attention to the need for further research on the impact of occupational and organisation characteristics in health, namely on physical and psychological well-being of healthcare professionals, as well as compromising the quality of healthcare. In fact, the research in this area has shown a negative correlation between the dimension of depersonalisation and burnout in healthcare professionals, patients' satisfaction and post discharge recovery time after controlling for severity of patient's condition and demographic factors.³³

CONCLUSIONS

Moderate burnout was described by 21.6% of the participants in our study and severe burnout by 47.8%, between 2011 and 2013.

The levels of burnout in physicians were moderate nationwide although severe burnout levels were found in 10 out of the 20 Portuguese districts/autonomous regions. Severe burnout was found in approximately 44% of the physicians. Moderate average levels of burnout were found in nurses, when compared to the national average level. Nevertheless, severe levels were found in nurses working in 13 out of the 20 districts and autonomous regions. Severe burnout levels were found in around 50% of the nurses.

Perception of poor working conditions was the best predictor of the incidence of burnout either in physicians or in nurses. The results obtained in our study show the need for occupational actions aimed to reduce the incidence of burnout in healthcare professionals, improving their physical and psychological well-being and therefore enhancing the quality of healthcare.

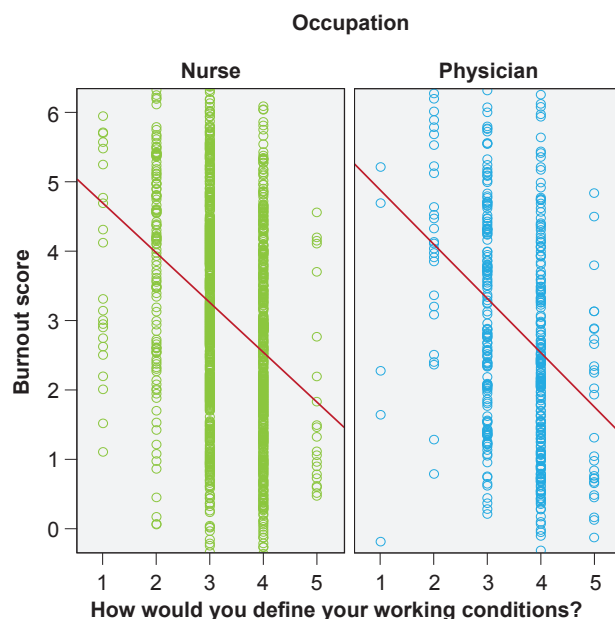


Figure 4 - Average levels of burnout according to the perception of working conditions (ranging from '1 - Very poor' to '5 - Very good')

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HUMAN AND ANIMAL PROTECTION

The authors declare that the followed procedures were according to regulations established by the Ethics Committee of the *Centro Hospitalar Lisboa Norte, EPE* as well as by the Ethics Committee of the *Unidade de Investigação em Psicologia e Saúde do ISPA-IU* and according to the Helsinki Declaration of the World Medical Association.

DATA CONFIDENTIALITY

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

CONFLICTS OF INTEREST

The authors declare that there were no conflicts of interest in writing this manuscript.

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