

Prevalence of Physical Symptoms and Burnout Syndrome in Healthcare Professionals after One Year of Pandemic: Study #COVID-19PS

Short title: Health alterations in health professionals after a year of pandemic: #COVID19PS

Authors:

Esquirol Causa, Jordi^{1,2}

García San Emeterio, Manuel¹

Méndez Olavide, Marta¹

Bayo Tallón, Vanessa¹

Sánchez Aldeguer, Josep^{1,5}

Affiliation:

1 Servei Universitari de Recerca i Innovació en Fisioteràpia. Escoles Universitàries Gimbernat (adscrites a la UAB).

2 Centre Mèdic Teknon (Barcelona).

3 Facultat de Medicina. Universitat Autònoma de Barcelona.

Authorship:

1. Concepción y diseño del manuscrito.

Esquirol Causa, Jordi; García San Emeterio, Manuel; Méndez Olavide, Marta

2. Recogida de datos.

Esquirol Causa, Jordi; Esquirol Herrero, Cristina; Tolosa Ridao, Carles

3. Análisis e interpretación de los datos.

Esquirol Causa, Jordi; Bayo Tallón, Vanessa; Viñas Fuster, Mariona; Sánchez Aldeguer, Josep

4. Redacción, revisión, aprobación del manuscrito remitido

Esquirol Causa, Jordi; García San Emeterio, Manuel; Méndez Olavide, Marta Bayo Tallón, Vanessa; Viñas Fuster, Mariona; Sánchez Aldeguer, Josep

Correspondence author:

Dr. Jordi Esquirol Causa

Avinguda de la Generalitat, 08174 Sant Cugat del Vallès, Barcelona

jordi.esquirol@eug.es

Ethical considerations: Sensitive data from human subjects have not been collected for this study; An anonymous survey has been carried out without containing any personal or sensitive data that allows the identification of the participants. The study has been carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki) for experiments on humans.

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ABSTRACT:

Purpose: The healthcare pressure and emotional tension during the first year of the COVID-19 pandemic have been able to affect the health of healthcare personnel. Physical and psychological symptoms attributed to a work situation and / or COVID-19 infection are described in health professionals. Objective: to analyze the prevalence of physical and psychological symptoms directly or indirectly related to COVID-19 (occupational causes, illness or persistent COVID-19) after a 12-month pandemic.

Methods: #COVID19PS is a cross-sectional analytical study using an ad hoc questionnaire distributed through social media to record physical and psychological symptoms related to COVID-19 in health professionals. Variables: age, sex, geographical origin, profession, characteristics of the work environment, physical symptoms, Maslach test (Burnout) for health professionals. Univariate and bivariate statistical analysis using *t distribution*, *Chi-square*, *ANOVA using IBM-SPSS-v20*.

Results: N=1.159 (78.2% women, 21.8% men; 44.6% <35 years old, 23.9% between 35-45years); 96.5% Spaniards. Professions: 17.1% medicine, 12.7% nursing, 32% physiotherapy, 24.1% occupational therapy, 14.1% others; 47.5% belonged to direct care for COVID-19 patients. 28.2% had passed the disease and 3.7% had it active. 61.6% had physical symptoms (37.6% neurological, 31.7% musculoskeletal, 29.6% general, 20.9% gastrointestinal, 20.3% skin, 19.2% cardiovascular, 16% respiratory (p=0.001)). 96.9% had a medium-high Burnout index (p=0.000): 48.3% with high levels of Emotional Exhaustion, 62.9% with medium-high level of Depersonalization and 74% with medium-low levels of Personal Accomplishment.

Conclusion: all health professions present high rates of physical and burnout consequences of the first year of COVID-19 pandemic.

Keywords: COVID-19; health personnel; Burnout, Psychological; COVID-19 stress syndrome

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Introduction:

The tension and healthcare pressure experienced during the first year of the COVID-19 pandemic has affected the health of sanitary staff. The work pressure of a demanding environment and SARS-CoV2 infection can have a physical and psychological impact.

Health can be directly affected by symptoms of stress (71.5-86.2%), anxiety (44.6-23.2%) or depression (50.4-22.8%).^{1,2,3,4,5} Indirectly, nervousness, gastrointestinal problems, sleeping disorders (23-38.9%), tachycardia, tachypnea, sweating, weakness or fatigue.^{1,3,4,5} These symptoms affect quality of life and job performance, reducing attention and decision-making capacity.³

The concern about becoming infected and transmitting it to the socio-familial environment has contributed to increased stress,^{2,3,6} especially in older professionals.² Family neglect and lack of information about the virus affect psychologically.

Burnout syndrome in health staff is highly prevalent and presents psychosocial problems due to ineffective management of long-term stress. They present decreased energy, increased distance from the tasks to be carried out and reduced personal efficiency.⁶

Having suffered the infection and the possible development of persistent COVID-19 with the perpetuation of physical symptoms (weakness, fatigue)⁷ for >4 (subacute COVID-19) or 12 weeks (chronic COVID-19) is associated with Burnout syndrome.⁸ Persistent COVID-19 prevalence varies: up to 87% of people who have suffered COVID-19 and have been hospitalized present related symptoms 60 days later (55% with >3 symptoms).⁷ In cases without hospitalization, the prevalence could be reduced⁹ to 10% and in many cases, disease pattern does not resolve.⁷ Up to 45% of patients should receive post-infection rehabilitation related to psychological aspects.⁹

At the beginning of the pandemic, the continuity of symptoms due to COVID-19 was attributed to the presence of preexisting comorbidities (asthma, diabetes, autoimmune diseases, etc.). Currently, these conditions appear in sanitary staff without previous illnesses. Associated with a systemic inflammatory component suggesting a prolonged hypoxic component due to not attending medical or emergency services due to: knowing the hospital situation, not considering themselves a risk patient or not being exposed to the stress experienced in emergency services.

Health workers have been exposed directly to the virus in specialized units for patient care with SARS-CoV-2 and in routine clinical practice treating infected patients who came for other health demands.¹⁰ Antibody seroprevalence have been shown in 4.04% of the professionals studied (higher in first-line male health workers <30 years), 1% more than in the voluntary donor population.¹⁰ The presence of symptoms, especially anosmia and ageusia during illness, increases the chances of seroconversion with higher counts of IgG, IgM, or both.¹⁰

Physical symptoms may be due to work pressure in very demanding and stressful environments and/or having passed the illness. The available evidence indicates that between 17-20% of health

workers will not work before 12 months (due to direct infection, persistent COVID-19, Burnout syndrome or other psychological, social or emotional disorders).¹¹

There are no observational data from large studies that determine the degree of involvement in physical symptoms and work overload in health professionals in Spain after two years of the pandemic. This study proposes conducting a survey disseminated by social networks to increase the size of the sample, aiming to analyze the prevalence of physical and psychological symptoms related directly or indirectly to COVID-19 (due to work causes, illness or persistent COVID-19).

Patients and methods:

Study with a cross-sectional analytical design, using an ad hoc questionnaire (Annex1) through a web form distributed by the social media of the organizing and collaborating entity for the registration of physical and psychological symptoms related to the disease and the COVID-19 pandemic in healthcare professionals. Data were collected during the month of February 2021. Study variables: age, sex, geographical origin, profession, characteristics of the work environment, physical symptoms in the environment of the disease, Maslach test (Burnout) for health professionals. Statistical analysis by univariate, bivariate and multivariate through t distribution, Chi-square, ANOVA and linear regression with the IBM-SPSS-v20® computer support.

Ethics: all the recommendations of good research practices have been followed. As it is an anonymous survey, the collection of informed consent from the participants has not been necessary.

Results:

Final sample of 1.159 participants (78.2%♀, 21.8%♂; 44,6% <35years, 23.9% between 35-45%); 96.5% from Spain. Most represented health professions: 17.1% medicine, 12.7% nursing, 32% physiotherapy, 24.1% occupational therapy, 14.1% others. Levels of care: 339 social and healthcare settings (29.2%), 244 hospital (21.1%) and 177 primary healthcare (15.3%); 399 other healthcare levels (34.4%). 606 participants (52.3%) practiced private medicine and 553 (47.7%) public medicine. 47.5% (n=551) provided direct face-to-face care to COVID-19 patients, 2.8 teleworking (n=33) and the remaining 49.6 to non-COVID-19 (n = 575).

35.6% (n=196) of people with face-to-face care had passed the disease, compared to 21.5% (n=131) of non-face care professionals (p-value=0.000) (Table 1). 35.6% of the direct care posts for COVID-19 patients had suffered the disease (n=196), while 21.5% of those that had no direct relationship with patients had experienced it (n=131) (p-value=0.000, Table 1). 40.9% of participants (n=475) had caused sick leave due to COVID-19 in direct relation to the disease (n=342/29.5%) or due to physical problems (n=114/9.8%) or psychic (n=19/1.6%) not directly related to the disease. The remaining 59% (n=684) had not required sick leave.

Among the 1.159 participants, 28.2% had suffered from the disease during the first year of the pandemic: 282 analytically confirmed (24.3%) and 45 with a clinical diagnosis without laboratory confirmation (3.9%). Of the remaining, 625 (53.9%) claimed not to have suffered from the disease and 207 (17.9%) had been confined (due to close contact or suspected COVID-19 infection).

Among the 172 participants who had presented with laboratory-confirmed disease during the study period, 39.0% had presented respiratory symptoms; those who had had a probable diagnosis of COVID-19 had presented respiratory symptoms in 22.2%, while only 6.6% of those who had not had the disease had symptoms of the respiratory system (p-value<.00001; Table 2).

Among all participants (Table 3), 61.6% currently presented some physical symptoms at the time of answering the survey: 37.6% neurological, 31.7% musculoskeletal, 29.6% general, 20.9%

gastrointestinal, 20.3% skin, 19.2% cardiovascular, 16% respiratory, 14.3% otorhinolaryngological, 6.9% ocular ($p=0.001$). In 18% symptoms began in relation to the pandemic (not directly related to COVID-19 infection) and in 8.7% they could be attributable to persistent COVID-19. 68.1% of the occupational therapy professionals presented associated symptoms, followed by nursing (62.6%), physiotherapy (60.4%) and medicine (51%); differences among groups are significant (p -value=.0036). They represent 65.2% of all professions (Table 3).

In the psychological area, 96.9% had medium or high Burnout syndrome (Figure 1). By subscales, 48.3% had high levels of Emotional Exhaustion (16% medium level), 62.9% medium/high levels of Depersonalization and 74% low or medium levels of Personal Accomplishment (p -value=.000). No significant differences were observed in the Burnout level (including subscales) between direct or non-direct care for COVID-19 patients, in sex or in age range.

In the stratified analysis, a higher level of Emotional Exhaustion and Depersonalization is observed in medical professionals, and a higher level of Personal Accomplishment in physiotherapists ($p=0.000$). Face to face personnel for COVID-19 patients present higher levels of Emotional Exhaustion, Depersonalization and lower Personal Accomplishment compared to non-face-to-face care ($p=0.000$) (Table 4, Figure 1).

Discussion:

The tension experienced during the first year of the pandemic, due to the increase in healthcare pressure, the lack of protection resources (or reuse)^{1,2} and social-media coverage, have been able to affect health workers.^{1,2,3,4,6} The health system has become saturated because of the high prevalence of physical or psychological conditions, associated or not with COVID-19 infection, and the COVID-19 infection of health workers (14-26% in Spain)^{1,10}. Professionals have modified their perception of the virus and the pandemic after what they experienced. Directly affecting health¹⁰ and perpetuating itself after successive waves.²

For professionals with a possible prolonged hypoxic component⁸, the recommendations to alleviate physical and psychological symptoms are: regarding physical symptoms, it is recommended to do moderate intensity exercise (60-70%HRmax) during 60 minutes 2 days/week and muscle strengthening.¹¹ Regarding psychological symptoms it is recommended greater access to health care (without having to present a positive PCR), greater multidisciplinary monitoring system ensuring coordination, and to deepen on the investigation and standardization of the procedures to be followed.⁸ Other sources propose more specific measures in function of the scope and degree of affection.⁹

In this study, all health professions present a high Burnout rate after the first year of the pandemic, with high figures for Emotional Exhaustion and Depersonalization with low Personal Accomplishment. Symptomatic physical consequences have been recorded due to the COVID-19 pandemic, either due to the direct impact of the disease or work overload. The most frequent symptoms are neurological and musculoskeletal.

Studies from the first wave in Wuhan indicate that nurses, especially women working on the front line and in tertiary hospitals⁴ with long work shifts,³ have a higher incidence and severity of stress, anxiety and depression compared to other health workers or secondary hospital personnel.⁴ In this study, it is verified that the direct care personnel for COVID-19 patients presents greater affectation in the psychosocial field with greater Emotional Exhaustion and Depersonalization, as well as less Personal Accomplishment. They present statistically significant differences ($p=0.000$) and a mean difference of 4.56 points in the total Maslach test (Burnout test). The isolation of the patients has produced an emotional overload in the health workers as all the emotional support falls on them,

especially nurses and units with high mortality rate.^{1,3} A greater Burnout condition is observed in first-line personnel, consistent with the bibliography showing a higher prevalence of mental health disorders (depression, anxiety, fear, insomnia and Burnout).³ Other research indicates a lower prevalence of Burnout in this healthcare group compared to primary care professionals, probably due to a greater sense of control over the situation arising from the pandemic.⁶

Present studies indicate that the use of psychological help has been minimal by professionals,² increasing the prevalence and dilation of these affectations over time. Promoting and facilitating access to these services, screening for emotional symptoms, and facilitating physical protection measures to reduce stress and long-term consequences have been recommended². To reduce the effects of Burnout, the bibliography recommends: adequate nutrition and rest (during and after the workday), work shifts with stable teams, making it possible to work with COVID-19 and non-COVID-19 patients, and spaced work shifts avoiding overloads.^{1,5,6} Some authors⁵ recommend working days of 6-8 hours (limit of 12 in day shift and 8 in night shift), and a minimum of 24-48 hours of rest between shifts.⁵ Schedule a vacation period every 6-8 weeks during the pandemic. All of this could limit the effects of stress and burnout in healthcare professionals.⁵ Despite the recommendations, these conditions have not been respected for administrative, bureaucratic, health or logistical reasons. It is proposed to facilitate psychological help tools through support groups, increased communication between colleagues and cognitive-behavioral therapy to reduce stress and prevent its consequences.^{1,5,6} The practice of physical activity, deep breathing or mindfulness is recommended to manage it. Other resources such as childcare services facilitate family reconciliation.⁵

61.6% of the respondents presented physical symptoms, figures comparable to those obtained in other studies in COVID-19 patients 4 months after infection.⁷ Among the most prevalent symptoms are neurological (37.6%), musculoskeletal (31.7%) and general (fatigue, dizziness, anorexia) (29.6%). Consistent with other studies^{7,8,9,12} where these conditions represent, together with cardiorespiratory, the most prevalent sequela in post-COVID-19 patients¹². Although official data indicate the prevalence of post-COVID-19 symptoms in 1-2% of cases after 12 weeks, the bibliography highlights the limitations of the figures, since follow-up is carried out exclusively in post-hospitalized patients. This generates a lack of information in less serious cases,^{7,8} such as the sample of this study. Lack of consensus in the definition of persistent COVID-19 generates disparate statistics,^{7,8,9} with prevalence varying between 1-87%. The great symptomatic variability (fluctuations up to 70%) and intensity (89%) make the monitoring, control and support necessary for this population more difficult.⁹

According to professions, they present a higher prevalence of physical symptoms in occupational therapy (68.1%), nursing (62.6%), physiotherapy (60.4%) and medicine (51%). Results consistent with other publications, where these groups show higher seroprevalence for antibodies compared to other health workers with less clinical tasks (laboratory technicians, administrative staff).¹⁰

Physical function has been greatly affected: 31.7% with musculoskeletal affection, similar data (22-27%) to studies in the Italian population up to 60 days after the onset of infection.⁹ The evidence shows a higher physical deconditioning with more prevalent and prolonged alterations over time than in cases of hospitalization for other reasons.^{9,11} General disorders (especially fatigue) or neurological disorders (headaches, weakness, lack of memory and concentration) are the most limiting in the personal, work and social sphere^{7,8,9} and are highly prevalent.

Cardiovascular symptoms are present in 19.2%; the review carried out by Liu¹³ underlines the numerical importance and significance of the alteration of this system by COVID-19 and its possible consequences. It gives special importance to the decrease in the expression of the angiotensin-converting enzyme 2 (ACE2) that would increase the systemic inflammatory state, as well as the effects of angiotensin II that, associated with the neuroimmune alteration, increases the risk of

cardiovascular events (pericarditis, cardiac arrest, arrhythmias and thromboembolic complications).^{8,9,13}

Respiratory conditions show an inflammatory component more directly related to viral infection, which can persistently induce the creation of fibrotic patterns.⁹ In our sample, only 6.65% of those who had not suffered from the disease had respiratory symptoms. However, the following groups had respiratory symptoms: 39% of those who had passed the disease, 22.2% of those who had probably had the disease, and 12% of those who had been confined due to close contact or suspicion of COVID-19 ($p=0.000$).

More than 20% of the analyzed population had suffered gastrointestinal symptoms such as dysphagia, pyrosis, nausea, diarrheal syndrome. Previous evidence^{9,14,15,16} highlights incidences up to 79% during the course of acute infection and hospitalization. However, a great variability is shown with a tendency to a higher incidence of cases of anorexia (39.9-50.2%), diarrhea (2-49.5%),^{14,15} nausea (1-29.4%) and vomiting (3.6-15.9%). Vomiting is clearly more prevalent in the pediatric population (up to 66.7%).¹⁴ These symptoms are explained by the viral infection and the associated neuroimmune response.¹⁴ It has been pointed to an origin in an alteration of the intestinal microbial composition^{15,16} with a decrease in symbiotic bacteria and an increase in opportunistic organisms, due to the infection itself, the taking of medications, hospitalization and intensive care or even a possible previous microbial alteration.^{15,16} These gastrointestinal disturbances can occur during active infection and persist afterwards.¹⁶ These microbial alterations have been related to the severity and mortality from SARS-CoV-2.¹⁵

The sample studied shows a relatively low prevalence (20.3%) of skin conditions compared to the bibliography consulted, where in first-line professionals it reaches 97%.¹⁷ The most prevalent are in the nose and hands due to prolonged use of a mask and high hygiene, use of gloves and long work shifts. Use of latex-free gloves is recommended to reduce them.¹⁷

Although the sample may not be very representative of the total population of health professionals in Spain due to the lack of input filters and the fact that it was only disseminated through social networks, the data extracted can provide information on the degree of work, personal and , psychological and physical that health professionals have experienced in Spain during these two years of pandemic.

Conclusions:

The present study confirms the high prevalence of physical, psychological and burnout symptoms in health workers during the first year of the pandemic. These results show consistency with those exposed in the scientific evidence. Despite this, the lack of unanimity in the adoption of diagnostic criteria and the approach to these alterations has made their correct resolution difficult, considerably affecting the professional performance of the health guild. These results, along with the rest of the evidence, should be considered for the implementation of preventive measures in this labor sector.

References

- 1 Bueno Ferrán M, Barrientos-Trigo S. Cuidar al que cuida: el impacto emocional de la epidemia de coronavirus en las enfermeras y otros profesionales de la salud. *Enferm Clin (Engl Ed)*. 2021 Feb;31:S35-S39. Spanish. doi: 10.1016/j.enfcli.2020.05.006. Epub 2020 May 16. doi: 10.1016/j.enfcli.2020.05.006.
- 2 Coto J, Restrepo A, Cejas I, Prentiss S. The impact of COVID-19 on allied health professions. *PLoS One*. 2020 Oct 30;15(10):e0241328. doi: 10.1371/journal.pone.0241328.
- 3 García-Iglesias JJ, Gómez-Salgado J, MartínPereira J, Fagundo-Rivera J, Ayuso-Murillo D, Martínez-Riera JR, Ruiz-Frutos C. Impacto del SARS-CoV-2 (Covid-19) en la salud mental de los profesionales sanitarios: una revisión sistemática. *Rev Esp Salud Pública*. 2020; 94: 23 de julio e202007088.
- 4 Lai, J, Ma, S, Wang, Y, Cai, Z, Hu, J, Wei, N, et al. Factors associated with mental health outcomes among health careworkers exposed to coronavirus disease 2019. *JAMA Network Open*. 2020; 3(3), e203976. doi: 10.1001/jamanetworkopen.2020.3976
- 5 Rieckert A, Schuit E, Bleijenberg N, Ten Cate D, de Lange W, de Man-van Ginkel JM, et al. How can we build and maintain the resilience of our health care professionals during COVID-19? Recommendations based on a scoping review. *BMJ Open*. 2021 Jan 6;11(1):e043718. doi: 10.1136/bmjopen-2020-043718.
- 6 Raudenská J, Steinerová V, Javůrková A, Urits I, Kaye AD, Viswanath O, et al. Occupational burnout syndrome and post-traumatic stress among healthcare professionals during the novel coronavirus disease 2019 (COVID-19) pandemic. *Best Practice & Research Clinical Anaesthesiology*. 34(3); 2020: 553-560. doi: 10.1016/j.bpa.2020.07.008
- 7 Yelin D, Margalit I, Yahav D, Runold M, Bruchfeld J. Long COVID-19-it's not over until? *Clin Microbiol Infect*. 2021 Apr;27(4):506-508. doi: 10.1016/j.cmi.2020.12.001. Epub 2020 Dec 11. doi: 10.1016/j.cmi.2020.12.001.
- 8 Ladds, E., Rushforth, A., Wieringa, S. et al. Persistent symptoms after Covid-19: qualitative study of 114 "long Covid" patients and draft quality principles for services. *BMC Health Serv Res* 20, 1144 (2020). <https://doi.org/10.1186/s12913-020-06001-y>.
- 9 Maxwell E. NIHR Themed Review: Living with Covid19. October 2020; doi: 10.3310/themedreview_41169.
- 10 Iversen K, Bundgaard H, Hasselbalch RB, Kristensen JH, Nielsen PB, Pries-Heje M, et al. Risk of COVID-19 in health-care workers in Denmark: an observational cohort study. *Lancet Infect Dis*. 2020 Dec;20(12):1401-1408. doi: 10.1016/S1473-3099(20)30589-2. Epub 2020 Aug 3. Erratum in: *Lancet Infect Dis*. 2020 Oct;20(10):e250. doi: 10.1016/S1473-3099(20)30589-2.
- 11 Rooney S, Webster A, Paul L. Systematic Review of Changes and Recovery in Physical Function and Fitness After Severe Acute Respiratory Syndrome-Related Coronavirus Infection: Implications for COVID-19 Rehabilitation. *Phys Ther*. 2020 Sep 28;100(10):1717-1729. doi: 10.1093/ptj/pzaa129.
- 12 Carfi A, Bernabei R, Landi F; Gemelli Against COVID-19 Post-Acute Care Study Group. Persistent Symptoms in Patients After Acute COVID-19. *JAMA*. 2020 Aug 11;324(6):603-605. doi: 10.1001/jama.2020.12603.
- 13 Liu PP, Blet A, Smyth D, Li H. The Science Underlying COVID-19: Implications for the Cardiovascular System. *Circulation*. 2020 Jul 7;142(1):68-78. doi: 10.1161/CIRCULATIONAHA.120.047549.
- 14 Tian Y, Rong L, Nian W, He Y. Review article: gastrointestinal features in COVID-19 and the possibility of faecal transmission. *Aliment Pharmacol Ther*. 2020 May;51(9):843-851. doi: 10.1111/apt.15731.
- 15 Din AU, Mazhar M, Waseem M, Ahmad W, Bibi A, Hassan A, Ali N, Gang W, Qian G, Ullah R, Shah T, Ullah M, Khan I, Nisar MF, Wu J. SARS-CoV-2 microbiome dysbiosis linked disorders and possible probiotics role. *Biomed Pharmacother*. 2021 Jan;133:110947. doi: 10.1016/j.biopha.2020.110947.
- 16 Zuo T, Zhang F, Lui GCY, Yeoh YK, Li AYL, Zhan H, et al. Wan Y, Chung ACK, Cheung CP, Chen N, Lai CKC, Chen Z, Tso EYK, Fung KSC, Chan V, Ling L, Joynt G, Hui DSC, Chan FKL, Chan PKS, Ng SC. Alterations in Gut Microbiota of Patients With COVID-19 During Time of Hospitalization. *Gastroenterology*. 2020 Sep;159(3):944-955.e8. doi: 10.1053/j.gastro.2020.05.048.

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17 Elston DM. Occupational skin disease among health care workers during the coronavirus (COVID-19) epidemic. *J Am Acad Dermatol.* 2020 May;82(5):1085-1086. doi: 10.1016/j.jaad.2020.03.012.

FIGURES

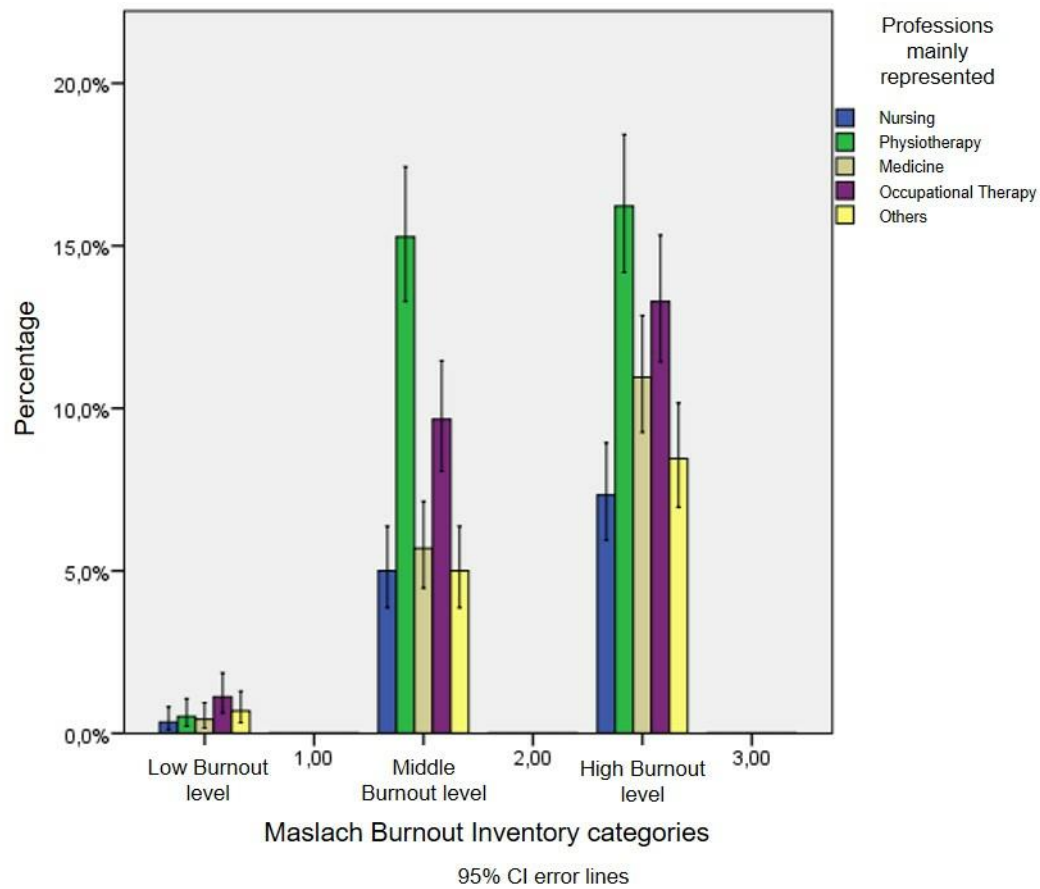


Figure 1 Distribution of Maslach Burnout Inventory results in the most represented professions.

TABLES

		Have you had COVID analytically confirmed or clinically suspected?		Total
		No	Yes	
Are you a direct face-to-face care staff for COVID patients?	No	Count 477	Count 131	608
		% 78,5%	% 21,5%	
	Yes	Count 355	Count 196	551
		% 64,4%	% 35,6%	
Total		Count 832	Count 327	1159
		% 71,8%	% 28,2%	

Table 1: Relationship between professionals providing direct care to COVID-19 patients and having suffered the disease

		Have you had the COVID-19 disease?				Total
		No	No, but I have had to be confined for some period of time due to close contact or suspected COVID-19	Probably yes; clinical diagnosis without laboratory confirmation	Yes, analytically confirmed (PCR, Antigen Test or other analytical means)	
Respiratory symptoms (Yes / No)	No	Count 584	Count 182	Count 35	Count 172	973
		% within "Have you had the COVID-19 disease?" 93,4%	% within "Have you had the COVID-19 disease?" 87,9%	% within "Have you had the COVID-19 disease?" 77,8%	% within "Have you had the COVID-19 disease?" 61,0%	
	Yes	Count 41	Count 25	Count 10	Count 110	186
		% within "Have you had the COVID-19 disease?" 6,6%	% within "Have you had the COVID-19 disease?" 12,1%	% within "Have you had the COVID-19 disease?" 22,2%	% within "Have you had the COVID-19 disease?" 39,0%	
Total		Count 625	Count 207	Count 45	Count 282	1159
		% within "Have you had the COVID-19 disease?" 100,0%	% within "Have you had the COVID-19 disease?" 100,0%	% within "Have you had the COVID-19 disease?" 100,0%	% within "Have you had the COVID-19 disease?" 100,0%	

Table 2: Comparative table of the presence of respiratory symptoms according to a history of COVID-19 (p -value<.00001).

		Do you currently have any type of physical symptoms?			
		Yes		No	
		Count	Line %	Count	Line %
Professions mainly represented	Nursing	92	62,6%	55	37,4%
	Physiotherapy	224	60,4%	147	39,6%
	Medicine	101	51,0%	97	49,0%
	Others	107	65,2%	57	34,8%
	Occupational Therapy	190	68,1%	89	31,9%
	Total	714	61,6%	445	38,4%

Table 3: Presence of physical symptoms in the most represented professions (p -value=.0036).

		Maslach Burnout Inventory - Depersonalization Subscale		Maslach Burnout Inventory - Personal Accomplishment Subscale		Maslach Burnout Inventory - Emotional exhaustion Subscale	
		Mean	St. Dev.	Mean	St. Dev.	Mean	St. Dev.
Professions mainly represented	Nursing	10	7	33	10	27	14
	Physiotherapy	8	6	37	8	24	14
	Medicine	11	8	34	9	30	15
	Occupational Therapy	7	6	34	10	26	14
	Others	10	7	34	10	27	14

Table 4: Maslach Burnout Inventory scores in the most represented professions.