



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Brief Report

Tackling the Pandemic a Year Later: Burnout Among Home Palliative Care Clinicians



Giacomo Ercolani, PSYD^a, Silvia Varani, PSYD^a, Rita Ostan, PhD, Luca Franchini, PSYD, Ahikam David Yaaqovy, MBBS, Raffaella Pannuti, MSc, Guido Biasco, MD[#], and Eduardo Bruera, MD[#]
Training and Research Department (G.E., S.V., R.O., L.F., R.P.), National Tumor Assistance (ANT), Bologna, Italy; Department of Experimental, Diagnostic and Specialty Medicine, University of Bologna (A.D.Y., G.B.), Bologna, Italy; Department of Palliative Care (E.B.), Rehabilitation and Integrative Medicine, Huston, Texas

Abstract

Context. The COVID-19 pandemic strongly challenged healthcare workers, disrupting their work routine and impacting on their professional life. A previous investigation explored levels of burnout and psychological morbidity among palliative care professionals (PCPs) during COVID-19 first wave.

Objective. To update data about burnout and psychological morbidity among PCPs after a year of COVID-19 pandemic.

Methods. The same questionnaires on burnout (Maslach Burnout Inventory, MBI) and psychological morbidity (General Health Questionnaire 12 items, GHQ-12) were administered a year after. Differences in MBI and GHQ-12 scores obtained in the two studies (COVID2020 and COVID2021), as well as distributions of PCPs showing burnout symptoms and psychological morbidity were analyzed and compared. We also explored the association between the three dimensions of burnout and socio-demographic and professional characteristics.

Results. The sample consisted of 145 PCPs (59% physicians and 41% nurses). Response rate (70.4%) was quite similar to the previous study (73.2%). No differences were observed in the frequency of burnout between COVID2021 and COVID2020; the PCPs in COVID2021 reported marginally higher level of EE ($P = .049$) and this result is confirmed in physicians ($P = .010$) while no difference was observed in nurses ($P = .326$). In addition, the percentage of cases showing psychological morbidity significantly decreased.

Conclusion. Our findings show stable levels of burnout and decreasing levels of psychological morbidity among PCPs one year after the onset of the COVID-19 pandemic. However, more research is needed to detail the significance of emotional exhaustion dimension, a variable influenced by the survey. *J Pain Symptom Manage* 2022;63:e349–e356. © 2021 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

Cancer, COVID-19, palliative care, pandemics, burnout, psychological distress

Introduction

In Italy, Coronavirus 2 (SARS-CoV-2) has affected about 4.3 million and caused more than 130,000 deaths since the emergency started.¹ The pandemic has followed a fluctuating trend composed of successive peaks and valleys resulting in containment measures. Vaccination and the reshaping of many daily habits have allowed a progressive resumption of private and

working life activities; however, the worldwide persistence of the Coronavirus 2 continue to engage and worry citizens and authorities.² The outbreak and evolution of the pandemic have strongly challenged the healthcare system and have put a strain on healthcare professionals, especially during the peaks.^{3,4} Hospice and palliative care teams found themselves dealing with demanding and stressful challenges imposed by

Address correspondence to: Silvia Varani, PSYD, Training and Research Department, National Tumor Assistance (ANT), Via Jacopo di Paolo, 36, Bologna, 40128, Italy. E-mail: silvia.varani@ant.it

Accepted for publication: 22 December 2021.

^a These authors have contributed equally to this work.
[#] senior co-mentorship.

the spread of the contagion, lockdown and emergency restrictions.

Patient care during a pandemic is at risk due to extreme pressure on health services.⁵ Home and community palliative care have an important role both in reducing symptoms and caregiver burden for patients with life-threatening diseases and in preventing hospital admissions for patients near the end of life.⁶

Italy was the first western country to be alarmingly affected by COVID-19 and impact of contagion was crushing for the National Health System. In Italy, COVID-19 emergency exerted an unprecedented pressure on palliative care services during the first wave of pandemic in 2020 forcing the palliative care teams to re-organize procedures and guidance according to the changing needs.⁷ Home palliative care for patients with advanced cancer have been even more essential to reducing admissions to hospitals in light of reduced availability of health-care facilities; in addition to the use of personal protective equipment, also telephone consultation and triage were adopted in order to avoid unnecessary contacts.⁸

Although health services have partially stabilized, one year after the beginning of the pandemic PCPs have still to deal with many uncertainties about the general health situation and work organization challenging their ability to adapt and overcome a prolonged stress condition.⁹

In our previous study, conducted during COVID-19 first wave, we observed that changes imposed by pandemic did not negatively affect workers' levels of burnout but seemed to cause a worsening in their psychological distress.¹⁰ The aim of the present brief report is to update our findings by analyzing levels of burnout and psychological morbidity after one year of pandemic, in order to characterize the evolution of these dimensions and the adjustment of PCPs working in the pandemic era.

Methods

Study Design and Sample

The participants were PCPs (physicians and nurses) working for the National Tumor Assistance (ANT) in 11 Italian regions. The results obtained by the investigation conducted on the PCPs after one year from the beginning of the COVID-19 emergency (COVID2021) have been compared with data collected on the PCPs during the first wave of COVID-19 pandemic (COVID2020).¹⁰ The questionnaires and the setting were the same for both the studies. Based on the changes in the composition of the ANT staff during the last year, we can assume that the PCPs participating in COVID2020 and COVID2021 survey were mostly the same (90%). No specific exclusion criteria were set,

with the exception of the PCPs who declined participation.

The workload remained substantially stable for the PCPs participating in COVID2020 and COVID2021 survey: the number and the functional status of patients entering in assistance as well as the total number of home visits/phone calls were quite similar between the first semester of 2020 and 2021 (3144 vs. 3171 patients entering in assistance with a mean Karnofsky Performance Status of 45.7 ± 15.6 vs. 45.5 ± 16.5 in the first semester of 2020 and 2021, respectively; total number of home visits/phone calls: 154,733 vs. 155,361 in the first semester 2020 and 2021, respectively). Participants provided the informed consent for participation to the investigation, data analysis, and publication.

The COVID2021 survey was conducted after one year from the beginning of the COVID-19 outbreak in Italy and data were collected from May 3rd to June 1st 2021. All the PCPs ($n = 206$) working in ANT were invited to participate by an e-mail explaining the aim and the method of the research and reporting the link to the questionnaires. The data were anonymously collected on a web-based platform (www.surveio.com) and the answers were analyzed using the Survio analyzing tool. The investigation was approved by the Ethical Committee of the Central Area of Emilia Romagna (619-2020-OSS-AUSLBO).

The details about COVID2020 have been previously described.¹⁰

Measures

Socio-demographic and professional data. Gender, age, marital status, offspring, profession, years of experience in palliative care and geographical area of work were recorded.

*Maslach Burnout Inventory.*¹¹ Burnout was measured by the Italian version of the Maslach Burnout Inventory (MBI). The questionnaire consists of 22 items investigating different aspects of burnout syndrome ascribable to 3 specific dimensions: emotional exhaustion (EE, 9 items), depersonalization (DP, 5 items) and personal accomplishment (PA, 8 items). The methods for the analysis have been previously described.^{10,12-14}

General Health Questionnaire - 12 items.^{15,16} The questionnaire aimed to identify the risk of developing psychological morbidity in general population. The results have been analysed as formerly described.¹⁰

Statistical Methods

The comparison of the MBI subscale scores and GHQ-12 total score between PCPs participating to the two studies was analysed by Mann-Whitney *U* Test, the distribution of PCPs showing burnout symptoms (MBI) and psychological morbidity (GHQ-12) was compared between the two studies by Chi Square test.

The association between the dimensions of burnout (Emotional Exhaustion, Depersonalization and Personal Accomplishment) and clinicians' characteristics (study, gender, geographical area, age, profession, offspring and years in palliative care) was explored by General Linear Models (GLMs). For each GLM, Model 1 (with all the dependent variables) and Model 2 (considering only the variables resulted significant in Model 1) have been shown. The significance threshold was set at .05.

The statistical analyses were executed by SPSS 27.0 for windows (SPSS Inc., Chicago, IL, USA).

Results

The present study considered the results from the sample of PCPs responding to the COVID2021 survey (145 out of 206 PCPs, response rate 70.4%). In the previous COVID2020 response rate was 73.2% (145 out of 198). All the participants have been working at the home palliative care program for advanced cancer patients.

Table 1 presents a summary of the socio-demographic and professional characteristics of the enrolled PCPs. The COVID2021 sample consisted of 86 physicians (59%) and 59 nurses (41%) while the COVID2020 sample included 77 physicians (53%) and 68 nurses (47%). In both the surveys most of the participants were women (68% – 67%, respectively), married or cohabitant (53% – 59%, respectively), with children (52% – 64%, respectively) and the average age was 42 and 45 years, respectively. The distribution

according the years of work in palliative care and the geographical area of work is quite similar in both surveys (Table 1).

Table 2 shows the comparison of the level of burnout of the PCPs between the two studies according the three different methods previously described: i) considering the MBI subscale scores as continuous variables, the PCPs of COVID2021 showed marginally higher level of EE ($P = .049$) and this result is confirmed in physicians ($P = .010$) while no difference was observed in nurses ($P = .326$); ii) analysing the frequency of burnout according the cut off from the Italian Maslach Manual,¹² and iii) according the definition criteria described by Shanafelt et al.¹³ no differences were observed between COVID2021 and COVID2020.

Table 3 reports the psychological morbidity of the PCPs participating to the two surveys. Analysing the GHQ-12 score as a continuous variable, there was only a trend towards improvement in 2021 ($P = 0.068$). However, analysing the results of GHQ-12 according the cut off indicated in literature, we observed a significant decrease of percentage of the PCPs showing psychological morbidity in COVID2021 study compared to COVID2020 ($P = .002$). Subgroup analysis showed significance among physicians ($P = .011$) and only a trend among nurses ($P = .075$).

Table 4 shows the association between clinicians' characteristics and burnout dimensions (EE, DP and PA subscale scores) by general linear models. The initial model (Model 1) exploited study (COVID2020 vs COVID2021), gender, geographical area, profession (physician vs. nurse), offspring and years of work in

Table 1
Socio-Demographic and Professional Characteristics of PCPs Working in ANT Participating to COVID2020 and COVID2021 Surveys

Study	COVID2020	COVID2021	COVID2020	COVID2021	COVID2020	COVID2021
Profession	PCPs, n = 145	PCPs, n = 145	Physicians, n = 77	Physicians, n = 86	Nurses, n = 68	Nurses, n = 59
Gender						
Men	47 (32%)	48 (33%)	28 (36%)	32 (37%)	19 (28%)	16 (27%)
Women	98 (68%)	97 (67%)	49 (64%)	54 (63%)	49 (72%)	43 (73%)
Age, mean (±St. Dev.)	42 (±12)	45 (±12)	48 (±10)	49 (±10)	36 (±10)	38 (±12)
Marital status						
Unmarried	59 (41%)	49 (34%)	19 (25%)	18 (21%)	40 (59%)	31 (52%)
Married/cohabitant	77 (53%)	86 (59%)	51 (66%)	61 (71%)	26 (38%)	25 (42%)
Separated/divorced	9 (6%)	7 (5%)	7 (9%)	5 (6%)	2 (3%)	2 (3%)
Widowed	-	3 (2%)	-	2 (2%)	-	1 (2%)
With children						
Yes	75 (52%)	93 (64%)	48 (62%)	65 (76%)	27 (40%)	28 (47%)
No	70 (48%)	52 (36%)	29 (38%)	21 (24%)	41 (60%)	31 (52%)
Yrs of work in palliative care						
<2 yrs	27 (19%)	17 (12%)	10 (13%)	6 (7%)	17 (25%)	11 (19%)
2-5 yrs	40 (28%)	27 (19%)	18 (23%)	10 (11%)	22 (32%)	17 (29%)
6-10 yrs	23 (16%)	31 (21%)	11 (14%)	21 (24%)	12 (18%)	10 (17%)
>10 yrs	55 (38%)	70 (48%)	38 (49%)	49 (57%)	17 (25%)	21 (36%)
Geographical area of work ^a						
Northern Italy	49 (34%)	53 (37%)	28 (36%)	33 (38%)	21 (31%)	20 (34%)
Central Italy	32 (22%)	33 (23%)	17 (22%)	21 (24%)	15 (22%)	12 (20%)
Southern Italy	64 (44%)	59 (41%)	32 (42%)	32 (37%)	32 (47%)	27 (46%)

ANT = National Tumor Assistance; PCPs = palliative care professionals.

^aNorthern Italy (Emilia-Romagna and Lombardia); Central Italy (Tuscany, Umbria, Marche, Lazio); Southern Italy (Campania, Basilicata and Puglia).

Table 2
MBI Subscale Scores and Frequency of Burnout Among PCPs Working in ANT Participating in COVID2020 and COVID2021 Surveys

Study Profession	COVID2020 PCPs, n = 145	COVID2021 PCPs, n = 145		COVID2020 Physicians, n = 77	COVID2021 Physicians, n = 86		COVID2020 Nurses, n = 68	COVID2021 Nurses, n = 59	
MBI subscale scores, mean (± St. Dev.)			<i>P</i> ^a			<i>P</i> ^a			<i>P</i> ^a
Emotional exhaustion (EE)	12.7 (±7.2)	15.1 (±7.9)	.049	13.3 (±7.6)	15.6 (±7.1)	.010	11.8 (±6.5)	14.1 (±8.9)	.326
Depersonalization (DP)	7.1 (±4.6)	6.7 (±3.9)	.999	7.0 (±4.6)	6.8 (±7.1)	.890	7.1 (±4.7)	6.7 (±4.4)	.693
Personal accomplishment (PA)	36.4 (±6.1)	35.8 (±6.3)	.722	36.5 (±6.2)	35.3 (±5.9)	.075	36.4 (±6.1)	36.6 (6.9)	.736
PCPs showing burnout symptoms, <i>n</i> ^c (%)			<i>P</i> ^b			<i>P</i> ^b			<i>P</i> ^b
High level of EE (≥24)	12 (8.4%)	22 (15.2%)	.075	7 (9.2%)	13 (15.1%)	.254	5 (7.5%)	9 (15.2%)	.165
High level of DP (≥9)	37 (26.1%)	36 (24.8%)	.811	15 (19.5%)	21 (24.4%)	.448	22 (33.8%)	15 (25.4%)	.306
Low level of PA (≤29)	17 (11.9%)	26 (17.9%)	.150	8 (10.5%)	15 (17.4%)	.208	9 (13.4%)	11 (18.6%)	.424
PCPs showing burnout, <i>n</i> (%) ^d			<i>P</i> ^b			<i>P</i> ^b			<i>P</i> ^b
EE > 27 and/or DP > 10	31 (22.0%)	35 (24.1%)	.666	14 (18.4%)	20 (23.3%)	.451	17 (26.2%)	15 (25.4%)	.926
Low level of PA (<31)	25 (17.2%)	40 (27.6%)	.403	12 (15.6%)	19 (22.1%)	.309	13 (19.1%)	12 (20.3%)	.895

ANT = National Tumor Assistance; MBI = Maslach Burnout Inventory; PCPs = palliative care professionals.

^aStatistical analysis compared the MBI subscale scores between PCPs participating to the two studies by Mann-Whitney *U* Test.

^bStatistical analysis compared the distribution of PCPs showing burnout symptoms between the two studies by Chi Square test.

^ccut off from the Italian Maslach manual by Sirigatti and Stefanile¹¹;

^dcriteria used by Shanafelt et al.¹².

palliative care (0 – 5 vs. 6 or more years) as regressors. Model 2 considered only the variables resulted significant in Model 1. The EE resulted the variable most likely influenced by the survey, with a significant association between COVID2021 and increased level of EE (*P* =.003). Moreover, increasing age was significantly associated to lower level of EE (*P* = <.001) and DP (*P* =.002) and higher level of PA (*P* =.001); PCPs living in Northern Italy showed higher level of EE (*P* =.014) and lower level of PA (*P* <.001) compared to Southern Italy. Analysing profession, physicians had higher level of EE (*P* =.001) and DP (*P* =.031) and lower level of PA (*P* =.032) compared to nurses; finally, PCPs without offspring showed increased level of DP (*P* =.022) respect to PCPs with offspring.

Discussion

The present study compared the levels of burnout and psychological morbidity among physicians and

nurses working in home palliative care during first COVID-19 wave vs. one year after. We investigated whether the deep changes in work routine and the persistence of the health emergency over many months had negative effects on occupational and psychological well-being among palliative care professionals. After one year working in the context of the COVID-19 pandemic, PCPs showed rather stable levels of burnout, with a slight increase in emotional exhaustion. Although this difference was particularly relevant for physicians, both professional groups displayed the same trend. As for psychological morbidity, we observed a decrease in the percentage of professionals showing high levels of psychological distress.

The overall stability of burnout after a year of pandemic suggests that this challenging situation did not play a critical role in PCPs psychological adjustment to the new work routine. Although several studies have highlighted increased levels of burnout in healthcare workers during the pandemic,^{17–20} the present results

Table 3
GHQ-12 Score and Frequency of Psychological Morbidity Among PCPs Working in ANT Participating to COVID2020 and COVID2021 Surveys

Study	COVID2020 PCPs, n = 145	COVID2021 PCPs, n = 145	<i>P</i>	COVID2020 Physicians, n = 77	COVID2021 Physicians, n = 86	<i>P</i>	COVID2020 Nurses, n = 68	COVID2021 Nurses, n = 59	<i>P</i>
GHQ-12 score, mean (±St. Dev.)	18.2 (±4.5)	17.0 (±3.8)	.068 ^a	18.2 (±4.9)	17.0 (±3.5)	.169 ^a	18.3 (±4.1)	17.0 (±4.4)	.058 ^a
PCPs showing psychological morbidity, <i>n</i> (%)	64 (45.1%)	40 (27.6%)	.002 ^b	34 (45.9%)	23 (26.7%)	.011 ^b	30 (45.9%)	17 (28.8%)	.075 ^b

ANT = National Tumor Assistance; GHQ-12 = General Health Questionnaire-12; PCPs = palliative care professionals.

^aStatistical analysis compared the GHQ-12 score between PCPs participating to the two studies by Mann-Whitney *U* Test.

^bStatistical analysis compared the distribution of PCPs showing psychological morbidity (GHQ-12 score > 19) between PCPs participating to the two studies by Chi Square test.

Table 4

General Linear Models Showing the Association Between Burnout Dimensions (EE, DP and PA Subscale Scores, Dependent Variables) and Clinicians' Characteristics. For Each GLM, we reported Model 1 (With All the Dependent Variables) and Model 2 (Considering Only the Variables Resulted Significant in Model 1)

Dependent Variable	Independent Variables	Model 1		Model 2		
		Contrast Estimates	P	Contrast Estimates	P	
Emotional Exhaustion	Study ^a	2.558	.004	2.631	.003	
	Gender ^b	.479	.613	-	-	
	Geographical Area ^c	North vs. Centre	-1.799	.130	-1.870	.110
		North vs. South	-2.406	.022	-2.512	.014
	Age	-.200	.000	-.175	.000	
	Profession ^d	-3.369	.001	-3.261	.001	
	Offspring ^e	-.033	.974	-	-	
Years in palliative care ^f	.884	.473	-	-		
Depersonalization	Study ^a	.015	.976	-	-	
	Gender ^b	.159	.767	-	-	
	Geographical Area ^c	North vs. Centre	-.035	.958	-	-
		North vs. South	-.872	.144	-	-
	Age	-.088	.006	-.079	.002	
	Profession ^d	-1.278	.026	-1.222	.031	
	Offspring ^e	1.136	.045	1.250	.022	
Years in palliative care ^f	-.134	.848	-	-		
Personal Accomplishment	Study ^a	-.846	.245	-	-	
	Gender ^b	.365	.650	-	-	
	Geographical Area ^c	North vs. Centre	2.432	.014	2.450	.012
		North vs. South	3.085	.000	3.093	.000
	Age	.099	.035	.118	.001	
	Profession ^d	1.711	.040	1.755	.032	
	Offspring ^e	-.479	.559	-	-	
Years in palliative care ^f	.545	.592	-	-		

For each regression, the following independent categorical variables have been considered:

^aCOVID2020 (ref) vs. COVID2021;

^bMen (ref) vs Women;

^cNorthern Italy (ref) vs. Central and Southern Italy;

^dPhysicians (ref) vs. Nurses;

^eOffspring (ref) vs. no offspring;

^f0 – 5 yrs (ref) vs. 6 yrs or more.

confirm our previous study conducted during the first wave showing lower level of burnout compared with a pre-COVID-19 investigation in home PCPs.²¹ Moreover, the level of burnout among home PCPs a year later is quite comparable.¹⁰ The awareness of being at the forefront of containing the pandemic along with the sense of responsibility toward their high-risk patients seems to remain steady during the whole period of pandemic continuing to foster their sense of professional satisfaction and personal accomplishment.²²

The available literature on the psychological status of PCPs in a period before the pandemic reported a lower burnout levels compared with other medical discipline.^{12–16} Two studies reported a burnout frequency among PCPs of about 38%,^{23,24} while the prevalence of burnout widely ranged in the previous literature, based on work context, characteristics of the health care professionals and coping strategies.^{25–27} In an emergency situation, the psychological stress level of health workers is expected to increase, thus facilitating the onset of burnout and other distress-related syndromes.^{28,29} A qualitative study on 77 palliative care workers from 41 countries described the huge impact of the COVID-19 pandemic on their ability to deliver services and their

financial status. These professionals reported increased workloads due to emergency situation and declared that pandemic placed them in vulnerable positions affecting their emotional well-being and resulting in distress and burnout.³⁰ A survey on 14 palliative hospital teams in U.S.A. evidenced that COVID-19 exacerbated burnout experienced by the staff members while the use of coping behaviours (devaluation tactic) and external resources (co-workers and supervisor support) were found to have a positive effect on the teams.³¹

Although the number of PCPs showing burnout did not change over months, the mean level of emotional exhaustion (EE) – one of the three dimensions provided for Maslach conceptualization of burnout – seems to be higher after a year of pandemic, making EE the dimension most affected by time. The difference between physicians and nurses in the increase in EE is quite small and one possible explanation lies in different sample size between the two groups of professionals.

Prolonged exposure to work-related problems can lead to occupational physical and emotional exhaustion³² and this psychological response has been more evident in the PCPs working in Northern Italy, where the virus hit hardest in the first wave.

We found a weak association between burnout levels and PCPs age and professions; these results need further investigations considering that the literature on impact of COVID-19 pandemic on burnout appear still limited and conflicting.³³

A combination of factors may be at the root of our findings of overall stability of burnout and decrease in percentage of PCPs showing psychological morbidity. A year after the beginning of COVID-19 outbreak, PCPs showed lower level of psychological morbidity as compared to during the first wave, when the level of distress was significantly higher than in the pre-pandemic period.¹⁰

Workload, long periods of isolation and uncertainty of the future represent psychosocial risk factors that negatively impact the emotional adjustment of healthcare workers, worsening their mental health condition.^{9,34-36} Although the healthcare workers' reaction to a prolonged emergency situation could become chronic stress lowering quality of life and psycho-physical well-being,³⁷⁻³⁹ our results are encouraging and likely reflect the adjustment of healthcare workers, largely related to work re-organization and successful individual self-care also considering that the workload for the PCPs remained substantially stable between the first semester of 2020 and 2021, in terms of number and functional status of patients entering in the home assistance program as well as regarding the number of home visits/phone calls.

Coping strategies are one of the individual, relational and environmental factors able to affect the expression of psychological adjustment among PCPs: their role and impact on the dimensions of burnout has been already observed both in other studies and in our pre-COVID-19 investigation.^{21,40} A recent qualitative study about perception of challenges during the COVID-19 outbreak in a similar PCPs sample reports similar findings.²² This previous study has investigated the type of operational strategies employed by PCPs to cope with the emergency and which of those strategies they found useful.²² Relying on telemedicine tools and the availability of practical and emotional support from colleagues seemed to be the most helpful strategies for physicians and nurses. The use of telephone and video visits may be an important factor, able to affect positively levels of distress if users evaluate this kind of tools as an opportunity rather than a threat to their work.⁴¹ Moreover, some PCPs operating in the home setting were already used to regularly using telemedicine in their clinical practice before the pandemic.

The high level of support and communication within the healthcare team reported in previous studies among PCPs^{42,43} is a known protective factor against development of burnout syndrome and psychological distress.⁴⁴ Summarizing evidence and recommendation for the palliative care response to COVID-19,

Etkind and colleagues⁵ pointed out that facilitating camaraderie among staff is important in order to minimize potential negative effects caused by pandemic; together with improving connectedness and helping workers dealing with stress, this action is an organizational device able to ensure positive adjustment of PCPs. The ability to recognise and deal with events with strong emotional impact, being aware of own coping strategies, enhancing peer support and job resources, facing regularly suffering and death and working in team according to an interdisciplinary approach are all key elements of working in palliative care setting.

Until now, there are no studies on the long-term psychological outcomes among healthcare workers involved in COVID-19 outbreak, and the results about the psychological reaction in the face of precedent emergencies are variable.⁴⁵ Considering we will have to fight with successive waves of the pandemic in the near future, it is mandatory to assess the PCPs psychological distress in order to put in place organizational policies supporting PCPs team and reinforcing their individual coping strategies. In our opinion, the continuous and frequent monitoring of the PCPs' psychological state should be included within the institutional clinical good practice of the National Health System, as the global situation related to the pandemic is constantly changing and this could have consequences for both personal and professional emotional well-being, particularly among healthcare workers. The regular monitoring of burnout is a preventive action that has to be implemented independently by situations of medical emergency.²¹ All the more reason, a constant follow-up is planned to try to better understand the potential causes – or contributing causes – of a modulation of burnout and emotional exhaustion following new peaks of contagion and in a context of post-COVID new normal.

Strengths and Limitation

According to our knowledge, this is the first study involving a consistent number of home PCPs and monitoring the level of burnout before and during the first acute wave and a year after the beginning of the pandemic.

However, findings should be interpreted in the light of some limitations. The PCPs enrolled in the two previous studies were mostly the same who participated to the present study, but the staff composition has undergone some little inevitable changes in the last five years, especially concerning the nursing team.

Moreover, the emotional responses vary according to the phase of the pandemic and a possible weakness of the present study concerns the time of the data collection, coinciding with a period of vaccination and falling of infection rates; for this reason, there is a need to

continue with the monitoring of healthcare workers psychological well-being.

Conclusion

Our findings show stable levels of burnout and decreasing levels of psychological morbidity among PCPs one year after the onset of the COVID-19 pandemic. More research is needed to better characterize populations at elevated risk, and to determine the most useful organizational and individual strategies for mitigation of both burnout and psychological morbidity.

Disclosures and Acknowledgments

The authors declare that they have no conflicts of interest.

The authors received no financial support for the research, authorship, and/or publication of this article.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

References

- Gruppo della Sorveglianza dei Decessi SARS-CoV-2, Epicentro. Caratteristiche Dei Pazienti Deceduti Positivi All'infezione Da SARS-CoV-2 in Italia. 2021. Available at: https://www.epicentro.iss.it/coronavirus/bollettino/Report-COVID-2019_5_ottobre_2021.pdf. Accessed October 30, 2021.
- Ministero della Salute. Covid-19, situation in Italy - Last updated: November 2, 2021. Available at: <https://www.salute.gov.it/portale/nuovocoronavirus/dettaglioContenuti-NuovoCoronavirus.jsp?lingua=english&id=5367&area=nuovoCoronavirus&menu=vuoto>. Accessed November 4, 2021.
- Danet Danet A. Psychological impact of COVID-19 pandemic in Western frontline healthcare professionals. A systematic review. *Med Clínica (English Ed)* 2021;156:449–458.
- Salari N, Khazaie H, Hosseinian-Far A, et al. The prevalence of stress, anxiety and depression within front-line healthcare workers caring for COVID-19 patients: a systematic review and meta-regression. *Hum Resour Health* 2020;18:100.
- Etkind SN, Bone AE, Lovell N, et al. The role and response of palliative care and hospice services in epidemics and pandemics: a rapid review to inform practice during the COVID-19 pandemic. *J Pain Symptom Manage* 2020;60:e31–e40.
- Gomes B, Calanzani N, Curiale V, McCrone P, Higginson IJ. Effectiveness and cost-effectiveness of home palliative care services for adults with advanced illness and their caregivers. *Cochrane Database Syst Rev* 2013: CD007760.
- Costantini M, Sleeman KE, Peruselli C, Higginson IJ. Response and role of palliative care during the COVID-19 pandemic: a national telephone survey of hospices in Italy. *Palliat Med* 2020;34:889–895.
- Porzio G, Cortellini A, Bruera E, et al. Home care for cancer patients during COVID-19 pandemic: the double triage protocol. *J Pain Symptom Manage* 2020;60:e5–e7.
- Coco M, Guerrero CS, Santisi G, et al. Psychosocial impact and role of resilience on healthcare workers during COVID-19 pandemic. *Sustainability* 2021;13:7096.
- Varani S, Ostan R, Franchini L, et al. Caring advanced cancer patients at home during COVID-19 outbreak: burnout and psychological morbidity among palliative care professionals in Italy. *J Pain Symptom Manage* 2021;61:e4–e12.
- Maslach C, Jackson SE. The measurement of experienced burnout. *J Organ Behav* 1981;2:99–113.
- Sirigatti S, Stefanile C. MBI maslach burnout inventory: adattamento e taratura per l'Italia. *MBI Maslach Burnout Inventory. Manuale*. Firenze: OS Organizzazioni Speciali; 1993. p. 33–42.
- Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Arch Intern Med* 2012;172:1377–1385.
- Reddy SK, Yennu S, Tanco K, et al. Frequency of burnout among palliative care physicians participating in a continuing medical education course. *J Pain Symptom Manage* 2020;60:80–86.e2.
- Endicott J, Nee J, Harrison W, Blumenthal R. Quality of life enjoyment and satisfaction questionnaire: a new measure. *Psychopharmacol Bull* 1993;29:321–326. Available at: <https://pubmed.ncbi.nlm.nih.gov/8290681/> Accessed October 1, 2020.
- Politi PL, Piccinelli M, Wilkinson G. Reliability, validity and factor structure of the 12-item General Health Questionnaire among young males in Italy. *Acta Psychiatr Scand* 1994;90:432–437.
- Bradley M, Chahar P. Burnout of healthcare providers during COVID-19. *Cleve Clin J Med* 2020.
- Hu D, Kong Y, Li W, et al. Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: a large-scale cross-sectional study. *EClinicalMedicine* 2020;24:100424.
- Gündoğmuş İ, Ünsal C, Bolu A, et al. The comparison of anxiety, depression and stress symptoms levels of healthcare workers between the first and second COVID-19 peaks. *Psychiatry Res* 2021;301:113976.
- Miguel-Puga JA, Cooper-Bribiesca D, Avelar-Garnica FJ, et al. Burnout, depersonalization, and anxiety contribute to post-traumatic stress in frontline health workers at COVID-19 patient care, a follow-up study. *Brain Behav* 2021;11:e02007.
- Ercolani G, Varani S, Peghetti B, et al. Burnout in home palliative care: what is the role of coping strategies? *J Palliat Care* 2020;35:46–52.
- Franchini L, Varani S, Ostan R, et al. Home palliative care professionals perception of challenges during the Covid-19 outbreak: a qualitative study. *Palliat Med* 2021;35:862–874.
- Mampuya WA, Matsuo Y, Nakamura A, Hiraoka M. Evaluation of the prevalence of burnout and psychological morbidity among radiation oncologist members of the Kyoto Radiation Oncology Study Group (KROSG). *J Radiat Res* 2017;58:217–224.
- Shanafelt TD, West CP, Sinsky C, et al. Changes in burnout and satisfaction with work-life integration in physicians

- and the general US working population between 2011 and 2017. *Mayo Clin Proc* 2019;94:1681–1694.
25. Dunwoodie DA, Auret K. Psychological morbidity and burn-out in palliative care doctors in Western Australia. *Intern Med J* 2007;37:693–698.
 26. Ramirez A, Graham J, Richards M, et al. Burnout and psychiatric disorder among cancer clinicians. *Br J Cancer* 1995;71:1263–1269.
 27. Lepnum R, Lockhart WS, Keegan D. A measure of daily distress in practising medicine. *Can J Psychiatry* 2009;54:170–180.
 28. Pappa S, Ntella V, Giannakas T, et al. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: a systematic review and meta-analysis. *Brain Behav Immun* 2020;88:901–907.
 29. Asai M, Morita T, Akechi T, et al. Burnout and psychiatric morbidity among physicians engaged in end-of-life care for cancer patients: a cross-sectional nationwide survey in Japan. *Psychooncology* 2007;16:421–428.
 30. Pastrana T, De Lima L, Pettus K, et al. The impact of COVID-19 on palliative care workers across the world: a qualitative analysis of responses to open-ended questions. *Palliat Support Care* 2021;19:187–192.
 31. Finuf KD, Lopez S, Carney MT. Coping through COVID-19: a mixed method approach to understand how palliative care teams managed the COVID-19 pandemic. *Am J Hosp Palliat Care* 2021.
 32. Guseva Canu I, Marca SC, Dell’Oro F, et al. Harmonized definition of occupational burnout: a systematic review, semantic analysis, and Delphi consensus in 29 countries. *Scand J Work Environ Health* 2021;47:95–107.
 33. Lasalvia A, Amaddeo F, Porru S, et al. Levels of burn-out among healthcare workers during the COVID-19 pandemic and their associated factors: a cross-sectional study in a tertiary hospital of a highly burdened area of north-east Italy. *BMJ Open* 2021;11:e045127.
 34. Giorgi G, Lecca LI, Alessio F, et al. COVID-19-related mental health effects in the workplace: a narrative review. *Int J Environ Res Public Health* 2020;17:7857.
 35. Theorell T. COVID-19 and working conditions in health care. *Psychother Psychosom* 2020;89:193–194.
 36. Heath C, Sommerfield A, von Ungern-Sternberg BS. Resilience strategies to manage psychological distress among healthcare workers during the COVID-19 pandemic: a narrative review. *Anaesthesia* 2020;75:1364–1371.
 37. Cai Z, Cui Q, Liu Z, et al. Nurses endured high risks of psychological problems under the epidemic of COVID-19 in a longitudinal study in Wuhan China. *J Psychiatr Res* 2020;131:132–137.
 38. Aronsson G, Theorell T, Grape T, et al. A systematic review including meta-analysis of work environment and burnout symptoms. *BMC Public Health* 2017;17:264.
 39. Lee AM, Wong JG, McAlonan GM, et al. Stress and psychological distress among SARS survivors 1 year after the outbreak. *Can J Psychiatry* 2007;52:233–240.
 40. Lenzo V, Indelicato F, Grisolia E, Toffle ME, Quattropani MC. The burnout syndrome in palliative home care workers: the role of coping strategies and metacognitive beliefs. *Mediterr J Clin Psychol* 2016;4.
 41. Berg-Beckhoff G, Nielsen G, Ladekjær Larsen E. Use of information communication technology and stress, burnout, and mental health in older, middle-aged, and younger workers – results from a systematic review. *Int J Occup Environ Health* 2017;23:160–171.
 42. Nestor S, O’ Tuathaigh C, O’ Brien T. Assessing the impact of COVID-19 on healthcare staff at a combined elderly care and specialist palliative care facility: a cross-sectional study. *Palliat Med* 2021;35:1492–1501.
 43. Lai J, Ma S, Wang Y, et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019. *JAMA Netw Open* 2020;3:e203976.
 44. Velando-Soriano A, Ortega-Campos E, Gómez-Urquiza JL, et al. Impact of social support in preventing burnout syndrome in nurses: a systematic review. *Japan J Nurs Sci* 2020;17:e12269.
 45. Busch IM, Moretti F, Mazzi M, Wu AW, Rimondini M. What we have learned from two decades of epidemics and pandemics: a systematic review and meta-analysis of the psychological burden of frontline healthcare workers. *Psychother Psychosom* 2021;90:178–190.