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COVID-19 Content

Caring Advanced Cancer Patients at Home During COVID-19 Outbreak: Burnout and Psychological Morbidity Among Palliative Care Professionals in Italy



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Abstract

Context. Providing palliative care (PC) at home for patients with advanced cancer has become essential during the COVID-19 emergency. Nevertheless, the home PC professionals (PCPs) faced a challenging situation because of increased number of discharged patients, reduced availability of health-care facilities, and physical/relational barriers between them and patients.

Objectives. This study aimed to investigate the impact of COVID-19 pandemic on burnout and psychological morbidity among home PCPs in Italy.

Methods. One hundred and ninety-eight PC physicians and nurses working in home assistance in Italy were invited to participate. The results obtained by the investigation conducted during the COVID-19 emergency (COVID2020) were compared with data collected in 2016 in the same setting (BURNOUT2016). The questionnaires (socio-demographics, Maslach Burnout Inventory and General Health Questionnaire-12) were the same for both the surveys. The PCPs participating in COVID2020 survey ($n = 145$) were mostly the same (70%) who participated in the BURNOUT2016 study ($n = 179$).

Results. One hundred and forty-five PCPs participated in the study (response rate 73.2%). During the COVID-19 emergency, home PCPs presented a lower burnout frequency ($P < .001$) and higher level of personal accomplishment than in 2016 ($P = .047$). Conversely, the risk for psychological morbidity was significantly higher during the pandemic ($P < .001$).

Conclusions. In the age of COVID-19, the awareness of being at the forefront of containing the pandemic along with the sense of responsibility toward their high-risk patients may arouse PCPs' psychological distress, but, on the other hand, this condition may improve their sense of professional satisfaction and personal accomplishment. *J Pain Symptom Manage* 2021;61:e4–e12. © 2020 American Academy of Hospice and Palliative Medicine. Published by Elsevier Inc. All rights reserved.

Key Words

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

Key message

This article investigates burnout and psychological morbidity among Italian palliative care professionals during the COVID-19 pandemic. Results indicate being at the forefront of containing the pandemic may arouse palliative care professionals' psychological distress, but, on the other hand, this condition may improve their sense of professional satisfaction and personal accomplishment.

Introduction

COVID-19, caused by novel coronavirus severe acute respiratory syndrome coronavirus-2, emerged in Wuhan, China, in December 2019. On March 11th, it was declared a pandemic by the World Health Organization.¹ The Italian outbreak began on February 21st in the Lombardy region (northern Italy) and rapidly diffused across the country, tragically overwhelming the National Health Care System capacity.^{2,3}

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During the pandemic, home supportive and palliative care (PC) for patients with advanced cancer have been even more essential to limit the extent of the disease, reducing admissions to hospitals, maintaining symptom control, and ensuring psychological support for patients and family.⁴ No less significant, PC professionals (PCPs) used their communication skills to talk appropriately with patients and their family, where the fear and the anxiety due to this period might worsen symptoms.⁵

With the spread of the pandemic and the lockdown in Italy, home PCPs had to face with a challenging situation because of increased number of discharged patients and, at the same time, reduced availability of health-care facilities.^{6–8} In addition, the poor knowledge about the virus, the lack of personal protective equipment, and the procedures to reduce the risk of infection have created physical and relational barriers between PCPs and patients.^{9,10} Consequently, the PCP's daily work routine became slower, more complex, and more demanding. Anxiety, overwork, and isolation can cause worrying consequences that negatively impact on their physical and psychological well-being, leading to burnout syndrome and other mental health concerns.¹¹ Stressful events might otherwise result in individual growth, involving individual resources and fostering personal accomplishment (PA).

Burnout syndrome is defined as a state of mental and/or physical exhaustion caused by prolonged exposure to excessive and prolonged work-related stress and has become a relevant and widely described psychosocial problem among PCPs.^{12–15} Burnout in health-care professionals has been frequently associated to psychological morbidity, a dimension that may early indicate the onset of major depressive, anxiety, and somatization disorders.^{12,15–17}

The aim of the present study was to investigate the impact of COVID-19 pandemic on burnout and psychological morbidity in home PCPs in Italy. Physicians and nurses working in PC setting from high- and low-impact areas of COVID-19 infections were enrolled in this survey to provide a comprehensive picture of the Italian situation. To describe the variation due to the COVID-19 emergency, we have compared these results with our previous survey,¹⁴ carried out four years ago on a similar sample of PCPs.

Methods

Study Design and Sample

The participants were PCPs (physicians and nurses) working for the National Tumor Assistance (ANT) in 11 Italian regions. ANT is a nonprofit organization, which has been providing since 1978 free-of-charge

specialized PC at home to patients with advanced cancer. The results obtained by the investigation conducted on the PCPs during the COVID-19 emergency (COVID2020) have been compared with data collected on the PCPs working in the same organization in 2016 (BURNOUT2016) and partially published in 2019.¹⁴ The questionnaires were the same for both the studies. Based on the changes in the composition of the ANT staff during the last four years, we can assume that the PCPs participating in COVID2020 survey were mostly the same (70%) who participated in the BURNOUT2016 study. No specific exclusion criteria were set, with the exception of the PCPs who declined participation. The research was carried out in full accordance with the Declaration of Helsinki and the Good Clinical Practice. Participants provided the informed consent to the investigation, data analysis, and publication.

COVID2020. The survey was conducted during the phase II of the lockdown for the COVID-19 outbreak in Italy, and data were collected from May 11th to June 2nd, 2020. All the PCPs ($n = 198$) working in ANT were invited to participate by an email 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).

BURNOUT2016¹⁴. The survey was performed between May and June 2016. All the PCPs working in ANT ($n = 212$) were invited to participate by the ANT psychologists during the ordinary meetings of the teams. The data were anonymously collected on paper questionnaires. The investigation was approved by the Ethical Committee Interaziendale Bologna-Imola-CE-BI (16028; Prot. N.504/CE).

Measures

Socio-demographic and Professionals Data. Data about gender, age, marital status, offspring, profession, years of experience in PC, and geographical area of work were collected.

Maslach Burnout Inventory¹⁸. 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 PA (8 items). EE refers to an excessive emotional engagement that leads to a feeling of draining and loss of personal resources and energy, DP describes a

negative attitude of detachment from work and patients, and a low level of PA is defined as a sense of failure and incompetence and is characterized by a decrease in own desire of success. The answers are graded on a 7-point scale from 0 (never) to 6 (everyday). The results of the MBI were analyzed using 3 different methods: 1) The score obtained in each subscale was considered as continuous variable (i.e., mean score); 2) the frequency of PCPs showing burnout symptoms as high level for EE and DP and low level of PA was assessed according the cutoff (EE \geq 24, DP \geq 9, PA \leq 29) reported by the Italian Maslach Manual¹⁹; 3) the frequency of PCPs showing burnout was defined as high level of EE (>27) and/or high level of DP (>10). The frequency of PCPs with a low sense of PA (<31) was separately considered.²⁰ The latter is the most commonly used method.²¹

General Health Questionnaire-12 Items^{22,23}. General Health Questionnaire 12 (GHQ-12) is a self-report questionnaire whose aim is to identify the risk of developing psychological morbidity in general population. Items are rated on 4-point Likert scale from 0 to 3. The results of GHQ-12 were analyzed both as a continuous variable (i.e., mean total score) and as a dichotomous variable considering the PCPs with a total score higher than 19 as showing psychological morbidity.

Statistical Methods

According the normality test Shapiro-Wilk, the scores obtained from the MBI and GHQ-12 question-

naires were not normally distributed; thus, nonparametric tests were applied. The comparison of the MBI subscale scores and GHQ-12 total score between PCPs participating in the two studies was analyzed by Mann-Whitney *U* test, the distribution of PCPs showing burnout symptoms (MBI), and psychological morbidity (GHQ-12) as well as the overlap between the two conditions were compared between the studies by Chi square test.

The potential predictors (socio-demographics [marital status, offspring]; professional data [profession, years of experience in PC, and geographical area of work]; psychological morbidity [GHQ-12 score]) for burnout symptoms (EE, DP, and PA subscale scores) were investigated by linear regression models adjusted for age and gender. The *P* values of the association analysis were adjusted by the Benjamini-Hockberg correction for multiple testing with a false discovery rate of .05.

The significance threshold was set at .05. A statistical analysis was executed by the English version of SPSS 25 for Windows.

Results

The present study considered the sample of PCPs responding to the BURNOUT2016 survey (179 out of 212 PCPs, response rate 84.4%) and the sample of PCPs responding to the COVID2020 survey (145 out of 198, response rate 73.2%). All the participants have been working in the home PC program for

Table 1
Socio-demographic and Professional Characteristics of PCPs Working in ANT Participating in BURNOUT2016 and COVID2020 Surveys

Study	BURNOUT2016	COVID2020	BURNOUT2016	COVID2020	BURNOUT2016	COVID2020
Profession	PCPs, n = 179	PCPs, n = 145	Physicians, n = 104	Physicians, n = 77	Nurses, n = 75	Nurses, n = 68
Gender						
Men	59 (33%)	47 (32%)	38 (36%)	28 (36%)	21 (28%)	19 (28%)
Women	120 (67%)	98 (68%)	66 (64%)	49 (64%)	54 (72%)	49 (72%)
Age, mean (\pm St.Dev)	42 (\pm 11)	42 (\pm 12)	45 (\pm 10)	48 (\pm 10)	37 (\pm 11)	36 (\pm 10)
Marital status						
Unmarried	50 (28%)	59 (41%)	20 (19%)	19 (25%)	30 (40%)	40 (59%)
Married/cohabitant	117 (65%)	77 (53%)	77 (74%)	51 (66%)	40 (53%)	26 (38%)
Separated/divorced	10 (6%)	9 (6%)	6 (6%)	7 (9%)	4 (5%)	2 (3%)
Widowed	2 (1%)	—	1 (1%)	—	1 (1%)	—
With children						
Yes	98 (55%)	75 (52%)	62 (60%)	48 (62%)	36 (48%)	27 (40%)
No	81 (45%)	70 (48%)	42 (40%)	29 (38%)	39 (52%)	41 (60%)
Years of work in palliative care						
<2 years	49 (27%)	27 (19%)	25 (24%)	10 (13%)	24 (32%)	17 (25%)
2-5 years	47 (26%)	40 (28%)	22 (21%)	18 (23%)	25 (33%)	22 (32%)
6-10 years	27 (15%)	23 (16%)	16 (15%)	11 (14%)	11 (15%)	12 (18%)
>10 years	56 (31%)	55 (38%)	41 (39%)	38 (49%)	15 (20%)	17 (25%)
Geographical area of work ^a						
Northern Italy	70 (39%)	49 (34%)	41 (39%)	28 (36%)	29 (39%)	21 (31%)
Central Italy	32 (18%)	32 (22%)	21 (20%)	17 (22%)	11 (15%)	15 (22%)
Southern Italy	77 (43%)	64 (44%)	42 (40%)	32 (42%)	35 (47%)	32 (47%)

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).

patients with advanced cancer over the Italian territory.

Table 1 presents a summary of the demographic and professional characteristics of the enrolled PCPs. The BURNOUT2016 sample consisted of 104 physicians (58%) and 75 nurses (42%) while the COVID2020 sample included 77 physicians (53%) and 68 nurses (47%). For both the surveys, most of the participants were female (67% and 68%, respectively), married or cohabitant (65% and 53%, respectively), with children (55% and 52%, respectively), and the average age was 42 years. The distribution according to the experience in PC and the geographical area of work is quite similar between the participants of BURNOUT2016 and COVID2020 surveys (Table 1).

Table 2 showed the comparison of the level of burnout of the PCPs between the two studies according to three different methods: 1) Considering the MBI subscale scores as continuous variables, the PCPs of COVID2020 showed lower level of DP ($P < .001$) and higher level of PA ($P < .001$) than BURNOUT2016. These results were confirmed also dividing physicians and nurses ($P < .001$ for both professions). 2) Analyzing the frequency of burnout according to the cutoff from the Italian Maslach Manual,¹⁹ PCPs showing burnout symptoms on DP and PA dimension were less numerous in COVID2020 than in the BURNOUT2016 (for DP: 26.1% vs. 65.9%, $P < .001$; for PA 11.9% vs. 22.3%, $P = .018$). The lower frequency of DP in COVID2020 study was confirmed also considering physicians and nurses separately ($P < .001$ for both professions). 3) According to the definition criteria described by Shanafelt et al.,²⁰ 31 PCPs (22.0%) participating in COVID2020 showed burnout compared with the 82 PCPs involved in BURNOUT2016 (45.8%) ($P < .001$). The separate analysis of physicians and nurses confirmed the lower burnout frequency in the COVID2020 than that in the BURNOUT2016 ($P < .001$ for physicians, $P = .008$ for nurses). The frequency of PCPs with a low sense of PA was lower in COVID2020 (25 PCPs, 17.2%) than that in BURNOUT2016 (48 PCPs, 26.8%) ($P = .047$).

Table 3 reported the evaluation of psychological morbidity of the PCPs participating to the two surveys. Analyzing the GHQ-12 score as a continuous variable, psychological morbidity was significantly higher in PCPs of the COVID2020 than in BURNOUT2016 ($P < .001$), and this result was confirmed considering physicians and nurses separately ($P = .004$ for physicians and $P < .001$ for nurses). Sixty-eight PCPs (45.1%) participating in COVID2020 showed psychological morbidity comparable to the 28 PCPs (15.6%) of BURNOUT2016 ($P < .001$). The higher frequency of psychological morbidity among COVID2020 participants was confirmed by the separate

Table 2
MBI Subscale Scores and Frequency of Burnout Among PCPs Working in ANT Participating in BURNOUT2016 and COVID2020 Surveys

Study	BURNOUT2016		COVID2020		BURNOUT2016		COVID2020	
	PCPs, n = 179	PCPs, n = 145	Physicians, n = 104	Physicians, n = 75	Nurses, n = 75	Nurses, n = 68		
MBI subscale scores, mean (±St.Dev.)							P^a	P^b
Emotional exhaustion (EE)	13.7 (±8.1)	12.7 (±7.2)	14.5 (±8.7)	13.3 (±7.6)	12.7 (±7.0)	11.8 (±6.5)	.470	.306
Depersonalization (DP)	10.2 (±4.5)	7.1 (±4.6)	10.4 (±4.7)	7.0 (±4.6)	9.9 (±4.2)	7.1 (±4.7)	<.001	<.001
Personal accomplishment (PA)	33.3 (±5.5)	36.4 (±6.1)	33.2 (±5.3)	36.5 (±6.2)	33.4 (±5.7)	36.4 (±6.1)	<.001	<.001
PCPs showing burnout symptoms, n (%) ^c							P^d	P^e
High level of EE (≥24)	20 (11.2%)	12 (8.4%)	15 (14.4%)	7 (9.2%)	5 (6.7%)	5 (7.5%)	.360	.853
High level of DP (≥9)	118 (65.9%)	37 (26.1%)	69 (66.3%)	15 (19.5%)	49 (65.3%)	22 (33.8%)	<.001	<.001
Low level of PA (≤29)	40 (22.3%)	17 (11.9%)	20 (19.2%)	8 (10.5%)	20 (26.7%)	9 (13.4%)	.145	.062
PCPs showing burnout, n (%) ^d							P^f	P^g
EE > 27 and/or DP > 10	82 (45.8%)	31 (22.0%)	46 (44.2%)	14 (18.4%)	36 (48.0%)	17 (26.2%)	<.001	.008
Low level of PA (<31)	48 (26.8%)	25 (17.2%)	25 (24%)	12 (15.6%)	23 (30.7%)	13 (19.1%)	.176	.124

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 PCPs participating to the two studies by Chi square test.

^cCutoff from the Italian Maslach manual by Sirigatti and Stefanile, 1993(19).

^dCriteria used by Shanafelt et al., 2012(20).

Table 3
GHQ-12 Score and Frequency of Psychological Morbidity Among PCPs Working in ANT Participating to BURNOUT2016 and COVID2020 Surveys

Study	BURNOUT2016		COVID2020		BURNOUT2016		COVID2020		BURNOUT2016		COVID2020	
	PCPs, n = 179	PCPs, n = 145	P	Physicians, n = 104	Physicians, n = 75	P	Nurses, n = 75	Nurses, n = 68	P	PCPs, n = 179	PCPs, n = 145	P
GHQ-12 score, mean (\pm St.Dev.)	15.9 (\pm 3.9)	18.2 (\pm 4.5)	<.001 ^a	16.4 (\pm 3.7)	18.2 (\pm 4.9)	.004 ^a	15.1 (\pm 3.9)	18.3 (\pm 4.1)	.001 ^a	15.9 (\pm 3.9)	18.2 (\pm 4.5)	<.001 ^a
PCPs showing psychological morbidity, n (%)	28 (15.6%)	64 (45.1%)	<.001 ^b	19 (18.3)	34 (45.9%)	<.001 ^b	9 (12.0%)	30 (45.9%)	<.001 ^b	28 (15.6%)	64 (45.1%)	<.001 ^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.

analysis of physicians and nurses ($P < .001$ for both professions).

The linear regression models failed to identify potential predictors of burnout among the socio-demographic and professional variables (age, gender, marital status, offspring, profession, years of experience in PC, geographical area of work) both for COVID2020 and BURNOUT2016 surveys (data not shown).

Table 4 displayed the linear regression models showing the association between psychological morbidity (GHQ-12 score) and burnout dimensions (EE, DP, and PA subscale scores) adjusted for age and gender in PCPs participating in COVID2020 and BURNOUT2016 studies. The level of psychological morbidity was significantly associated with the burnout dimensions in both the surveys with very similar coefficient (for EE: β coefficient = .403, $P < .001$ in BURNOUT2016 and β coefficient = .417, $P < .001$ in COVID2020; for DP: β coefficient = .372, $P < .001$ in BURNOUT2016 and β coefficient = .253, $P < .001$ in COVID2020; for PA: β coefficient = -.206, $P = .006$ in BURNOUT2016 and β coefficient = -.219, $P = .009$ in COVID2020). Among COVID2020 participants, 23 out of the 31 PCPs (74.2%) showing burnout displayed also psychological morbidity, while in the BURNOUT2016 study, this percentage was significantly lower (19 out of 82 PCPs [23.2%] showed both burnout and psychological morbidity; $P < .001$). Among COVID2020 participants, all the PCPs with EE ($n = 12$) showed psychological morbidity, while in the BURNOUT2016 study, only 8 out of the 20 (20%) PCPs with EE showed also psychological morbidity ($P < .001$).

Discussion

Until now, very few studies have explored the psychological status of PCPs during COVID-19 pandemic,²¹ and no studies have compared the burnout level during the age of COVID-19 with the psychological conditions of PC staff in a period before the pandemic. The available literature reported a lower burnout levels for PCPs than for other medical discipline.^{12,24-27} Two recent studies^{21,28} reported a burnout frequency among PCPs of about 38%, while the prevalence of burnout widely ranged in the previous literature, based on work context, characteristics of the health-care professionals, and coping strategies.¹³⁻¹⁵ In their study, Koh et al.¹⁵ found a higher risk of burnout (36.9%) for PCPs who worked in home care setting than in other setting (hospice or hospital). In a health emergency situation, the psychological stress level of health workers is expected to increase, thus facilitating the onset of burnout and other distress-related syndromes.^{11,29} During COVID-19

Table 4

Linear Regression Models Showing the Association Between Psychological Morbidity (GHQ-12 Score, Independent Variable) and Burnout Dimensions (EE, DP, and PA Subscale Scores, Dependent Variables) Adjusted for Age and Gender in PCPs Participating in BURNOUT2016 and COVID2020 Surveys

MBI Dimension	BURNOUT2016		COVID2020	
	β Coeff. (95% CI)	<i>P</i>	β Coeff. (95% CI)	<i>P</i>
EE	.403 (.550/1.125)	<.001	.417 (.4200/.902)	<.001
DP	.372 (.267/.593)	<.001	.253 (.095/.428)	<.001
PA	-.206 (-.499/-.083)	.006	-.219 (-.522/-.077)	.009

DP = depersonalization; EE = emotional exhaustion; MBI = Maslach Burnout Inventory; PA = personal accomplishment; PCPs = palliative care professionals.

pandemic, health-care workers have faced many difficulties such as the risk of infection, excessive workload, relationship constraints, and lack of medical guidelines and available protocols.^{30–32}

Considering that the data about the burnout prevalence in PC are not univocal and strictly dependent on different settings, inferring the burden of the pandemic on the PCPs' psychological status results in a very demanding challenge. For this reason, the present study for the first time aimed to compare burnout level during COVID-19 emergency with MBI scores of a similar sample collected four years ago¹⁴ in the same home PC service.

Surprisingly, providing home PC in the age of COVID-19 seemed to lead to a lower burnout level than before the pandemic. In particular, the DP score was significantly lower during outbreak than that four years ago. Consistently, PA score was higher in the sample forced to face the COVID-19. Similar unexpected findings have been recently attained in a study where most of the health-care professionals interviewed strongly disagree that they feel more burnout during COVID-19 than before the outbreak.³³

On the contrary, psychological morbidity, as measured by the GHQ-12 questionnaire, was worse during the pandemic than in routine work under standard conditions. Psychological morbidity was significantly associated with the three dimensions of burnout, confirming data from previous studies.^{12,16,17,34}

In the COVID2020 survey, we found a strong overlap between burnout, particularly for the EE dimension, and psychological morbidity.

Some considerations may explain the results of this study. During the pandemic, the frequency of burnout decreased, and we can suppose that the crucial social role played by PCPs could have fostered their professional satisfaction. On the other hand, the few cases of burnout among PCPs facing with the COVID-19 showed also psychological morbidity, and this finding could be ascribed mainly to individual factors of emotional distress. Accordingly, our data have shown that during the global crisis, PCPs have maintained their capacity to find gratification from their work,

and they have increased their sense of vocation promoting greater professional fulfilment.^{35,36} In particular, recent studies reported a key role of PC in pandemics both for previously healthy people who had been severely infected by the virus and for patients with preceding life-threatening conditions.^{4,32,37} PC is critical for improving symptom control, facilitating triage and difficult decision-making, and advancing communication with patients and families.⁴ In order to guarantee, during the pandemic, the care of the seriously ill patients, many studies highlighted the particular need to enhance PC at home to prevent hospitalizations and to ensure continuity of care.^{32,38,39} Owing to their fragile condition, patients with cancer have to receive an overprotection from the risk of contracting COVID-19, both to guarantee their safety and to avoid additional burden of the health system.⁶

In this scenario, PCPs enrolled in our study may have felt at the forefront of containing the pandemic and keeping safe the vulnerable patients they care.³³ The awareness of being responsible for the safety of such high-risk patients may, on the one hand, had arouse PCPs' concerns and stress, but on the other hand, it could have strengthened their sense of professional satisfaction and PA. We can assume that in such a situation, they may have felt more emotionally close and involved with their patients, who had become even more frail, isolated, and suffering from the pandemic.³⁷

COVID-19 pandemic increased PCPs' distress because of work overload, fear of contagion, and difficulty in delivering effective PC despite isolation and necessary barrier precautions.^{30,31,40} On the other hand, the PCPs, playing a strategic role in the management of the health emergency, may acquire a pride that prevents DP and overcome the risk of burnout. It is possible that psychological distress might happen earlier and lead later to burnout. More research with longitudinal follow-up might be needed in future studies. When the emergency ceases, a further survey will be necessary to give a complete and exhaustive view of the long-term consequences of the COVID-19 pandemic on the PCPs. Our results highlighted the

importance of acknowledging the key role of PC within the public health system, especially in an emergency context such as pandemics.^{4,32,37,41} Nowadays it became evident that PC competence and skills, such as symptom control, psychological support for patients and families, breaking bad news, and end-of-life decision-making are essential in the public health context and not only in PC setting.⁸ Working on a deeper PC integration in a broader community health-care context could improve PCPs' PA and professional satisfaction.^{42–47}

There is a wide range of literature on the relationship between health-care professionals' psychological health and quality of care.^{48–51} DP, intended as an attitude of emotional disengagement from one's work, could increase the risk of medical errors and render difficult the adaptivity to change.^{48,52} Other studies reported an association between burnout and worst indicators of patient safety increasing the risk of adverse events.^{20,48,53,54} On the contrary, a greater PA makes PCPs feeling more self-efficacious in coping with patients' needs, encouraging them to take in charge challenging clinical tasks.⁴⁸ Although the majority of evidence suggested a negative impact of burnout on the professional performance, the available literature did not provide clear evidence on the relationship between specific burnout dimensions and quality of care outcomes.^{49,55,56} Starting from these observations, it could be interesting to investigate if home PCPs may have provided a similar, or even better, quality of care during COVID-19 pandemic than in nonemergency situations.

During the pandemic, the home PC organization did not improve the psychological support for the PCPs. The ordinary measures of support, such as the monthly supervision with an external expert psychologist and multidisciplinary weekly staff e-meeting with cases discussions, have been maintained during emergency period. A systematic regular monitoring of burnout and psychological morbidity among the PC staff could become a suitable strategy to identify early signal of distress and to develop additional intervention aimed at the maintenance of the PCPs' well-being. Further studies should be devoted to this issue.

Study Limitation

Our study has a number of limitations. This study is designed to describe the variation due to the COVID-19 emergency in the burnout frequency and psychological status of PCPs working at home in Italy. To this aim, the data obtained during a "normal" period of work have been used as reference. The PCPs participating in COVID2020 survey were mostly the same who participated to the BURNOUT2016 study, but it

is worth noting that the composition of the ANT staff has undergone some inevitable changes in the last four years, especially concerning the nursing team. Regarding the physician staff, which has remained more stable, four more years of age and experience in home PC must be considered. It is also possible that improvement in other aspects of the working conditions might have resulted in the observed improvement in burnout rate. In addition, owing to the emergency period, the data-collection methods of the two surveys were different. In the BURNOUT2016, the questionnaires were filled on paper forms, while in the COVID2020 survey, the data were collected through an online platform. In both cases, the interviews were anonymous rendering impossible the execution of a paired data analysis.

Conclusion

The frequency of burnout among PCPs during the pandemic was significantly lower than 4 years before, while the severity of psychological distress was significantly worse. More research is needed to better characterize the impact of pandemics on health-care professionals.

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