

THE ROLE OF FATIGUE OF COMPASSION, BURNOUT AND HOPELESSNESS IN HEALTHCARE: EXPERIENCE IN THE TIME OF COVID-19 OUTBREAK

Francesco Franza^{1,3}, Roberto Basta¹, Ferdinando Pellegrino², Barbara Solomita^{1,3} & Vincenzo Fasano³

¹Psychiatric Rehabilitation Center "Villa dei Pini", Avellino, Italy

²Mental Health Department, ASL Salerno, Italy

³Neamente Association, Avellino – Naples, Italy

SUMMARY

Background: In the times of serious health alarm, as it is happening in the COVID-19 pandemic, burden of healthcare is likely to explode. The current pandemic is having a profound effect on all aspects of society, including mental health and physical health. In a previous study we showed interaction between compassion fatigue, burnout and workload.

Methods: In our study, we have evaluated stress levels in 102 healthcare workers recruited in different rehabilitation departments (psychiatric and multidisciplinary). In particular, we evaluated the fatigue of compassion, vicarious trauma, burnout and hope (hopelessness) in the first two months of lockdown due to the COVID-19.

Results: The results obtained after the administration of the following evaluation scales: sCFs, CBI, Pro QOL, HBS, showed an overall increase in the scores in all professional figures. Significant compassion fatigue and burnout percentage is present in several groups. The highest levels of hopelessness in some professional figures, while higher educational levels can protect workers from the risk of developing high levels of work stress.

Conclusions: The data obtained with this study are similar to those of our previous study, although they may indicate that during the period of the coronavirus pandemic the scores of the several scales used are higher.

Key words: burnout - hopelessness - compassion fatigue

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INTRODUCTION

The healthcare assistance and support to people with complex disabling organic and mental disorders can increase the work-stress burden. In times of serious health alarm, as is happening in the COVID-19 pandemic, this burden of healthcare is likely to explode. The current pandemic is having a profound effect on all aspects of society, including mental health and physical health, bearing in mind that the COVID-19 outbreak spread rapidly throughout the globe, with worldwide infections and deaths continuing to increase dramatically (Zhao et al. 2020).

The current health emergency due to the coronavirus pandemic can aggravate and increase the exposure of health workers (stressful workload, with increased anxiety, increased responses to stress and Compassion Fatigue (CF)). Healthcare workers (HCWs) are defined as personnel responsible for direct treatment, care, service or help of patients, mainly consisting of doctors and nurses, as well as physiotherapists, laboratory technicians, respiratory therapists, housekeepers, or even medical waste handlers (Al Barmawi et al. 2019; Zhang et al. 2018). These often report a wide range of psychological needs, including trauma, and out-of-control emotional reactions. The response might generate remarkable stress and emotional turmoil in healthcare providers who work during the outbreak (Barello & Graffigna 2020) and these problems might endure for

many months after the outbreak. All this can lead to negative effects on mental and physical well-being, incorrect behavior and looking for help that can overburden healthcare facilities and on available resources (Garfin et al. 2020). Practice characteristics such as long working hours, high emotion load, infection stigma, lack of adequate support in the work and family environment can all play an important role in contributing to physicians' experience of stress. A strong perceived obligation to continue and a reluctance to seek help are also factors responsible for altering the emotional balance of the HCWs.

IMPACT OF STRESS ON HCWs

Anxiety, stress, nervousness, impatience, sadness, frustration and depression can manifest themselves and affect family and social relationships, work, study and social relationships, significantly worsening the quality of life if they are not addressed promptly and correctly (Doolittle 2020). A situation of this magnitude (with the emotional and organizational problems) can create emotional overload and an inability to think, a sort of emotional and mental short circuit in anyone, not only in the most fragile subjects. It is important to ask for help for the workload, to face with obstacles, those ones at the basis of anxieties and deep emotions provoked, activated or reactivated by the pandemic (Lucattini 2020).

During the COVID-19 period, all the workload, the perception of the increased risk, the need to have PPE cause extra stress. All this is associated with social isolation to protect family members with reduced social support (Galbraith et al. 2020). State of chronic stress can also lead to symptoms of depression or anxiety, poor sleep, impaired nutrition or other maladaptive strategies such as use of alcohol and /or other drugs to cope (Ritsma & Forrest 2020). Ritsma & Forrest claim that “Stress would be considered toxic when the demand on environment are assessed to be vastly greater than the individual’s resource, and individual experiences distress”. When resources are depleted and when homeostasis and allostasis that protect against stress wear off, healthcare workers are overwhelmed by an excessive amount of stress”. The natural consequence is a high social health load in terms of work quality, absenteeism and public health spending.

Therefore, continuous monitoring of the psychological well-being of health workers is indispensable, while awaiting the end of this pandemic. In this context, some experts have expressed concern for the patients with mental disorder and healthcare of medical workers. Hospitalised patients with several mental disorders were seemingly overlooked. Li & Zang (2020) point out that “compared with patients from other departments, psychiatric patients encountered more barriers and problems”. The risk factors are multiple. For examples, “psychiatric patients had to stay in closed” centers, “their family visiting was cancelled due to fear of transmission of the novel coronavirus”. These risk factors may be present in the patients in multidisciplinary rehabilitation facilities. The consequences can be dramatic on the mental health of both health workers and patients. Accordingly, current policy and regulation issued by the government ought to highlight the needs of psychiatric and other patients and their families should be considered by management team. Li & Zhang (2020) also claim that “the team responsible for patient’s psychological support and treatment should include non-only psychiatrists and psychologists but also psychiatric nurses, social workers, volunteers and family members”, which in turn can be victims of the emotional workload (Franza et al. 2015).

An editorial of The Lancet, May 2020 concludes that: “When this pandemic has ended, we cannot allow a return to the status quo ante. We must ensure that essential workers can do their jobs safely, and that they have adequate health care and paid sick leave to safeguard their health beyond extraordinary pandemics”. Finally, in mental HCWs the hope is one of the main coping strategies and is a resource that influences people's ability to interact with stress in life-threatening situations (Jones-Schenk 2020). Hopelessness as a psychological construct is of relevance with regard to various psychological disorders and related symptoms, e.g. depression, suicide, schizophrenia, alcoholism and sociopathy. Due to its role in the etiology of depression, hopelessness became a focus of the work group around Aaron T. Beck (Kliem et al. 2018).

OBJECTIVE

The aim of our study was to investigate the stress, burnout and compassion fatigue of HCWs. In a previous article we have described and defined these elements in more depth (Franza et al. 2015). Particularly in this article, we have evaluated several professionals of a psychiatric department (psychiatrists, psychologists, social workers, psychiatric nurses, and healthcare support workers) and of a multidisciplinary medical department (physiatrists, cardiologists, neurologists, nurses, rehabilitation technicians). Another goal was to evaluate the role of the hope of health workers with patients hospitalized in different medical and surgical hospital departments or in psychiatric residential inpatients affected by subacute or chronic organic diseases. We found it particularly important to identify hope or hopelessness in the current pandemic emergency period.

METHODS

The study was structured in two parts: the first phase concerns the evaluation in the first month of the COVID-19 pandemic impact on health workers. In this first phase in a natural observational study, we assessed the effects of the COVID pandemic on the psychological health of several HCWs of Multidisciplinary (psychiatric, cardiological, orthopedic, neurological and respiratory) Rehabilitation Centre “Villa dei Pini”, located in Avellino, Italy and in other psychiatric and medical departments. We have recruited from March 2020 to April 2020, 102 HCWs (54 females, 48 men; average age 46.6±12.01 years) that returned completed questionnaires (a completion rate of 69%).

All staff in this study, to research the levels of stress, fatigue of compassion and hope (or hopelessness) were asked HCWs to complete anonymously the following scales:

- short Fatigue Compassion Scale (FCs) (Adams 2004) Professional Quality of Life (ProQOL)-Compassion Satisfaction and Fatigue Subscales (Stamm 2009); Caregiver Burden Inventory (CBI) (Novack & Guest 1989); Beck Hopelessness Scale (BHS) (Beck & Steer 1993).
- The ProQOL is the most common used measure of the negative and positive affects of helping others who experience suffering and trauma. The following factors can be assessed with this scale: compassion satisfaction and compassion fatigue (burnout and secondary trauma). Compassion satisfaction is about the pleasure deriving from being able to do the work well.
- sCFs (Short Compassion Fatigue Scale) is a brief scale used to explore as the compassion fatigue might affect several HCW.
- CBI (Caregiver Burden Inventory), a scale used to quantify burdens in different aspects of a caregiver's life.

For the evaluation of a possible depressive symptomatology in a group of analyzed health workers we used the Beck Depression Inventory (BDI-II), created by Aaron T. Beck (Beck et al. 1996). It is a 21-question multiple-choice self-report inventory, one of the most widely used psychometric tests for measuring the severity of depression. Statistical significance was ascertained by t-tests or repeated measures ANOVA (to test multiple groups) with EZAnalyze 3.1 Excel Platform. T-tests Student were used to compare the results of administrated scales in any group. Demographic variables and evaluation questions were subjected to descriptive analysis.

RESULTS

In table 1, some epidemiological data of HCWs are included.

Overall, 102 participants completed the onetime scales and assessments. The majority of participants were female (52 vs 48; 52.94% vs 47.06%, respectively). At the beginning of the study, 234 envelopes were delivered to each operator, containing all the self-administration scales. Those who returned the completed questionnaires were administered the BID-II scale.

It's interesting to note that only 43.59% (102/234) of HCWs completed the questionnaires; the highest rate of defection has been observed in health and social workers (68.35%) unlike doctors whose defection rate for delivery of the complete material was only 34.45%. Among the several health departments in psychiatric rehabilitation there was the highest level of delivery of the complete material (almost 72.34% vs 34.54% cardiological center vs 45% orthopedic center).

In tables 2 and 3, the data of the CBI, sFCs, ProQOL and BHS scales are shown.

Compassion fatigue (sFCs)

Data showed an increase of overall compassion fatigue scores in all workers; however, there was a more

increase CF in psychiatric health workers (22% and 33%, respectively). It must be stressed that the social workers of the two departments (psychiatric and multidisciplinary) are the work category with the highest percentage of JB (39.67% vs 40.67%). The results obtained with the ProQOL are similar to those of the previous scales but they show a higher percentage of Compassion Fatigue and Secondary Trauma compared to the data produced by our previous study (Franza et al. 2015) (see table 3). The nurse group shows high percentage of FC and the lowest average scores in the ProQOL CS subscale with a percentage of 45.83% of people having moderate to severe scores. While the therapist and nurse groups have reduced compassion satisfactions, our ProQOL data showed low scores in the Burnout and Secondary Trauma subscales in the groups of physicians and psychologists.

The most significant data of CF /ProQOL scale (Burnout and Secondary Trauma) is represented by the percentage of vicarious trauma in nurse group (29.16%); this group has also a high percentage also in job burnout (in 29.16%). These data are similar to those of our previous study.

Burnout (CBI)

With CBI we observed a greater increase in the mean values in all the groups analyzed ($p=0.003$). The highest mean total result is that of psychiatric vs multidisciplinary nurses (42.28 vs 35.45, respectively), with higher results than the previous study (34.25%).

Hopelessness (BHS)

About half of the respondents scored above the average (37.5%) in mental health workers vs multidisciplinary workers (24.02%). Beck Hopelessness Scale® measures negative attitudes about the future. The BHS adheres to cognitive schemes in which the common denominator is the negative expectation towards the future, both in the short and long term.

Table 1. Respondent demographic participants (N=102/232)

	Total	%	Rehab Psych	Rehab Mult
Health care worker role				
Resident physician	12	11.76%	7	5
Psychologist	5	4.90%	3	2
Nurse	24	23.52%	17	7
Therapist (psychiatric, respiratory therapy, physical therapy, occupational therapy, speech therapy)	21	20.59%	8	13
Clinical social worker	30	29.41%	21	9
Technician (eg, surgery, laboratory, radiology)	4	3.92%	4	0
Admin support (secretary, receptionist)	6	5.88%	4	0
	102		64	36
Gender				
Male	48	47.06%	28	16
Female	54	52.94%	36	20
Other				
Education (years)	11.67 ± 4.56			
Smokers	39.24%			
Alcohol	58.98%			
Drug use	13.65%			

Table 2. CBI and sCFs Scale in psychiatric and multidisciplinary rehabilitation departments

		Scales				
		CBI	s	VT	sCFs	JB
Psychiatric Rehab department						
Psychiatrists	mean total	28.34 ±17.49	+	10.78 ±15.49	21.34 ±5.41	
	Affected (%)			25.78%	19.34%	+
Psychologists	mean total	30.19 ±15.53	+	14.67 ±11.21	28.32 ±11.92	
	Affected (%)			34.38%	29.65%	+
Nurses	mean total	42.28 ±13.87	+	14.35 ±13.22	34.93 ±11.21	
	Affected (%)			24.67%	41.18%	+
Social workers	mean total	34.21 ±16.78	-	19.14 ±16.72	32.18 ±11.12	
	Affected (%)			22.34%	39.67%	-
Healthcare support workers	mean total	28.18 ±19.32	+	13.57 ±11.39	27.57 ±12.63	
	Affected (%)			21.38%	19.31%	+
Multidiscip Rehab department						
Physicians	mean total	27.78±16.94	+	13.28 ±16.49	18.34 ±11.61	
	Affected (%)			32.17%	12.78%	+
Psychologists	mean total	41.28 ±11.35	-	12.35 ±6.67	26 ±13.89	
	Affected (%)			36.36%	35.45%	+
Nurses	mean total	35.45 ±11.28	+	21.45 ±10.16	39.93 ±11.41	
	Affected (%)			28.57%	34.28%	+
Social workers	mean total	29.21 ±13.87	-	22.74 ±15.81	33.9 ±21.12	
	Affected (%)			20.45%	40.67%	-
Healthcare support workers	mean total	27.83 ±14.21	+	13.45 ±11.93	24.95 ±11.63	
	Affected (%)			15.28%	22.21%	+

Scales: sCFs - short Compassion Fatigue Scale; VT - Vicarious Trauma ≥ 15; JB - Job Burnout ≥ 30; CBI - Caregiver Burden Inventory; S = + : statistically significant; - : not statistically significant

Table 3. ProQOL and BHS Scales in psychiatric and multidisciplinary rehabilitation departments

	PROQol				BHS
	CS	Bur	CF	ST	
Physician	39.92	21.58		21.83	24.90
±	9.89	9.43		10.78	21.24
Affected	8.83%	8.83%		16.66%	16.66%
Psychologist	42.80	17.20		23.40	24.32
±	5.85	7.01		12.54	26.13
Affected	20%	0		20%	60%
Nurse	22.96	29.92		26.75	16.63
±	10.31	13.18		12.48	8.95
Affected	45.83%	29.16%		29.16%	29.16%
Therapist	17.29	30.76		27.10	13.69
±	10.10	14.52		12.87	5.08
Affected	61.90%	31.09%		28.57%	38.09%
Clinical social worker	19.27	26.87		24.93	13.14
±	7.02	14.67		14.21	8.66
Affected	36.66%	30%		26.66%	26.66%
Technician	22.75	14.75		18.25	14.33
±	5.91	4.19		4.86	11.91
Affected	50%	50%		50%	50%
Admin support	19.67	31.17		29.33	12.43
±	5.20	14.78		10.01	10.23
Affected	33.33%	33.33%		16.66%	33.33%

CS: Compassion Satisfaction; CF: Compassion Fatigue (Bur: Burnout; ST: Secondary Trauma); BHS: Beck Hopelessness Scale

In our study the highest scores were in the group of psychologist, therapists and technicians (60% vs 38.09% vs 50%) ($p=0.001$). However, the low number of psychologists and technicians should be highlighted with not statistically significant results. More significant are the results obtained in the physician group. Only 16.66% had a high BHS score.

CONCLUSIONS

During a health crisis, health workers are subjected to high levels of stress. In our small observational group, the fatigue of compassion and burnout are higher than previous data in mental health workers. One of the problems closely linked to this extraordinary period is the expectations and the hope that the emergency will end. The hopelessness can be an important indicator for implementing psychological and pharmacological intervention strategies. Although some professionals have a greater responsibility in the management of therapeutic interventions, our study has shown how higher school levels can be a protective factor against stress and hopelessness. The group of physicians and psychologists have, in fact, presented higher levels of job satisfaction (compassion satisfaction) and lower burnout levels compared to other HCWs.

However, the outlook and initial assumptions have been confirmed. In this historically unexpected period, health workers are subjected to higher levels of stress, reaching high percentages of workers involved. It's the responsibility of the health authorities and health companies to implement strategies to manage the psychological emergency.

They must promote a reduction of stress levels, in a stress-low and quiet working atmosphere, where every worker can make his own professional contribution to the patient's well-being; a favorable working environment in which the patient's well-being associated with the operator's well-being contributes definitively to the company's well-being.

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All authors made substantial contributions to the design of the study, and/or data acquisition, and/or its analysis and interpretation.

Correspondence:

Francesco Franza, MD
Rehabilitation Psychiatric Center "Villa dei Pini"
Avellino, Italy
E-mail: franza.francesco@viriglio.it

References

1. Al Barmawi MA, Subih M, Salameh O, Sayyah Yousef Sayyah N, Shoqirat N, Abdel-Azeez Eid Abu Jebbeh R: Coping strategies as moderating factors to compassion fatigue among critical care nurses. *Brain Behav* 2019; 9:e01264
2. Barelllo S, Graffigna G: Caring for Health Professionals in the COVID-19 Pandemic Emergency: Toward an "Epidemic of Empathy" in Healthcare. *Front Psychol* 2020; 11:1431
3. Beck AT, Steer RA, Ball R, Ranieri W: Comparison of Beck Depression Inventories -IA and -II in psychiatric outpatients. *J Personal Assess* 1996; 67:588-97
4. Beck AT, Steer RA: *Beck hopelessness scale (BHS) manual*. Pearson: San Antonio, 1993
5. Doolittle BR: Association of Burnout with Emotional Coping Strategies, Friendship, and Institutional Support Among Internal Medicine Physicians [published online ahead of print, 2020 May 15]. *J Clin Psychol Med Settings* 2020; 1-7
6. Franza F, Del Buono G, Pellegrino F: Psychiatric caregiver stress: clinical implications of compassion fatigue. *Psichiatria Danub* 2015; 27(Suppl 1):S321-S327
7. Galbraith N, Boyda D, McFeeters D, Hassan T: The mental health of doctors during the COVID-19 pandemic [published online ahead of print, 2020 Apr 28]. *BJPsych Bull* 2020; 1-4. doi:10.1192/bjb.2020.44
8. Garfin DR, Silver RC, Holman EA: The novel coronavirus (COVID-2019) outbreak: Amplification of public health consequences by media exposure. *Health Psychol* 2020
9. Jones-Schenk J: Hope as a Generative Force: Lifting Our Gaze to the Future. *J Contin Educ Nurs* 2020; 51:203-204
10. Kliem S, Lohmann A, Mößle T, Brähler E: Psychometric properties and measurement invariance of the Beck hopelessness scale (BHS): results from a German representative population sample. *BMC Psychiatry* 2018; 18:110
11. Li S, Zhang Y: Mental healthcare for psychiatric inpatients during the COVID-19 epidemic. *BMJ* 2020; 33:e100216
12. Lucattini A: Quali tracce lasceranno il confinamento a casa, la quarantena, la presenza del coronavirus nell'inconscio e nell'immaginario individuale e collettivo? *Riflessioni psiconalitiche sulla pandemia da sars-cov-2. Quaderni di Telos* 2020; 2:53-62
13. Novak M, Guest C: Application of a multidimensional caregiver burden inventory. *Gerontologist* 1989; 29:798-803
14. Ritsma A, Forrest L: Causes of chronic stress and impact on physician health. In: *Humanism and resilience in residency training* (Hategan A, Saperon K, Harms S, Water H, eds). Springer, 2020
15. Stamm H: *Professional Quality of Life: Compassion Satisfaction and Fatigue Version 5 (ProQOL)* 2009. www.isu.edu/~bhstamm or www.proqol.org
16. Xiao J, Fang M, Chen Q, He B: SARS, MERS and COVID-19 among healthcare workers: A narrative review. *J Infect Public Health* 2020; 13:843-848
17. Zhang YY, Han WL, Qin W, et al: Extent of compassion satisfaction, compassion fatigue and burnout in nursing: A meta-analysis. *J Nurs Manag* 2018; 26: 810-819
18. Zhao Y, Cui C, Zhang K, et al.: COVID19: A Systematic Approach to Early Identification and Healthcare Worker Protection. *Front Public Health* 2020; 8:205