Emotional exhaustion and fear of COVID-19 in geriatric facilities during the COVID-19 pandemic.

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RESEARCH ARTICLE

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Emotional exhaustion and fear of COVID-19 in geriatric facilities during the COVID-19 pandemic

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Abstract

Objective: Since the onset of the COVID-19 pandemic, healthcare workers, especially those employed in hospital settings, have been exposed to a variety of stressors in the workplace. The aim of this study was to explore the Emotional Exhaustion (EE) of workers in geriatric facilities during the COVID-19 crisis. We accordingly sought to investigate the short-term impact of the COVID-19 pandemic in terms of the EE experienced by workers in geriatric facilities, and to examine the manner in which psychosocial conditions and fear of COVID-19 in the workplace have affected EE.

Methods: Surveys were administered in the midst of the COVID-19 crisis (October to December 2020). The study included 118 French healthcare workers with a mean age of 35.61 ± 0.73 recruited in geriatric facilities. We assessed EE, psychosocial conditions (e.g., demands at work, health and well-being, etc.) and fear of COVID-19 in the workplace.

Results: The analysis yielded two main outcomes. First, 34.75% workers (41) reported severe levels of EE. Second, demands at work and the fear of COVD-19 increased EE. Health and well-being were, however, demonstrated to protect against EE.

Discussion: Furthermore, fear of COVID-19 was shown to contribute significantly to EE healthcare workers in geriatric facilities. It is likely that Covid-19 indirectly contributes to EE by influencing demands at work.

KEYWORDS
emotional exhaustion, fear of COVID-19, geriatric facilities, psychosocial conditions, workplace

Key points

- COVID-19 is a pandemic with negative impact in workplace.
- Emotional Exhaustion (EE) seems to be a short-term negative impact factor of COVID-19 exposure in geriatric facilities.

- Fear of COVID-19 and demands at work contribute significantly to increase EE among healthcare workers in geriatric facilities.
- Health and well-being contribute significantly to decrease EE among healthcare workers in geriatric facilities.
- In the COVID-19 pandemic context, there is a need to deploy specific prevention, and short and long-term intervention programs to support healthcare workers and curb fear levels of COVID-19.

1 | INTRODUCTION

The World Health Organization declared COVID-19 a global pandemic in March 2020.[1] In Europe, the first cases appeared in Italy, then Spain, finally spreading throughout the whole European continent, spurring particular concern in France's *Hauts-de-France* and *Est* regions. COVID-19 currently affects more than two million people throughout Europe, and has caused over two hundred thousand deaths since the end of 2019.[2]

COVID-19 is a highly contagious, airborne SARS-CoV-2 viral infection. Identified in late 2019 as a novel virus belonging to the coronavirus family, SARS-CoV-2 is known to cause respiratory complications such as severe acute respiratory syndrome, which requires patients be treated with a mechanical respirator in an intensive care unit. COVID-19 followed on from previous H1N1 (2009) and SARS-CoV-1 (2003) outbreaks, however, the risk of infection and mortality appears to be heightened with SARS-CoV-2.[3] The pathogen's newness, high incidence and reproduction rate in the general population, combined with the existence of severe forms of the disease and high mortality, have raised concern and fear of contamination among both the general population and health workers. The rampant surge and persistence of this pandemic, and the attendant risk of being contaminated and contaminating others, seems to have wrought major consequences on the mental health of the general population and healthcare personnel.

COVID-19 case numbers among healthcare workers are on the rise in France, particularly those employed in geriatric facilities. On the one hand, the pandemic has thrown into question the routine practices of healthcare workers, amidst a wider crisis requiring urgent action. The psychological consequences likely to result from the COVID-19 pandemic are many and varied.[4,5] In fact,[4] reported a significant increase of effects on mental health as depression, anxiety and stress in a large UK cohort. In the same vein,[6] reported that COVID-19 has had a significant effect on well-being and mental health in a large cohort in Wales.

Concerning healthcare workers, the literature has pointed to a heightened risk to workers' mental health, and suggested that COVID-19 significantly increases stress, depression, anxiety, insomnia and distress in this employment category.[5,7–9] In particular, older people and their healthcare workers have been prominently affected by Covid-19 and its consequences. Older people are particularly vulnerable to COVID-19, and have been impacted more drastically than their younger peers.[10,11] Also, the working conditions of healthcare workers have been radically altered, as they have found themselves forced to deal with complex decisions, adopt new health and safety practices, and provide explanations to families.[12] Prolonged exposure to fear and insecurities, and changes in working conditions brought on by COVID-19 are thought to have induced EE.[13] has coined a new catchword, "CORONEX", to describe the emotional consequences of the COVID-19 pandemic. Emotional Exhaustion is defined as a psychological dimension characterized by feelings of fatigue, emotional depletion, and being overwhelmed.[14]

Several recent studies have pointed to the pivotal role of EE during COVID-19.[15] reported higher levels of EE as a negative impact during the COVID-19 pandemic among employees in various sectors (e.g., tourism, hotels, airlines, restaurant, and hospitals).[16] found higher levels of EE in nurses with long-term exposure to COVID-19 in quarantine units.[17] assessed high levels of EE in 31.9% of healthcare workers during the COVID-19 pandemic. Already prior to COVID-19,[18,19] revealed that working in geriatric facilities poses a significant risk to emotional resources due a chronic lack of time, equipment and human resources, and the characteristics of older people in geriatric facilities (e.g., functional, behavioral and cognitive decline). Furthermore,[12] reported that this EE increased in geriatric facilities over the course of the COVID-19 pandemic.

In other words, lack of emotional resources in the workplace is a common complaint among individuals who report EE.[20] In studies on burnout, EE of healthcare workers has been linked to intense chronic occupational stress in the workplace,[21] driven by the psychosocial conditions there.[22–24] During the COVID-19 pandemic, researchers have highlighted higher levels of EE among healthcare workers.[15–17,25] But no relationship has been thus far established between the COVID-19 pandemic and EE in geriatric facilities exposed to COVID-19 during the pandemic. Drawing on previous literature, the present study aimed to explore the short-term impact of COVID-19 pandemic on the EE of healthcare workers in a geriatric facility, and to examine the manner in which psychosocial conditions and fear of COVID-19 in the workplace affected EE.

2 | METHOD

2.1 | Study sample and procedure

A total of 118 native French-speaking geriatric healthcare workers were recruited from a public hospital in France. The participants were

composed of 107 (90.68%) females and 11 (9.32%) males with a mean age of 35.61 ± 0.73 years. The recruitment process was carried out in accordance with the ethical principles of the Declaration of Helsinki and with the agreement of the medical and administrative authorities of the Hospital (Centre Hospitalier Gustave Dron, Tourcoing, France).

Surveys were conducted in the midst of the COVID-19 crisis (October-December 2020) via a paper questionnaire distributed in the participants' workplace. All of the healthcare workers at Centre Hospitalier Gustave Dron (France) assigned to the geriatric facility there were informed and invited to participate in the study. Out of the 294 healthcare workers invited to participate in the study, 40% opted to participate. Only regular workers, including physicians, psychologists, physiotherapists, dieticians, psychometricians, nurses, healthcare aides and nursing assistants, as well as healthcare workers in other professions (e.g., service/custodial workers responsible for sanitation or meal distribution), were eligible to participate in the survey. All participants worked in a geriatric facility and were exposed repeatedly and directly to older people with COVID-19.

Each participant was informed about the subject of the study and gave their free consent before beginning the survey. Each participant completed the survey individually and anonymously. No financial compensation was provided. A reminder was sent out 2 weeks and 1 month after first disseminating the questionnaire. The average completion time was between 15 and 20 min.

2.2 | Measures

Sociodemographical variables. Sociodemographical data were collected on age, gender, occupational category (i.e., physicians, nurses, healthcare aides and healthcare workers belonging to others professions), seniority in position, and working pattern (i.e., fulltime or part-time).

Emotional Exhaustion. Emotional Exhaustion was assessed using only the EE subscale, one of three subscales of the Maslach Burnout Inventory (MBI).[26] This inventory was translated and validated in French by [27] with two samples: 260 days-care workers and 123 nurses. Validity of the French version of the MBI was demonstrated to be acceptable for a variety of populations.[20,27] The EE subscale consists of a 9-item self-report measure (e.g., "I feel emotionally exhausted because of my work") assessing the frequency of EE symptoms using a 7-point Likert scale from 0 ("never") to 6 ("every day"). The authors proposed a cut-off score for this subscale: a score ≥27 indicates a severe level of EE for the French sample.[27] In our sample, the internal consistency for the scale was $\alpha = 0.90$.

Psychosocial Conditions in the workplace. The Copenhagen Psychosocial questionnaire (COPSOQ,[28]) is a 46-item self-report measure of job-related psychosocial aspects and outcomes. This questionnaire was validated in French by[29] with 3166 workers at a French aerospace company. The abovementioned authors reported the French version of the COPSOQ scale to have satisfactory validity ($\chi 2\ 144 = 1796.2$; $p < 0.001$; RMSEA = 0.06; AGFI = 0.92). This scale adopts a multidimensional approach in order to cover the full spectrum of job-related psychosocial strain in the workplace. It was used to assess 24 scales grouped into six dimensions: one- Demands at work (e.g., "The demands of my work interfere with my home, personal and family life"), two- Work organization and leadership (e.g., "Are contradictory demands placed on you at work?"), three- Horizontal relationships (e.g., "Is there a good atmosphere between you and your colleagues?"), four- Autonomy (e.g., "Does your work give you the opportunity to develop your skills?"), five- Work—Individual interface (e.g., "I am enthusiastic about my job"), six- Health and Well-being (e.g., "In general, would you say that your health is:"). For most items, the participants were given a 5-point Likert scale ranging from 0 ("never") to 5 ("always"). In our sample, the internal consistency for this scale was $\alpha = 0.90$.

Fear of COVID-19. The fear of COVID-19 scale[30] is a 7-item self-report measure of the level of fear of COVID-19 in the general population. This questionnaire was translated and validated in French by[31] with 316 French participants from the general population during lockdown. The scale's authors reported satisfactory validity of French version of the fear of COVID-19 scale ($\chi 2\ 86 = 235.52$; $p < 0.001$; relative $\chi 2 = 2.74$; RMSEA = 0.074 (90% CI [0.063, 0.086]; CFI = 0.797; TLI = 0.734, SRMR = 0.065). The level of fear of COVID-19 was assessed using a 5-point Likert scale (e.g., "I am most afraid of coronavirus") ranging from 1 ("strongly disagree") to 5 ("strongly agree"). In our sample, the internal consistency for the scale was $\alpha = 0.91$.

2.3 | Statistical analysis

SPSS® software version 20 (IBM Corporation, Armonk NY, USA) was used to analyze the data set and test the hypothesis. The statistical analyses were conducted in three steps. First, descriptive statistics were conducted on all study variables, and the cut-off score of the EE subscale was used to identify those participants with severe risk level of EE. Second, categorical variables were analyzed with the $\chi 2$ test for gender difference, working pattern, and Kruskal–Wallis (non-parametric) analysis test for comparison of means of the two groups (low to moderate EE vs. severe EE). Third, binomial logistic regression was used to determine the effects had by all the study variables (e.g., psychosocial aspects and outcomes in the workplace, fear of COVID-19) on EE. Logistic regression was run to assess the size effect of different independent factors on the risk of developing EE. The level of significance was $p < 0.05$, Odds Ratio = 1 indicated no relationship between factors and the risk of developing EE. Odds Ratio< 1 indicated a decreased risk of developing EE, while Odds Ratio> 1 indicated an increased risk of developing EE.

3 | RESULTS

3.1 | Preliminary analyses

Table 1 displays the results for means, standard deviations and correlations for all study variables. The participants were composed of 107 (90.68%) females and 11 (9.32%) males with a mean age of 35.61 ± 0.73 years and a mean seniority of 11.43 ± 8.92. Fifty-five

participants were nursing assistants and healthcare aides, 14 were nurses, seven were physicians, 10 were psychologists, physiotherapists, dieticians, or psychometricians, and 32 were healthcare workers belonging to other professions. All participants had been directly exposed to COVID-19 in the workplace. Ninety-eight worked fulltime and 22 worked part-time. No gender difference was found (Table 1).

3.2 | Comparison of the two Emotional Exhaustion (EE) groups

Our sample was divided up into two groups: 1- "Lower to moderate EE" group and 2- "Severe EE" group using.[27] The results indicated seventy-seven (65.25%) participants in the sample in the lower to moderate EE group and forty-one (34.75%) in the severe EE group (Table 2). Comparison of mean analysis with non-parametric Mann-Whitney U test between the two groups showed EE (U = 3157, $p < 0.001$) and demands at work ($U = 2324.5$, $p < 0.001$) in the severe EE group to be significantly higher than in the lower to moderate EE group. Instead, the mean scores for work organization and leadership (U = 778.50, $p < 0.001$), autonomy (U = 1187.50, $p < 0.026$) work—individual interface (U = 800.50, $p < 0.001$), and health and well-being (U = 290, $p < 0.001$) were significantly higher in the lower to moderate EE group than in the severe EE group.

3.3 | Binomial logistic regression analysis

Age, gender, education, seniority in position, working pattern, all dimensions of psychosocial conditions and fear of COVID-19 were retained as independent variables in the binomial logistic regression analysis. The dependent variable was the two EE groups. Each participant was in only one EE group. No significant outliers were found.

The results found that three significant variables significantly contribute to the risk of developing EE: demands at work, health and well-being and fear of COVID-19 (Table 3). High levels of demands at work (Odd Ratio (OR) = 1.44; IC95 [1.10, 1.88], $p = 0.001$) and fear of COVID-19 (OR = 1.13; IC95 [1.00, 1.28], $p = 0.042$) were significant risk factors for developing severe EE. High levels of health and well-being (OR = 0.71; IC95 [0.62, 0.83], $p = 0.001$) were significant protective factors against severe EE.

4 | DISCUSSION

Healthcare workers in geriatric facilities are for the most part young females with limited seniority (11 years on average) working fulltime. During the COVID-19 pandemic, more than a third of healthcare workers reported severe levels of EE in the workplace, as they were forced to perform tasks for which they had not been proper trained and cope with the fear of becoming infected and spreading COVID-19 to their families. According to previous studies,[32] EE seems to be a short-term negative impact factor of COVID-19 exposure. These results lend credence to previous research reporting that the COVID-19 pandemic has triggered an increase in EE among healthcare workers in geriatric facilities.[12] In fact, work in geriatric facilities poses a significant risk to healthcare workers' emotional resources due a chronic lack of time, equipment, and human resources.[18,19] The COVID-19 pandemic has escalated existing difficulties in geriatric

TABLE 1 Characteristics of sample and normality test

	All sample (n = 118)				
	Mean	SD	Shapiro-wilk	ddl	*p* value
Age	35.61	7.92	0.807	118	0.001
Gender (female)	0.09	0.29	-	-	-
Seniority in position	11.60	8.57	0.872	118	0.001
Working pattern (fulltime)	1.18	0.39	-	-	-
Emotional exhaustion	22.66	12.98	0.969	118	0.009
Psychosocial conditions (COPSOQ)					
Demands at work	16.92	3.00	0.898	118	0.000
Work organization and leadership	37.08	10.81	0.987	118	0.297
Horizontal relationships	10.94	2.85	0.962	118	0.002
Autonomy	9.61	2.64	0.963	118	0.002
Work—Individual interface	13.18	3.38	0.958	118	0.001
Health and well-being	19.33	7.87	0.988	118	0.403
Fear of COVID-19	14.14	6.35	0.912	118	0.001

Note: N = 118. SD: standard deviation.
Gender (Female: 0, Male: 1), Working pattern (Fulltime:1, Part-time:2).

TABLE 2 Characteristics and comparison of two Emotional Exhaustion (EE) groups with χ2 or U Mann-Whitney test

	Low to moderate EE (n = 77) Mean (SD)	Severe EE (n = 41) Mean (SD)	*p-value* (between groups)
Age	35,32 (7.57)	36.17 (8.60)	0.643
Gender	0.08 (0.27)	0.12 (0.33)	0.433 (χ2)
Seniority in position	11.43 (8.92)	11.93 (7.99)	0.610
Working pattern (fulltime)	1.19 (0.39)	1.17 (0.38)	0.749 (χ2)
Emotional exhaustion	14.77 (7.34)	37.49 (6.73)	0.001
Psychosocial conditions (COPSOQ)			
Demands at work	16.14 (3.08)	18.39 (2.23)	0.001
Work organization and leadership	40.23 (10.19)	31.15 (9.44)	0.001
Horizontal relationships	11.04 (2.86)	10.75 (2.86)	0.615
Autonomy	9.91 (2.79)	9.05 (2.27)	0.026
Work—Individual interface	14.05 (3.31)	11.54 (2.74)	0.001
Health and well-being	23.16 (6.02)	12.15 (5.61)	0.001
Fear of COVID-19	13.29 (5.53)	15.73 (7.47)	0.153

Note: N = 118. EE: Emotional Exhaustion, SD: standard deviation.
Gender (Female: 0, Male: 1), Working pattern (Fulltime:1, Part-time:2).

TABLE 3 Binomial logistic regression of determinants of Emotional Exhaustion (EE)

	"Low to moderate EE" versus "severe EE"	
	Or (95% CI)	*p*-value
Age	1.03 [0.93–1.14]	0.612
Gender (female)	0.15 [0.02–1.38]	0.094
Seniority in position	0.99 [0.90–1.09]	0.792
Working pattern (fulltime)	0.88 [0.12–6.64]	0.900
Psychosocial conditions (COPSOQ)		
Demands at work	1.44 [1.10–1.88]	0.006
Work organization and leadership	0.99 [0.91–1.09]	0.867
Horizontal relationships	1.02 [0.76–1.38]	0.890
Autonomy	0.91 [0.65–1.26]	0.567
Health and well-being	0.71 [0.62-0.83]	0.001
Work—Individual interface	0.80 [0.59–1.09]	0.148
Fear of COVID-19	1.13 [1.00–1.28]	0.042

Note: N = 118. OR: Odd Ratio; CI: Confidence Interval.

facilities and the risk of EE, confirming the "CORONEX" postulate put forward.[13]

Our results also support the argument that three variables, demands at work, fear of COVID-19 and health and well-being contribute significantly to EE among healthcare workers in geriatric facilities. As shown by,[33] prior to the COVID-19 crisis, among nurses, perceived social impact and perceived social worth were related to work engagement and burnout independent of the effects of quantitative job demands and control. In our study, the combination of high demands at work and fear of COVID-19 seem to constitute a specific risk factor for severe levels of EE. On the contrary, high levels of health and well-being serve as a protective factor against EE.

In order to focus on the workplace conditions of healthcare workers and their determinants, we shall discuss the role of the COVID-19 pandemic in EE. First, demands at work are the primary contributor to EE in healthcare workers, followed by fear of COVID-19. Clearly, repeated and direct exposure to COVID-19 in the workplace conduced to increase the risk perception of contraction and spreading the virus, producing a fear reaction in some healthcare workers, probably linked to different factors (e.g., personal history, personality). Said fear also increased demands at work, such as stricter protective measures. Second, our findings highlighted the protective role played by health and well-being of healthcare workers against EE in the workplace.

According to the literature, EE seems to be a negative impact factor of the COVID-19 pandemic.[12,13,16,17] In fact, many negative consequences have been linked to the pandemic context (e.g., depression, anxiety, insomnia, distress, stress, and EE),[5,7–9,12,15,25] such that a new catchword, "CORONEX," is emerging to describe EE caused by the coronavirus.[13] Our results corroborate data in the literature; these negative consequences were likely related to the pandemic's novelty and unpredictability, as well as the constant prevalence of COVID-19 in media, and persistent measures to control it. Moreover, poor knowledge about the virus and the fear of contracting and dying from COVID-19 caused healthcare workers to experience difficulties in coping with emotional distress and stress endured from repeated exposure to COVID-19.

Our present study expands the results of recent studies on the impact of the COVID-19 pandemic in geriatric facilities' healthcare workers.[12,13,16,17] Our original contribution with this study was to highlight the role of emotional resources, and to identify their determinants during direct repeated exposure to the COVID-19 pandemic virus. The results yielded revealed a significant number of healthcare workers with severe EE levels, raising questions about the personal and institutional coping strategies implemented. In personal strategies, fear of COVID-19 emerged as the central factor. There is a need to deploy specific prevention (e.g., education about COVID-19 and the risk of contracting and spreading the virus), and intervention programs to support healthcare workers and curb fear levels (e.g., group-based training teaching coping skills). From an institutional perspective, demands at work represented the central factor in EE of healthcare workers. There is a need to drive down demands at work (e.g., via reinforced staffing and greater safety) to mitigate EE as a short-term impact of the COVID-19 pandemic, and also to prevent long-term impacts such as burnout or post-traumatic stress disorder, a chronic institutional problem in geriatric facilities, due notably to a lack of time, equipment, and human resources.[18,19]

Our study has some limitations. First, our healthcare workers were recruited from a single public French hospital. Second, the study specifically explored only one dimension of burnout: EE, as well as a limited number of psychosocial variables in the workplace such as risk or protective factors, much more widely covered in the literature. Third, our small study sample did not allow us to explore the impact of occupational category on EE. Fourth, no baseline was available for EE. The ideal study might have involved a two-step protocol, "before" and "after" the COVID-19 pandemic. Regardless of its potential limitations, this is the first study to explore EE and its determinants in geriatric facilities directly and repeatedly exposed to COVID-19.

In future research, we will explore two points. First, we shall focus on the emotional impacts of the COVID-19 pandemic, rather than exclusively investigating EE. Second, we will assess the long-term impacts of the COVID-19 pandemic through a longitudinal approach, placing particular emphasis on burnout and post-traumatic stress disorders.

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CONFLICT OF INTEREST

The author declares that there is no conflict of interest that could be perceived as prejudicing the impartiality of the research reported.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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