ORIGINAL ARTICLE

WILEY

Investigating the association between patient verbal aggression and emotional exhaustion among Italian health care professionals during the COVID-19 pandemic

Valentina Sommovigo PsyD, PhD, Research Fellow[1,2] ⓘ |
Chiara Bernuzzi MPsy, PhD Student[1] ⓘ | **Ilaria Setti PsyD, PhD, Associate Professor**[1] ⓘ

[1]Department of Brain and Behavioural Sciences, Unit of Applied Psychology, University of Pavia, Pavia, Italy

[2]Department of Management, University of Bologna – Rimini Campus, Rimini, Italy

Correspondence
Valentina Sommovigo, Department of Brain and Behavioural Sciences, University of Pavia, Piazza Botta, 11, Pavia, Italy.
Email: valentina.sommovigo@unipv.it

Abstract

Aims: To analyze whether patient verbal aggression would be related to emotional exhaustion and whether this relationship would be mediated by work–family conflict and moderated by dehumanization and resilience.

Background: Although patient verbal aggression has been identified as one of the most experienced forms of aggression, its effects on Italian health care providers during the pandemic are still poorly known.

Methods: A total of 197 Italian health care professionals completed paper-and-pencil questionnaires. Descriptive statistics and moderated mediation analyses were performed.

Results: Patient verbal aggression was positively related to health care professionals' emotional exhaustion, both directly and indirectly, as mediated by work–family conflict. Health care providers were more likely to become emotionally exhausted when they had low resilience and, simultaneously, tended to ascribe patients non-uniquely human traits.

Conclusions: Patient verbal aggression may spill over onto health care professionals' family lives. Dehumanization represents an ineffective coping strategy that exacerbates the effects of aggression on work–family conflict, whereas resilience represents a protective resource against emotional exhaustion.

Implications for nursing management: Hospital organisations could benefit from providing their staff with stress management interventions, aggression management, psychological support and psychological resilience training programmes. These programmes should incorporate coping skills on establishing work–home boundaries and balancing empathy with cognitive problem-solving abilities.

K E Y W O R D S
COVID-19, dehumanization, emotional exhaustion, patient aggression, resilience

---

1 | BACKGROUND

The COVID-19-related health emergency has posed unprecedented challenges for health care professionals worldwide. These include concern about transmitting the virus to their loved ones and extended shifts to handle the considerable volume of patient demand (Bhatti et al., 2021; Kakemam et al., 2021). Additionally, an alarming increase in aggression against health care personnel has been witnessed globally, especially in the form of patient verbal aggression (Bhatti et al., 2021; Lafta et al., 2021).

Patient verbal aggression (i.e., verbal expressions that make the professional feel devalued through words, tone or manner; Farrell et al., 2006) represents one of the critical factors in the generation of burnout because it is the most experienced form of aggression by health care personnel during normal and pandemic times (Liu et al., 2021). Indeed, due to their extended work shifts, health care professionals working during the pandemic were exposed longer to patients who sometimes vented on them their negative emotions elicited by the treatment received (e.g., long waiting times) through verbal aggression (Ożegalska-Trybalska, 2021). Drawing on the Conservation of Resources (COR) theory (Hobfoll et al., 2018), health care professionals who are exposed to patient aggression may feel that their working conditions and personal resources are threatened, or their investment of resources in relationships with patients does not generate a sufficient return of resources. This can deplete professionals' resources by eliciting negative emotions and recurrent thoughts about critical event(s) (Sommovigo et al., 2020; Zhou et al., 2019). In such a situation, health care professionals who cannot compensate for this loss of resources through the conservation of resource strategies are likely to develop emotional exhaustion. This core dimension of burnout refers to feelings of being exhausted by one's work (Maslach & Leiter, 2016). During the pandemic, the prevalence of burnout among health care providers has been estimated between 13% and 51% (Cotel et al., 2021), resulting in adverse psychological outcomes (Ghio et al., 2021), decreased patient care safety and quality (Kakemam et al., 2021). Specifically, emotional exhaustion has been the major symptom experienced by burned-out professionals (Roslan et al., 2021). Thus, understanding how to manage health care professionals' emotional exhaustion has practical implications for health care professionals and patients, affecting the health care system's ability to respond to health emergencies. However, although the frequency of exposure to patient verbal aggression was positively related to professionals' emotional exhaustion during pandemic times (Vincent-Höper et al., 2020), it is still unclear how and when this can happen. Therefore, more research is needed to clarify the relationship between patient aggression and professionals' emotional exhaustion to design effective interventions to support health care providers during the actual health emergency and possible future outbreaks (Cotel et al., 2021).

During the pandemic, some factors related to the Italian context put health care professionals at risk of experiencing work–family conflict (i.e., when the demands posed by the work role are incompatible with the requirements from the family domain; Bernuzzi et al., 2021).

Italy was one of the nations most affected by the number of people infected during the first COVID-19 wave, which overwhelmed the national health care system and its staff (Romani et al., 2021). Italy also closed its schools longer than any other European country as a containment measure (Zampano, 2020). In this nation, women are the vast majority of the health care workforce (MEF, 2019). Together with extended shifts due to staff shortages, these factors made it difficult for Italian health care professionals to take care of their children and elderly family members (Giusti et al., 2020). Like other countries, most professionals were afraid to transmit the virus to their loved ones (Roslan et al., 2021). Additionally, many health care providers were quarantined, resulting in long isolation from their families and severe staff shortages, causing extra work and disturbances to work–life balance for their co-workers (Brooks et al., 2020). As a result, most health care professionals had trouble balancing work and family requirements (Schiff et al., 2021), thus experiencing work–family conflict. This is in line with the spillover theories stating that individuals may experience blurring of work–family boundaries, such that how they behave and feel in the work domain may spill over into the family domain (Bernuzzi et al., 2021). However, it is still unclear whether patient verbal aggression may spill over onto health care professionals' family lives.

None of the previous studies on health care professionals have provided explanation models containing patient verbal aggression, work–family conflict and emotional exhaustion. Nevertheless, the positive relationship between work–family conflict and emotional exhaustion has been well-documented (Reichl et al., 2014). However, to our knowledge, there is only one study that demonstrated that work–family conflict was a significant predictor of burnout among health care providers during the outbreak (Cotel et al., 2021), whereas no previous study has examined whether patient aggression can spill over onto health care professionals' family lives during this time. Integrating COR theory (Hobfoll et al., 2018) with spillover theories, professionals can perceive a loss of their resources when confronted with patient verbal aggression, which undermines their ability to combine work and family. This is because victims of aggression tend to worry about the critical event(s) even outside of work and carry negative feelings home, which can make them less capable of paying full attention to family matters and more prone to vent their anger at family members (Demsky et al., 2019; Lim et al., 2018). This leaves them with fewer resources to invest in the family domain (Hobfoll et al., 2018), resulting in work–family conflict (Zhou et al., 2019). When trying to reconcile work and family commitments, professionals must invest additional resources to protect those remaining from being lost, which, if unsuccessful, may lead them to lose further resources (Yeh et al., 2020). In such a situation, health care providers may lack the resources to maintain their functioning at work, and eventually emotional exhaustion may occur. However, professionals may react differently to patient aggression due to their resources and conservation of resource strategies (Hobfoll et al., 2018).

When investigating the effects of patient aggression, individual differences in dehumanizing tendencies (i.e., depriving patients of

uniquely human qualities; Capozza et al., 2016) could help explain the different reactions of professionals to aggression (Hobfoll et al., 2018). In this sense, ascribing patients a lower human status could represent a coping strategy that reduces the loss of resources resulting from encounters with aggressive patients. The scarcely available research suggests that because humanizing patients increases stress, health professionals tend to ascribe patients a lower human status as an unwitting form of dehumanization to cope with stressful encounters with patients (Capozza et al., 2016; Falvo et al., 2021). For instance, Trifiletti and co-workers (Trifiletti et al., 2014) found that attributing non-uniquely human traits relates to stress reduction among nurses. Additionally, this may facilitate patient care and clinical problem-solving (Haque & Waytz, 2012).

In addition to dehumanization, individual differences in resilience (i.e., a dynamic process that allows people to face stressful events and recover from adversities; Bernuzzi et al., 2021) could affect how professionals respond to stressors, such as work–family conflict (Hobfoll et al., 2018). Drawing on the COR theory (Hobfoll et al., 2018), resilience is a personal resource because it helps people face stressful situations (Maffoni et al., 2020). More specifically, resilience can allow professionals to fulfill multiple roles by adjusting to challenging conditions (Bernuzzi et al., 2021), thus protecting them against work–family conflict. Consequently, although some studies found that resilience buffered the negative impact of work–life conflict on employees' well-being (Balogun & Afolabi, 2021), its moderating role in the association between work–family conflict and emotional exhaustion among health care providers during the pandemic has not received enough attention. Because (de)humanization of patients can be promoted through medical practices (Haque & Waytz, 2012) and resilience can be fostered through training (Joyce et al., 2018), understanding their protective role against can inform practitioners about how to support health care professionals' well-being during pandemic times.

Therefore, our research questions were as follows: May patient verbal aggression be related to emotional exhaustion, directly and indirectly, as mediated by work–family conflict? Can dehumanization be an effective coping strategy against patient aggression? Can resilience be a protective resource against work–family conflict? Figure 1 shows our conceptual model.
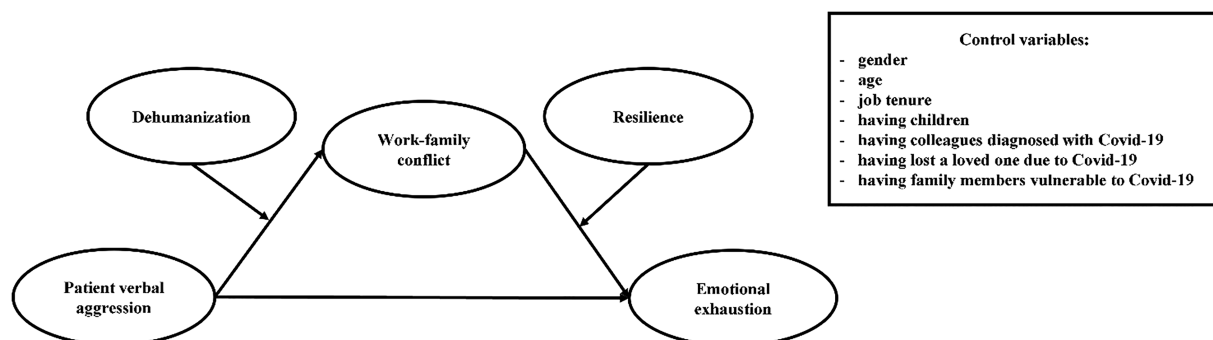
2 | METHODS

2.1 | Sample

This cross-sectional study was conducted in an Italian public hospital located in the Lombardy Region between October 2020 and February 2021, during the second COVID-19 wave. This research intervention was commissioned by the Medical Direction (i.e., the board of medical directors that organizes and coordinates physician services and services provided by other professionals within the hospital), which authorized the study and informed staff about the research using email via the company intranet. The Ethical Review Board of the Hospital provided ethical approval for this research. To participate, professionals were required to be health care professionals employed in the hospital working in contact with patients during the COVID-19 pandemic and to provide an informed consent form. Additionally, a coordinator and a researcher presented the objectives of the research project to professionals during shift changes. After giving informed consent, a total of 201 participants (response rate: 41.44%) completed anonymous self-report paper-and-pencil questionnaires. Of these, four were eliminated because of incomplete responses. The questionnaire's cover sheet informed participants about the study's goals and ensured both the voluntariness of their participation and the confidentiality of the responses. Once completed, the questionnaires were placed in cardboard boxes to ensure anonymity of the data.

2.2 | Measurements

2.2.1 | Patient verbal aggression

Patient verbal aggression was assessed using the seven-item non-physical violence scale from the Hospital Aggressive Behaviour Scale-Users (Waschgler et al., 2013). Participants indicated how often they experienced aggressive verbal acts by patients (e.g., *Patients get angry with me because of delay*; $\alpha = .90$) on a 5-point Likert scale (0 = *never*, 4 = *always*). We chose this scale over other instruments because it was specifically developed to capture verbal aggression from users towards health care personnel.

FIGURE 1 Conceptual model

2.2.2 | Work–family conflict

Work–family conflict was measured using the Italian version of the Work–Family Conflict Scale (Colombo & Ghislieri, 2008). This instrument comprises five items that assess the respondents' level of agreement with statements describing situations of work-to-family conflict (e.g., *The amount of time my job takes up makes it difficult to fulfill family responsibilities*; $\alpha = .90$) on a 7-point Likert scale (1 = *completely agree*, 7 = *completely disagree*).

2.2.3 | Emotional exhaustion

Emotional exhaustion was assessed using the five-item scale from the Italian version of the Maslach Burnout Inventory-General Survey (Borgogni et al., 2005). Respondents reported how frequently they experienced a state of feeling emotionally drained due to their work lives (e.g., *I feel emotionally drained by my work*; $\alpha = .92$) on a 7-point Likert scale (0 = *never*, 6 = *always*).

2.2.4 | Non-humanness attributions

Non-humanness attributions were measured using four non-uniquely human traits (e.g., *instinct*; Capozza et al., 2013; $\alpha = .92$). Health care professionals reported the extent to which they perceived patients in their hospital as characterized by non-uniquely human traits on a 7-point Likert scale (1 = *definitely false*, 7 = *definitely true*).

2.2.5 | Resilience

Resilience was measured using the six-item scale of the Italian version of the Psychological Capital Questionnaire (Alessandri et al., 2018). This scale consists of items that measure the participants' level of agreement with statements about ways of facing stressful work-related situations (e.g., *I usually take stressful things at work in stride*; $\alpha = .79$) on a 7-point Likert scale (1 = *completely agree*, 7 = *completely disagree*).

2.2.6 | Control variables

We controlled for gender (0 = *male*, 1 = *female*), age (in years), job tenure (in years) and having children (0 = *no*, 1 = *yes*) because the literature indicated that women, younger and less experienced health care workers were more likely to develop burnout, whereas parents had trouble balancing work and childcare during the pandemic. Moreover, we controlled for having had colleagues diagnosed with COVID-19 (0 = *no*, 1 = *yes*) or family members vulnerable to the virus (0 = *no*, 1 = *yes*) and having lost a loved one due to COVID-19 (0 = *no*, 1 = *yes*) because these experiences could have contributed

to health care professionals' state of exhaustion and work–family conflict.

2.3 | Statistical analyses

A composite score was calculated for each scale by averaging its respective items. Data were checked for outliers and intercorrelations were explored using SPSS 23 (George & Mallery, 2016). Then, we performed confirmatory factor analyses (CFAs) with the maximum likelihood method, comparing our measurement model with competing models. After testing for common method bias, we conducted structural equation models (SEMs) using bootstrapping analyses and a bias-corrected 95% confidence interval (CI) with a resample procedure of 1000 bootstrap samples. In our moderated mediation model, we controlled work–family conflict and exhaustion for gender, age, job tenure, having children, having colleagues diagnosed with COVID-19, having lost a loved one due to COVID-19 and having vulnerable family members. Indirect and conditional effects were considered significant when CI did not include zero and the p value was less than .05. CFAs and SEMs were performed using Mplus 7 (Muthèn & Muthèn, 2012).

3 | RESULTS

3.1 | Sample description and correlations

Most respondents were female (77.70%) nurses (65.80%) with children (65.90%) who had an average age of 45.56 years ($SD = 10.23$) and an average job tenure of 15.45 years ($SD = 12.23$). Most participants had colleagues diagnosed with COVID-19 (77.80%) and loved ones among the most vulnerable (89.80%). Around one-third of the respondents had lost a loved one due to COVID-19 (29.20%). With the use of G*Power, we performed a power analysis for multiple regression analysis with 11 antecedents setting an alpha of .05, a power of .95, and a medium effect size. The results showed that our sample size was appropriate (i.e., a minimum of 178 subjects). All variables correlated with each other in the expected directions, except for non-humanness attributions, gender and COVID-19-related variables that were not statistically significantly correlated with exhaustion (see Table 1).

3.2 | CFA and common method bias check

The results of the CFA testing the five-construct dimensions of our conceptual model (see Table 2) showed that the five-factor model outperformed any alternative model ($\chi^2[314] = 648.92$, Root Mean Square Error of Approximation (RMSEA) = .07, standardized Root Mean Square Residuals (SRMR) = .07, Comparative Fit Index (CFI) = .91, Tucker–Lewis Index (TLI) = .92). The results from Harman's

TABLE 1 Descriptive statistics and correlations among the study's variables (N = 197)

	M	SD	Min/max	Skewness	Kurtosis	1	2	3	4	5	6	7	8	9	10	11	12
1. Patient verbal aggression	.72	.82	0/4	1.5	2.34	**.90**											
2. Work–family conflict	3.78	1.56	1/7	−.05	−.83	.31**	**.90**										
3. Resilience	4.90	.89	1/7	−.38	.04	−.15*	−.22**	**.79**									
4. Dehumanization	4.53	1.04	1/7	−.68	1.07	.05	.13	.03	**.83**								
5. Emotional exhaustion	2.21	1.51	0/6	.70	−.27	.35**	.56**	−.41**	.18*	**.92**							
6. Gender	-	-	-	-	-	−.01	.05	−.06	.05	.07	-						
7. Age	45.56	10.23	-	-	-	.16*	.16*	−.19*	.06	.25**	.11	-					
8. Job tenure	15.45	12.23	-	-	-	.06	.16*	−.25**	.07	.23**	.11	.68**	-				
9. Having children	-	-	-	-	-	−.02	.22**	−.27***	.07	.10	.12	.55***	.39**	-			
10. Co-workers diagnosed with COVID-19	-	-	-	-	-	.20**	.23**	−.15	.08	.14	.09	.22**	.17*	.15*	-		
11. Loss of a loved one	-	-	-	-	-	−.03	24**	−.02	.01	.11*	−.06	.22**	.13	.15	.03	-	
12. Vulnerable family members	-	-	-	-	-	.20*	.23*	.01	.09	.23**	.10	.05	.01	−.05	−.02	.13	-

Note: Boldfaced numbers on the diagonal represent Cronbach's alpha; *M* = means; *SD* = standard deviations; min/max = minimum and maximum scores for each scale; gender: 0 = male, 1 = female; age: measured in years; job tenure: measured in years; having children: 0 = no, 1 = yes; Co-workers diagnosed with COVID-19: 0 = no, 1 = yes; loss of a loved one due to COVID-19: 0 = no, 1 = yes; family members vulnerable to COVID-19: 0 = no, 1 = yes.

*p < .05. **p < .01.

TABLE 2 Fit indices for the five-factor model and the alternative models

Model	χ^2	df	p	RMSEA	90% CI RMSEA	SRMR	CFI	TLI
Mediation model	406.33	227	.00	.07	[.05, .08]	.07	.91	.90
Five factor_cmb[a]	464.71	286	.00	.06	[.05, .06]	.05	.94	.93
Five-factor model[b]	648.92	314	.00	.07	[.06, .08]	.07	.91	.92
Four-factor model[c]	917.66	318	.00	.10	[.09, .11]	.10	.81	.79
Three-factor model[d]	1282.19	321	.00	.12	[.12, .13]	.11	.70	.67
Two-factor model[e]	1886.77	323	.00	.16	[.15, .16]	.14	.52	.47
One-factor model[f]	2198.48	324	.00	.17	[.16, .18]	.15	.42	.37

Abbreviations: CFI, comparative fit index; df, degree of freedom; RMSEA, root mean square error of approximation; SRMR, standardized root mean square residuals; TLI = Tucker–Lewis index.

[a]Previous model with the inclusion of a common method latent variable on which make all the items loaded.

[b]Patient verbal aggression, resilience, dehumanization, work–family conflict and emotional exhaustion load on their respective factors.

[c]Resilience loads on one factor, work–family conflict loads on a second factor, patient verbal aggression loads on a third factor, dehumanization and emotional exhaustion load on a fourth factor.

[d]Resilience loads on one factor, work–family conflict loads on a second factor, patient verbal aggression, dehumanization and emotional exhaustion load on a third factor.

[e]Resilience loads on one factor, patient verbal aggression, work–family conflict, dehumanization and emotional exhaustion load on a second factor.

[f]All indicators load on a single factor.

[g]Fit indices of the mediation model having work–family conflict as a mediator of the relationship between patient verbal aggression and emotional exhaustion, while controlling work–family conflict and emotional exhaustion for gender, age, job tenure, having children, having colleagues diagnosed with COVID-19, having lost a loved one due to COVID-19 and having family members vulnerable to Covid-19.

single-factor test indicated that the first factor explained only 29.85% of the variance. Moreover, the hypothesized five-factor model generated a better fit to the data after including the unmeasured latent method factor. This factor explained 24.00% of the total variance (less than 25.00%, the average amount of method variance observed in self-report studies; Podsakoff et al., 2012), indicating that common method variance is unlikely to be a major concern.

3.3 | Hypotheses testing

In our moderated mediation model (see Table 3), patient aggression was positively associated with work–family conflict ($\beta = .43$, $SE = .18$, $p < .05$, 95% CI [.08, .79]) and exhaustion ($\beta = .40$, $SE = .14$, $p < .01$, 95% CI [.03, .68]). Work–family conflict was positively related to exhaustion ($\beta = .43$, $SE = .18$, $p < .05$, 95% CI [.08, .79]) and partially mediated the patient aggression-exhaustion link. The indirect effect was positive, suggesting that patient aggression increased work–family conflict, which, in turn, led to exhaustion. Non-humanness attributions strengthened the patient aggression-work–family conflict association ($\beta = .50$, $SE = .21$, $p < .01$, 95% CI [.10, .91]), whereas resilience buffered the work–family conflict–exhaustion relationship ($\beta = -.15$, $SE = .07$, $p < .05$, 95% CI [−.30, −.01]). Professionals with high dehumanizing tendencies reported a considerable increase in work–family conflict in the passage from low to high exposure to patient aggression conditions (see Figure 2a). Additionally, health care professionals with low resilience reported a considerably greater increase in exhaustion in the passage from low to high work–family conflict conditions than those with high resilience (see Figures 2b and 3). The indirect effect of

patient aggression through work–family conflict on exhaustion was stronger when health care professionals had low resilience and, simultaneously, high dehumanizing tendencies ($\beta = .55$, $SE = .19$, $p < .001$, 95% CI [.18, .92]). This effect was also statistically significant for professionals with low/moderate resilience who had high/moderate dehumanizing tendencies. Conversely, this effect was statistically insignificant when professionals had high resilience regardless of their dehumanizing tendencies or when they had low dehumanizing tendencies regardless of their resilience levels.

4 | DISCUSSION

This study clarifies *how* and *when* patient verbal aggression may lead health care professionals to experience emotional exhaustion during the COVID-19 pandemic. The findings demonstrated that the association between patient verbal aggression and health care professionals' emotional exhaustion was mediated by work–family conflict but only when the professionals had low/moderate resilience and high/moderate dehumanizing tendencies towards their patients. Hence, this research makes several contributions to the literature.

First, by demonstrating the effects of patient verbal aggression can spill over to professionals' nonwork domain, this study adds to the growing body of research investigating the spillover effects of interpersonal stressors from work to family. In doing so, this study supports the notion based on COR theory (Hobfoll et al., 2018) that patient aggression may deplete professionals' resources due to the negative emotions and thoughts about the incident(s) (Zhou et al., 2019). In such a situation, health care professionals may struggle

TABLE 3 Path coefficients and conditional effects for the moderated mediation model

	Effects		
Paths	B	SE	95% CI
Gender → WFC	.01	.29	[−.74, .56]
Age → WFC	.01	.02	[−.04, .06]
Job tenure → WFC	−.01	.05	[−.14, .08]
Having children → WFC	−.05	.12	[−.04, .06]
Having colleagues diagnosed with COVID-19 → WFC	.67*	.34	[.10, 1.40]
Having lost a loved one due to COVID-19 → WFC	−.20	.25	[−.85, .30]
Having family members vulnerable to COVID-19 → WFC	.78	.45	[−.38, 1.67]
Gender → exhaustion	.28	.22	[−.16, .72]
Age → exhaustion	.01	.01	[−.02, .03]
Job tenure → exhaustion	.01	.01	[−.06, .08]
Having children → exhaustion	−.05	.09	[−.29, .14]
Having colleagues diagnosed with COVID-19 → exhaustion	−.24	.28	[−.95, .31]
Having lost a loved one due to COVID-19 → exhaustion	.52*	.21	[.11, .92]
Having family members vulnerable to COVID-19 → exhaustion	.72*	.30	[.12, 1.31]
Patient aggression → WFC	.43*	.18	[.08, .79]
Dehumanization → WFC	.14	.14	[−.14, .41]
Patient aggression * dehumanization → WFC	.50*	.21	[.10, .91]
Work–family conflict → exhaustion	.43***	.08	[.22, .58]
Resilience → exhaustion	−.19	.26	[−.70, .32]
Work–family conflict * resilience → WFC	−.15*	.07	[−.30, −.01]
Patient aggression → exhaustion	.40**	.14	[.03, .68]
Patient aggression → WFC → exhaustion	.25*	.17	[.02, .73]
Patient aggression * low dehumanization → WFC → exhaustion	−.01	.11	[−.30,.28]
Patient aggression * moderate dehumanization → WFC → exhaustion	.21*	.09	[.03, .46]
Patient aggression * high dehumanization → WFC → exhaustion	.44**	.15	[.06, .82]
Patient aggression → WFC * low resilience → exhaustion	.21*	.15	[.01, .49]
Patient aggression → WFC * moderate resilience → exhaustion	.01*	.08	[.03, .36]
Patient aggression → WFC * high resilience → exhaustion	.10	.06	[−.15, .04]
Patient aggression * low dehumanization → WFC * low resilience → exhaustion	−.04	.15	[−.33,.25]
Patient aggression * moderate dehumanization → WFC * low resilience → exhaustion	.25*	.12	[.03,.48]
Patient aggression * high dehumanization → WFC * low resilience → exhaustion	.55***	.19	[.18, .92]
Patient aggression * low dehumanization → WFC * moderate resilience → exhaustion	−.03	.11	[−.24, .18]
Patient aggression * moderate dehumanization → WFC * moderate resilience → exhaustion	.19*	.08	[.02, .35]
Patient aggression * high dehumanization → WFC * moderate resilience → exhaustion	.40**	.14	[.13, .67]
Patient aggression * low dehumanization → WFC * high resilience → exhaustion	−.02	.07	[−.16, .12]
Patient aggression * moderate dehumanization → WFC * high resilience → exhaustion	.12	.07	[−.01, .25]
Patient aggression * high dehumanization → WFC * high resilience → exhaustion	.26	.12	[−.15, .75]

*$p < .05$. **$p < .01$. ***$p < .001$

to balance work and family, which can, in unsuccessful cases, exacerbate their loss of resources and then make it challenging to maintain their work functioning, thus resulting in exhaustion (Bernuzzi et al., 2021).

Second, to our knowledge, this is the first study to support the protective role of resilience against work–family conflict experienced

by health care professionals facing aggressive patients during the pandemic. In this view, resilience represents a personal resource that allows professionals to perceive incompatible demands between work and family roles as a challenge to address by adopting effective coping strategies (Hobfoll et al., 2015). Indeed, given that resilient people tend to have a sense of control over their own life and an optimistic

view of the future, they are more likely to see the bright sides of demanding situations (Bernuzzi et al., 2021). Moreover, resilient workers have a vast reservoir of resources on which to draw to handle challenging situations (Hobfoll et al., 2015). Thus, they are well-equipped to reconcile work and nonwork role demands and recover

their emotional resources, thereby being less vulnerable to emotional exhaustion (Maffoni et al., 2020).

Third, to our knowledge, this is the first empirical attempt to investigate whether dehumanization might help health care professionals deal with aggressive patients during the pandemic. Contrary to our expectations, the ascription of non-uniquely human traits to patients is an ineffective coping strategy to handle stressful demands posed by patient aggression. Based on COR theory (Hobfoll et al., 2018), it might be that this strategy does not allow health care professionals to restore their resources through pleasant encounters with other patients. Thus, dehumanization may undermine the health care professional-patient relationship and communication by compromising patient trust and care satisfaction (Capozza et al., 2016).

Finally, this study informs on how professionals' experiences with COVID-19 impacted their work–family interface and well-being. Having colleagues diagnosed with COVID-19 was positively related to work–family conflict, probably because the remaining staff had to cover absent co-workers, making their workload heavier and further interfering with their family life (Brooks et al., 2020). Additionally, having family members vulnerable to COVID-19 was positively related to professionals' emotional exhaustion, probably due to the increased fear of transmitting the virus to them. Furthermore, losing a loved one was positively associated with emotional exhaustion, probably because bereaved health care professionals could undergo a severe psychological crisis, along with worries about their family stability and financial situation (Mohammadi et al., 2021).

This cross-sectional study was limited to a single Italian hospital and relied merely on self-report measures. Thus, future studies should adopt longitudinal designs and collect multisource and multimethod data on more nationally representative samples. Replications should be made in other countries and include other personal characteristics and coping strategies.
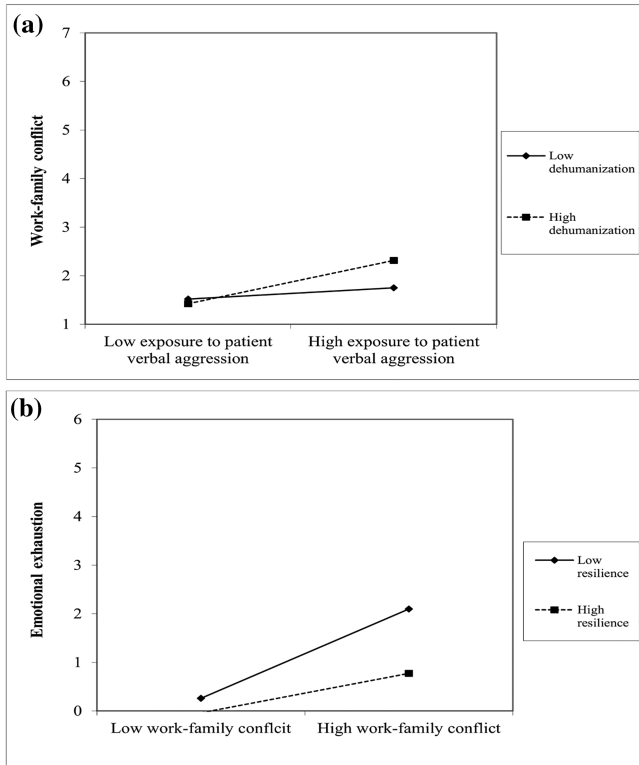
FIGURE 2 Moderating effects of dehumanization (a) and resilience (b) on the association between patient verbal aggression and emotional exhaustion through work–family conflict
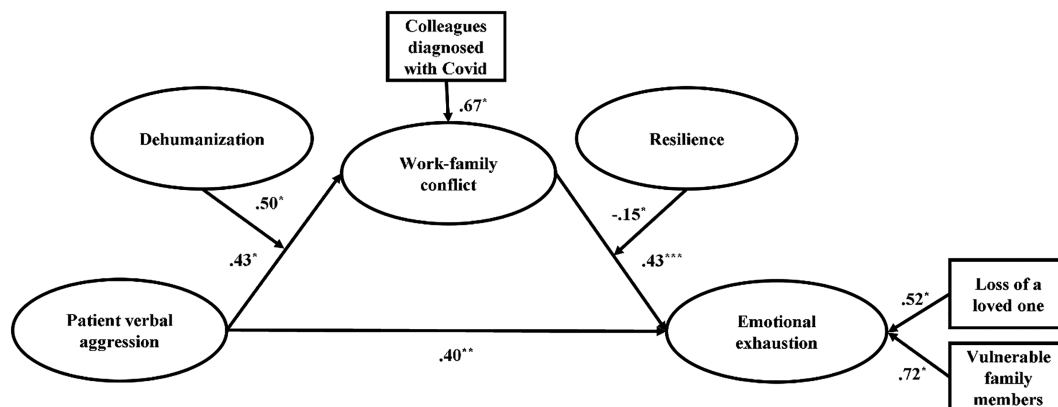
FIGURE 3 Model analysing the mediating role of work–family conflict in the association between patient verbal aggression and emotional exhaustion and the moderating effects of dehumanization and resilience, while controlling work–family conflict and emotional exhaustion for socio-demographic and COVID-19-related variables. *Note*: *p < .05, **p < .01

5 | CONCLUSION

This study demonstrated that when confronted with verbally aggressive patients during the COVID-19 pandemic, health care professionals with low/moderate resilience and high/moderate dehumanizing tendencies were at risk of experiencing work–family conflict and then emotional exhaustion. Therefore, hospital organisations could provide their staff with resilience and interpersonal skills training programmes to prepare them to handle patients during emergencies.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Hospital organisations should implement a zero-tolerance policy for patient aggression, ensuring institutional support, systematic monitoring and feedback practices (Dafny & Muller, 2021). Reporting of patient verbal aggression incidents should be encouraged by ward managers to identify strategies to prevent and de-escalate these events (Jakobsson et al., 2021). To this end, the ward managers could conduct periodic sharing and debriefing sessions where professionals are encouraged to share their experiences with aggressive patients and home problems, reflecting in teams on possible solutions. Health care professionals could benefit from stress management interventions, aggression management and scenario training programmes on de-escalating communicative skills to decrease the potential for aggression (Dafny & Muller, 2021). These programmes should also incorporate psychological resilience training and coping skills to establish work–home boundaries (Maffoni et al., 2020). Additionally, work-hour regulation programmes and services should be implemented, such as on-site childcare facilities or food delivery to workers' elderly family members. Furthermore, health care professionals should be aware of the risks related to the dehumanization of patients and educated on how to effectively balance empathy with cognitive problem-solving abilities through interpersonal skill training programmes (Haque & Waytz, 2012). Finally, hospital organisations could consider introducing psychological support programmes to support needy workers during normal and pandemic times.

ACKNOWLEDGEMENTS

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

ETHICAL APPROVAL

The study was commissioned by the Medical Direction (i.e., the board of medical directors that organizes and coordinates physician services and services provided by other professionals within the hospital, including the Ethical review board of the Hospital) and the Dean of Medicine with a protocol of understanding between the Hospital and the University of Pavia approved on 11 August 2020 (number 372) in which all parties agreed to conduct the study. In this protocol, the Ethical Review Board of the Hospital provided ethical approval for this research.

DATA AVAILABILITY STATEMENT

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

ORCID

Valentina Sommovigo https://orcid.org/0000-0001-9273-5706
Chiara Bernuzzi https://orcid.org/0000-0003-0703-1398
Ilaria Setti https://orcid.org/0000-0001-7901-4226

REFERENCES

Alessandri, G., Consiglio, C., Luthans, F., & Borgogni, L. (2018). Testing a dynamic model of the impact of psychological capital on work engagement and job performance. *Career Development International*, *23*(1), 33–47. https://doi.org/10.1108/CDI-11-2016-0210

Balogun, A. G., & Afolabi, O. A. (2021). Do personal resources make a difference in the relation between work-family conflict and burnout among working mothers? *Covenant International Journal of Psychology*, *5*(2), 5356–5368.

Bernuzzi, C., Setti, I., Maffoni, M., & Sommovigo, V. (2021). From moral distress to burnout through work-family conflict: The protective role of resilience and positive refocusing. *Ethics and Behavior*, 1–23. https://doi.org/10.1080/10508422.2021.1955682

Bhatti, O. A., Rauf, H., Aziz, N., Martins, R. S., & Khan, J. A. (2021). Violence against healthcare workers during the COVID-19 pandemic: A review of incidents from a lower-middle-income country. *Annals of Global Health*, *87*(1), 41. https://doi.org/10.5334/aogh.3203

Borgogni, L., Galati, D., Petitta, L., & Centro Formazione Schweitzer. (2005). *Il questionario checkup organizzativo*. Manuale dell'adattamento Italiano. O.S. Organizzazioni Speciali.

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, *395*(10227), 912–920. https://doi.org/10.1016/S0140-6736(20)304608

Capozza, D., Falvo, R., Boin, J., & Colledani, D. (2016). Dehumanization in medical contexts: An expanding research field. *TPM*, *23*(4), 545–559. https://doi.org/10.4473/TPM23.4.8

Capozza, D., Trifiletti, E., Vezzali, L., & Favara, I. (2013). Can intergroup contact improve humanity attributions? *International Journal of Psychology*, *48*(4), 527–541. https://doi.org/10.1080/00207594.2012.688132

Colombo, L., & Ghislieri, C. (2008). The work-to-family conflict: Theories and measures. *TPM*, *15*(1), 35–55.

Cotel, A., Golu, F., Pantea Stoian, A., Dimitriu, M., Socea, B., Cirstoveanu, C., Socea, B., Cirstoveanu, C., Davitoiu, A. M., Alexe, F. J., & Oprea, B. (2021). Predictors of burnout in healthcare

workers during the COVID-19 pandemic. *Health*, *9*(3), 304. https://doi.org/10.3390/healthcare9030304

Dafny, H. A., & Muller, A. (2021). Australian nurses' suggestions for the management of violence in the workplace: 'the people who make the policy are not the people on the floor'. *Journal of Nursing Management*. https://doi.org/10.1111/jonm.13378

Demsky, C. A., Fritz, C., Hammer, L. B., & Black, A. E. (2019). Workplace incivility and employee sleep: The role of rumination and recovery experiences. *Journal of Occupational Health Psychology*, *24*(2), 228–240. https://psycnet.apa.org/doi/10.1037/ocp0000116

Falvo, R., Colledani, D., & Capozza, D. (2021). Denying full humanity to patients and nurses' well-being: The moderating role of attachment security. *TPM*, *28*(3), 329–342. https://doi.org/10.4473/TPM28.3.4

Farrell, G. A., Bobrowski, C., & Bobrowski, P. (2006). Scoping workplace aggression in nursing: Findings from an Australian study. *Journal of Advanced Nursing*, *55*(6), 778–787. https://doi.org/10.1111/j.1365-2648.2006.03956.x

George, D., & Mallery, P. (2016). IBM SPSS statistics 23 step by step: A simple guide and reference, Routledge.

Ghio, L., Patti, S., Piccinini, G., Modafferi, C., Lusetti, E., Mazzella, M., & del Sette, M. (2021). Anxiety, depression and risk of post-traumatic stress disorder in health workers: The relationship with burnout during COVID-19 pandemic in Italy. *International Journal of Environmental Research and Public Health*, *18*(18), 9929. https://doi.org/10.3390/ijerph18189929

Giusti, E. M., Pedroli, E., D'Aniello, G. E., Badiale, C. S., Pietrabissa, G., Manna, C., Badiale, M. S., Riva, G., Castelnuovo, G., & Molinari, E. (2020). The psychological impact of the COVID-19 outbreak on health professionals: A cross-sectional study. *Frontiers in Psychology*, *11*, 1684. https://doi.org/10.3389/fpsyg.2020.01684

Haque, O. S., & Waytz, A. (2012). Dehumanization in medicine: Causes, solutions, and functions. *Perspectives on Psychological Science*, *7*(2), 176–186. https://doi.org/10.1177/1745691611429706

Hobfoll, S. E., Halbesleben, J., Neveu, J. P., & Westman, M. (2018). Conservation of resources in the organizational context: The reality of resources and their consequences. *Annual Review of Organizational Psychology and Organizational Behavior*, *5*, 103–128. https://doi.org/10.1146/annurev-orgpsych-032117-104640

Hobfoll, S. E., Stevens, N. R., & Zalta, A. K. (2015). Expanding the science of resilience: Conserving resources in the aid of adaptation. *Psychological Inquiry*, *26*(2), 174–180. https://doi.org/10.1080/1047840X.2015.1002377

Jakobsson, J., Örmon, K., Berthelsen, H., & Axelsson, M. (2021). Workplace violence from the perspective of hospital ward managers in Sweden: A qualitative study. *Journal of Nursing Management*. https://doi.org/10.1111/jonm.13423

Joyce, S., Shand, F., Tighe, J., Laurent, S. J., Bryant, R. A., & Harvey, S. B. (2018). Road to resilience: A systematic review and meta-analysis of resilience training programmes and interventions. *BMJ Open*, *8*(6), e017858. https://doi.org/10.1136/bmjopen-2017-017858

Kakemam, E., Chegini, Z., Rouhi, A., Ahmadi, F., & Majidi, S. (2021). Burnout and its relationship to self-reported quality of patient care and adverse events during COVID-19: A cross-sectional online survey among nurses. *Journal of Nursing Management*, *29*(7), 1974–1982. https://doi.org/10.1111/jonm.13359

Lafta, R., Qusay, N., Mary, M., & Burnham, G. (2021). Violence against doctors in Iraq during the time of COVID-19. *PLoS ONE*, *16*(8), e0254401. https://doi.org/10.1371/journal.pone.0254401

Lim, S., Ilies, R., Koopman, J., Christoforou, P., & Arvey, R. D. (2018). Emotional mechanisms linking incivility at work to aggression and withdrawal at home: An experience-sampling study. *Journal of Management*, *44*(7), 2888–2908. https://doi.org/10.1177/0149206316654544

Liu, X., Yang, H., Hu, Y., Zhou, Y., Wang, J., Dong, L., Zhang, M., & Liang, T. (2021). Incidence of workplace violence against nurses among Chinese hospitals: A meta-analysis. *Journal of Nursing Management*. https://doi.org/10.1111/jonm.13427

Maffoni, M., Sommovigo, V., Giardini, A., Paolucci, S., & Setti, I. (2020). Dealing with ethical issues in rehabilitation medicine: The relationship between managerial support and emotional exhaustion is mediated by moral distress and enhanced by positive affectivity and resilience. *Journal of Nursing Management*, *28*(5), 1114–1125. https://doi.org/10.1111/jonm.13059

Maslach, C., & Leiter, M. P. (2016). Burnout. In G. Fink (Ed.), *Stress: Concepts, Cognition, Emotion, and Behaviour: Handbook of Stress* (pp. 351–357). Academic Press.

MEF-Ministero dell'Economia e delle Finanze. (2019). Occupazione, https://www.contoannuale.mef.gov.it/it/occupazione

Mohammadi, F., Oshvandi, K., Shamsaei, F., Cheraghi, F., Khodaveisi, M., & Bijani, M. (2021). The mental health crises of the families of COVID-19 victims: A qualitative study. *BMC Family Practice*, *22*(1), 1–7. https://doi.org/10.1186/s12875-021-01442-8

Muthèn, L. K., & Muthèn, B. O. (2012). *Mplus User's Guide*. Muthèn & Muthèn.

Ożegalska-Trybalska, J. (2021). Infringement of the personal rights of a doctor and medical institution. *Nowotwory. Journal of Oncology*, *71*(3), 179–182. https://doi.org/10.5603/NJO.2021.0034

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*, 539–569. https://doi.org/10.1146/annurev-psych-120710-100452

Reichl, C., Leiter, M. P., & Spinath, F. M. (2014). Work–nonwork conflict and burnout: A meta-analysis. *Human Relations*, *67*(8), 979–1005. https://doi.org/10.1177/0018726713509857

Romani, G., Dal Mas, F., Massaro, M., Cobianchi, L., Modenese, M., Barcellini, A., Ricciardi, W., Barach, P., Lucà, R., & Ferrara, M. (2021). Population health strategies to support hospital and intensive care unit resiliency during the COVID-19 pandemic: The Italian experience. *Population Health Management*, *24*(2), 174–181. https://doi.org/10.1089/pop.2020.0255

Roslan, N. S., Yusoff, M. S. B., Razak, A. A., & Morgan, K. (2021). Burnout prevalence and its associated factors among Malaysian healthcare workers during COVID-19 pandemic: An embedded mixed-method study. *Health*, *9*(1), 90. https://doi.org/10.3390/healthcare9010090

Schiff, M., Shinan-Altman, S., & Rosenne, H. (2021). Israeli health care social workers' personal and professional concerns during the COVID-19 pandemic crisis: The work–family role conflict. *The British Journal of Social Work*, *51*(5), 1858–1878. https://doi.org/10.1093/bjsw/bcab114

Sommovigo, V., Setti, I., O'Shea, D., & Argentero, P. (2020). Investigating employees' emotional and cognitive reactions to customer mistreatment: An experimental study. *European Journal of Work and Organizational Psychology*, *29*(5), 707–727. https://doi.org/10.1080/1359432X.2020.1745189

Trifiletti, E., Di Bernardo, G. A., Falvo, R., & Capozza, D. (2014). Patients are not fully human: A nurse's coping response to stress. *Journal of Applied Social Psychology*, *44*(12), 768–777. https://doi.org/10.1111/jasp.12267

Vincent-Höper, S., Stein, M., Nienhaus, A., & Schablon, A. (2020). Workplace aggression and burnout in nursing—The moderating role of follow-up counseling. *International Journal of Environmental Research and Public Health*, *17*(9), 3152. https://doi.org/10.3390/ijerph17093152

Waschgler, K., Ruiz-Hernández, J. A., Llor-Esteban, B., & García-Izquierdo, M. (2013). Patients' aggressive behaviours towards nurses: Development and psychometric properties of the hospital aggressive behaviour scale-users. *Journal of Advanced Nursing*, *69*(6), 1418–1427. https://doi.org/10.1111/jan.12016

Yeh, T. F., Chang, Y. C., Hsu, Y. H., Huang, L. L., & Yang, C. C. (2020). Causes of nursing staff burnout: Exploring the effects of emotional

exhaustion, work–family conflict, and supervisor support. *Japan Journal of Nursing Science*, *18*, e12392. https://doi.org/10.1111/jjns.12392

Zampano. (2020). Students, parents fight school closures in Italy. https://www.aa.com.tr/en/education/students-parents-fight-school-closures-in-italy/2069281

Zhou, Z. E., Meier, L. L., & Spector, P. E. (2019). The spillover effects of coworker, supervisor, and outsider workplace incivility on work-to-family conflict: A weekly diary design. *Journal of Organizational Behavior*, *40*(9), 1000–1012. https://doi.org/10.1002/job.2401