

# WORK OVERLOAD, EMOTIONAL EXHAUSTION, EMOTIONAL CONTAGION, AND COMPASSION FATIGUE IN NURSES DURING COVID-19 PANDEMIC: A MODERATED MEDIATION MODEL

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## ABSTRACT

### OBJECTIVE:

Burnout is stated as a major problem for nurses. The relationship between work overload and burnout, another problem experienced by nurses, has been examined by different authors. However, the effect of mediation and moderation mechanisms that may affect the relationship between work overload and emotional exhaustion in nurses has yet to be clarified to a great extent. This study aims to fill this research gap by examining the mediating role of compassion fatigue and moderating role of emotional contagion in the relationship between work overload and emotional exhaustion.

### METHODS:

This descriptive cross-sectional study was conducted in Istanbul, Turkey, with the participation of 330 nurses. The research model was tested with Hayes' PROCESS macro.

### RESULTS:

The result shows that the indirect effect of work overload on emotional exhaustion through compassion fatigue is positive and significant ( $b = 0.335$ , 95% confidence intervals (CIs) = (0.243, 0.430)). Also, the indirect effect was found to vary depending on emotional contagion (Index of moderated mediation (IMM) = 0.076, 95% CIs = (0.029, 0.132)). In this context, the effect of work overload on emotional exhaustion through compassion fatigue is stronger in nurses with high emotional contagion levels.

### CONCLUSIONS:

The study's findings revealed that emotional contagion and compassion fatigue variables are important mechanisms for clarifying the relationship between work overload and the emotional exhaustion of nurses.

### KEYWORDS

burnout, compassion fatigue, emotional contagion, nursing, work overload

## INTRODUCTION

Health care focuses on humans, cannot be postponed, and is vital. Additionally, health consumers have limited information about health services, uncertainty about the quality of the health care they will receive, and lack of substitution for health services cause them to exhibit irrational behaviors such as not following medical advice [1]. These situations cause healthcare professionals to work under more difficult conditions than in other sectors. Extraordinary situations that occasionally occur can further increase the difficulties healthcare professionals face. The COVID-19 pandemic is one of the best examples of this. The COVID-19 pandemic has caused many physical and psychological conditions that have affected nurses. One of the main reasons is that nurses have the largest share among the professional groups working in hospitals and are the primary employees responsible for patient care. Many factors, such as changing working conditions, increasing patient admission, insufficient personnel in the face of intensive work, and the increasing number of shifts per person, have increased the nurses' workload both in terms of quality and quantity [2]. While the quantitative part includes burdens related to the amount and duration of work, the qualitative part includes situations that exceed the employee's knowledge, skills, and abilities [3].

One of the negative situations that nurses face is emotional exhaustion. Emotional exhaustion is one of the sub-dimensions of burnout syndrome. Compared to other dimensions (depersonalization and personal accomplishment), it is the central component with the most critical role in the emergence of burnout [4]. Emotional exhaustion is a decrease in emotional and mental energy, which causes the employee to feel tired and overwhelmed due to the constant repetition of specific job demands [5]. Compared to other professions, burnout is most prevalent in the health sector, particularly in medical care providers such as doctors and nurses. The burnout rate in 19% to 30% of employees in general increases to 25% to 75% among healthcare professionals [6].

Furthermore, burnout, defined as an occupational disease, accounts for 8% of occupational disease cases [6]. The complex working environment during the pandemic, increased working hours, increased patient admissions, and increased workloads per nurse make health service delivery very difficult. It is assumed that repeating this troublesome process throughout the pandemic will cause

the nurses to constantly feel tired and overwhelmed. This process will have a negative psychological impact on them [7]. The research hypothesis developed in this context is as follows:

### **Hypothesis 1: Work overload is positively related to emotional exhaustion.**

Nurses, whose workload has increased considerably with the pandemic, have cared for more patients than usual; many are COVID-19 patients. Some negative effects on the nurses will be caused by interacting too much with traumatized patients [8]. One of them is compassion fatigue. Composed of the sub-dimensions of secondary trauma and occupational burnout, compassion fatigue is defined as the traumatic stress that occurs due to the nurses' constantly being exposed to the sufferings of the patients. Failure to take adequate measures for nurses exposed to intense working conditions and the suffering of patients triggers compassion fatigue [9]. Therefore, the nurses' compassion fatigue, whose workload has increased considerably during the pandemic, is also likely to increase. The research hypothesis developed in this context is as follows:

### **Hypothesis 2: Work overload is positively related to compassion fatigue.**

Nurses interact with patients requiring intensive care, especially patients at risk of death, increasing their compassion fatigue. Considering that nurses have constantly been dealing with patients who are struggling for life, showing compassion to these patients, and witnessing many deaths during the pandemic, compassion fatigue is inevitable [10]. It is stated that nurses experiencing compassion fatigue face many negative situations, such as lack of motivation, decreased empathy, hopelessness, fear, insomnia, and intention to leave work [11]. Therefore, such negative situations are likely to lead to burnout in nurses. Work overload may have a direct effect on emotional exhaustion, as well as an indirect effect through compassion fatigue. The research hypotheses developed in this context are as follows:

### **Hypothesis 3: Compassion fatigue is positively related to emotional exhaustion.**

Hypothesis 4: Compassion fatigue mediates the relationship between work overload and emotional exhaustion.

Another variable discussed in this research is emotional contagion. Emotional contagion is the effect of triggering stimuli that arise in one individual or group on another individual or group. In other words, it is the process of one

person transferring their emotions and behaviors to another [12]. This phenomenon can occur consciously or unconsciously in which individuals or groups influence each other's behavior [13]. Empathy emerges in the process of individuals and groups influencing each other's emotions and behaviors and transferring them to others. With empathy, people are exposed to another's emotional experience and produce a similar emotional response. Watson's [14] human caring theory emphasizes an empathic relationship between nurses and patients. It is also noted that nurses' compassion fatigue will increase if the necessary precautions are not taken during this empathic relationship between patients and nurses. With the increasing workload during the pandemic, nurses have generally cared for patients who struggle with life and death in intensive care. In this process, they have witnessed the sufferings of the patients and many cases resulting in death. Therefore, it is likely that nurses who are a group with high feelings of empathy are affected by these traumatic cases and that they transfer their emotions and behaviors to their colleagues and affect them as well [15, 16]. The research hypothesis developed in this context is as follows: Hypothesis 5: Emotional contagion moderates the effect of work overload on compassion fatigue, such that this effect is stronger when emotional contagion is high.

Additionally, in this study, the effect of work overload on emotional exhaustion through compassion fatigue is expected to depend on the level of emotional contagion. In this context, the following research hypothesis was developed:

**Hypothesis 6: Emotional contagion moderates the indirect effect of work overload on emotional exhaustion, such that**

**this indirect effect is stronger when emotional contagion is high.**

In the literature, the relationship between work overload and burnout has been examined in various sectors, especially in the health sector and the nursing sample [17, 18]. However, the effect of mediation and moderation mechanisms that may affect the relationship between work overload and emotional exhaustion in nurses has not been clarified to a great extent. Therefore, the lack of such studies creates a research gap. This study aims to contribute to filling this research gap by examining the mediating role of compassion fatigue and the moderating role of emotional contagion in the relationship between work overload and emotional exhaustion.

## METHODS

### PARTICIPANTS AND PROCEDURE

This study was designed as an explanatory and cross-sectional. The study was conducted between 18 June 2022 and 13 August 2022 with the participation of 330 nurses in İstanbul, Turkey. In this study, the face-to-face survey method was employed, and the online survey method was preferred in cases where nurses could not be reached due to the COVID-19 pandemic. A questionnaire was sent to 350 nurses who agreed to participate in the study, and 340 nurses (97.1%) completed the questionnaire. Of the 340 questionnaires obtained, ten were excluded from the evaluation according to the recommendations of Tabachnick & Fidell [19] due to more than 50% missing data. Therefore, the data obtained from a total of 330 nurses (170 obtained by online and 160 by face-to-face) were analyzed.

TABLE 1. DEMOGRAPHIC AND PROFESSIONAL CHARACTERISTICS OF NURSES

Variables	n	%	Mean	SD
<b>Sex</b>				
Male	81	24.5		
Female	249	75.5		
<b>Education</b>				
High school degree	45	13.6		
Associate degree	94	28.5		
Bachelor's degree	152	46.1		
Master's degree	39	11.8		
<b>Income</b>				
Low	183	55.5		
Middle	142	43.2		
High	5	1.3		

<b>Age</b>	32	7.7
Working time in current hospital	6.3	5.5
Working time in the profession	10.7	7.4

Note: SD, Standard deviation; Working time in current hospital (in years); Working time in the profession (in years).

Most of the nurses who participated in the study (75.5%, n = 249) were female, and more than half (57.9%, n = 191) had a bachelor's or higher education degree. The participants had been working in their hospital for an average of 6.3 years and practicing nursing for 10.7 years. In addition, the ages of the participants ranged between 20 and 60 (mean =  $32 \pm 7.7$ ), and more than half of them (55.5%, n = 183) stated that their monthly income was low.

## ETHICAL CONSIDERATIONS

Prior to commencing data collection, the ethics committee approval was obtained from the ethics committee of Nigde Omer Halisdemir University with the decision numbered E-86837521-050.99-199459.

## MEASURES

In this study, four scales consisting of forty-eight items were used. Also, seven questions were asked to collect participants' demographic information.

### Work overload scale

The work overload scale was developed by Peterson et al. [20] and adapted into Turkish by Derya [21]. This scale has eleven items in one dimension, and the scale response options are in a five-point Likert type. As a result of the Turkish adaptation of the scale, Cronbach's alpha (CA) coefficient was calculated to be 0.86.

### Emotional exhaustion scale

Maslach burnout scale was developed by Maslach et al. [22] and adapted into Turkish by Ergin [23]. In this scale, there are three sub-dimensions, "Emotional exhaustion," "Depersonalization," and "Personal accomplishment," and a total of twenty-two items. The "Emotional exhaustion" sub-dimension has nine items that will be used in this study. The response options of the scale are in a five-point Likert type. The CA coefficient for the emotional exhaustion sub-dimension of the scale was calculated to be 0.83.

### Compassion fatigue scale

The compassion fatigue scale was developed by Adams et al. [24] and adapted into Turkish by Dinc & Ekinci [25]. The compassion fatigue scale consists of thirteen items and two subscales, and the scale response options are in a ten-point Likert type. The scale can also be used one-dimensionally [24]. As the score increases, the level of compassion fatigue

increases. Within the scope of the scale's reliability, the CA coefficient was calculated, and the secondary trauma and occupational burnout sub-dimensions coefficients were calculated to be 0.75 and 0.85, respectively. In addition, the CA coefficient for the overall scale was calculated to be 0.88.

### Emotional contagion scale

The emotional contagion scale was developed by Doherty [12] and adapted into Turkish by Akin et al. [26]. The emotional contagion scale consists of fifteen items, and the scale response options are in a five-point Likert type. As a result of the confirmatory factor analysis (CFA) conducted by Akin et al. [26], the scale presented a single-factor structure as in the original. The CA coefficient was calculated within the scale's reliability scope, and the related coefficient ( $\alpha = 0.75$ ) was considered sufficient [27].

### CONTROL VARIABLES

Since gender (Female = 0, Male = 1), age (in years), and working time in the profession (in years) are important factors affecting burnout, they were included in the analysis as control variables [5, 8].

### STATISTICAL ANALYSES

CFA was conducted to test the construct validity, and CA coefficients were also calculated to test reliability. PROCESS macro (v4.1), developed by Hayes [28], was used to test the research hypotheses. First, model 4 in PROCESS macro was used to test the indirect effect. Then, model 7 was used to test the moderating effect of emotional contagion on the indirect effect. For a significant effect in the scope of PROCESS macro, 95% confidence intervals (CIs) should not contain zero values. All the analyses processed using the PROCESS macro were conducted with a sample size of 5,000 using the bootstrap technique and 95% CIs. In addition, SPSS 23 program was used for descriptive statistics and correlation analysis.

## RESULTS

### VALIDITY AND RELIABILITY ANALYSIS RESULTS

As a result of the CFA to test construct validity, we determined that the fit indices were not in the desired range. We excluded the seventh item of the work overload

scale (I can finish my work on time) because it had a low factor load ( $b = 0.153$ ;  $p < 0.05$ ). We performed CFA again with the revised model. We observed that the model fit values were in the desired threshold range ( $\chi^2 (974) = 2045.18$ ,  $\chi^2 / df = 2.100$ , Comparative fit index = 0.902, Root mean square error of approximation = 0.058, Standardized root mean square residual = 0.068). In addition, we determined that all factor loads of the scales were statistically significant. In addition, we calculated the CA coefficient to test the reliability presented in Table 2. The CA coefficients are above 0.70, indicating that the scales are reliable.

### CORRELATION ANALYSIS RESULTS

Table 2 shows the main research variables' mean, standard deviation, correlation, and reliability results.

**TABLE 2. CORRELATIONS, RELIABILITY COEFFICIENTS, AND DESCRIPTIVE STATISTICS OF THE MAIN RESEARCH VARIABLES**

Variables	M	SD	1	2	3	4
1. WO	3.13	0.91	<b>0.861</b>			
2. CF	4.95	2.13	0.626**	<b>0.934</b>		
3. EE	3.03	1.04	0.641**	0.689**	<b>0.936</b>	
4. EC	3.56	0.76	0.460**	0.437**	0.364**	<b>0.913</b>

Note: WO, Work overload. CF, Compassion fatigue. EE, Emotional exhaustion. EC, Emotional contagion. M, Mean. SD, Standard deviation. \*\*  $p < .01$ . Diagonals (in bold) represent Cronbach's alpha coefficient.

**TABLE 3. MEDIATION ANALYSIS RESULTS**

Model	Effect	SE	t-value	LLCI	ULCI	Hypotheses results
Mediation Model (Model 4 of the Hayes' PROCESS) Outcome: CF ( $R^2=0.394$ )						
WO	1.454***	0.104	0.128	1.250	1.658	H2 supported
Gender (Female=0, Male=1)	-0.013	0.223	-0.060	-0.451	0.425	
Age	0.010	0.024	0.433	-0.037	0.058	
Working time in the profession	-0.002	0.025	-0.062	-0.051	0.048	
Outcome: EE ( $R^2=0.553$ )						
WO	0.387***	0.055	7.001	0.278	0.495	H1 supported
CF	0.230***	0.023	9.876	0.184	0.276	H3 supported
Gender (Female=0, Male=1)	-0.003	0.093	-0.036	-0.187	0.180	
Age	-0.010	0.101	-0.974	-0.030	0.010	
Working time in the profession	0.019	0.011	1.841	-0.001	0.040	
Bootstrapping results of the indirect effect						
WO → CF → EE	0.335	0.047		0.243	0.430	H4 supported

Note: WO, Work overload. EE, Emotional exhaustion. CF, Compassion fatigue. Age (in years). Working time in the profession (in years). LLCI, Lower limit confidence interval. ULCI, Upper limit confidence interval. \*\*\* $p < .001$ . Unstandardized effects are reported in the table. Bootstrap sample size = 5,000.

H4 states that compassion fatigue mediates the relationship between work overload and emotional exhaustion. The bootstrapping estimate on the indirect effect of work overload on emotional exhaustion through compassion fatigue is positive and significant because 95% CIs do not include zero ( $b = 0.335$ , 95% CIs = (0.243, 0.430)). Therefore, H4 is supported.

The results show that work overload positively correlated with emotional exhaustion ( $r = 0.641$ ,  $p < 0.01$ ) and compassion fatigue ( $r = 0.626$ ,  $p < 0.01$ ). Also, compassion fatigue positively correlated with emotional exhaustion ( $r = 0.689$ ,  $p < 0.01$ ).

### HYPOTHESES TESTING

Table 3 shows that work overload positively predicted emotional exhaustion and was statistically significant ( $b = 0.387$ ,  $p < 0.001$ ). Therefore, H1 is supported. H2 is supported, as regression results show that work overload positively predicted compassion fatigue and was statistically significant ( $b = 1.454$ ,  $p < 0.001$ ). H3 is supported based on the results in Table 3 ( $b = 0.230$ ,  $p < 0.001$ ), indicating that compassion fatigue positively predicted emotional exhaustion.

Table 4 presents the findings of the moderator role of emotional contagion in the relationship between work overload and compassion fatigue and the moderator role of emotional contagion on the indirect effect of work overload on emotional exhaustion.

H5 states that emotional contagion strengthens the positive relationship between work overload and compassion fatigue. Table 4 shows that the interaction term of work overload × emotional contagion has a positive and significant effect on compassion fatigue ( $b = 0.328, p < 0.01$ ). Therefore, H5 is supported. The results also show that

the conditional effect of work overload on compassion fatigue is positively significant and stronger in the high emotional contagion condition ( $b = 1.472, p < 0.001$ ). At the same time, it is positively significant but weaker in the low emotional contagion condition ( $b = 0.971, p < 0.001$ ).

**TABLE 4. MODERATED MEDIATION ANALYSIS RESULTS**

Model	Effect	SE	t-value	LLCI	ULCI	Hypotheses results
Moderation Model (Model 1 of the Hayes' PROCESS) Outcome: CF ( $R^2=.0440$ )						
WO	1.222***	0.111	11.03	1.004	1.435	
EC	0.723***	0.146	4.971	0.437	1.001	
WO x EC	0.328**	0.111	2.962	0.110	0.546	H <sub>5</sub> supported
Gender (Female=0, Male=1)	-0.255	0.226	-1.130	-0.699	0.189	
Age	0.003	0.023	0.140	-0.043	0.049	
Working time in the profession	0.001	0.024	0.018	-0.047	0.048	
Results for conditional effect of WO on CF at different levels of EC						
A Low (-1 SD)	0.971***	0.147	6.613	.682	1.260	
A Medium (Mean)	1.222***	0.111	11.03	1.001	1.440	
A High (+1 SD)	1.472***	0.131	11.21	1.214	1.730	
Moderated Mediation Model (Model 7 of the Hayes' PROCESS)						
Bootstrapping results for the conditional indirect effect (WO → CF → EE) at different levels of EC						
A Low (-1 SD)	0.223	0.042		0.146	0.309	
A Medium (Mean)	0.281	0.041		0.204	0.366	
A High (+1 SD)	0.339	0.050		0.247	0.441	
Index of moderated mediation (IMM)	0.076	0.026		0.029	0.132	H <sub>6</sub> supported

Note: WO, Work overload. EE, Emotional exhaustion. EC, Emotional contagion. CF, Compassion fatigue. Age (in years). Working time in the profession (in years). LLCI, Lower limit confidence interval. ULCI, Upper limit confidence interval. \*\* $p < .01$ , \*\*\* $p < .001$ . Unstandardized effects are reported in the table. Bootstrap sample size = 5,000.

**FIGURE 1. THE EFFECT OF WORK OVERLOAD ON COMPASSION FATIGUE AT DIFFERENT LEVELS OF EMOTIONAL CONTAGION**

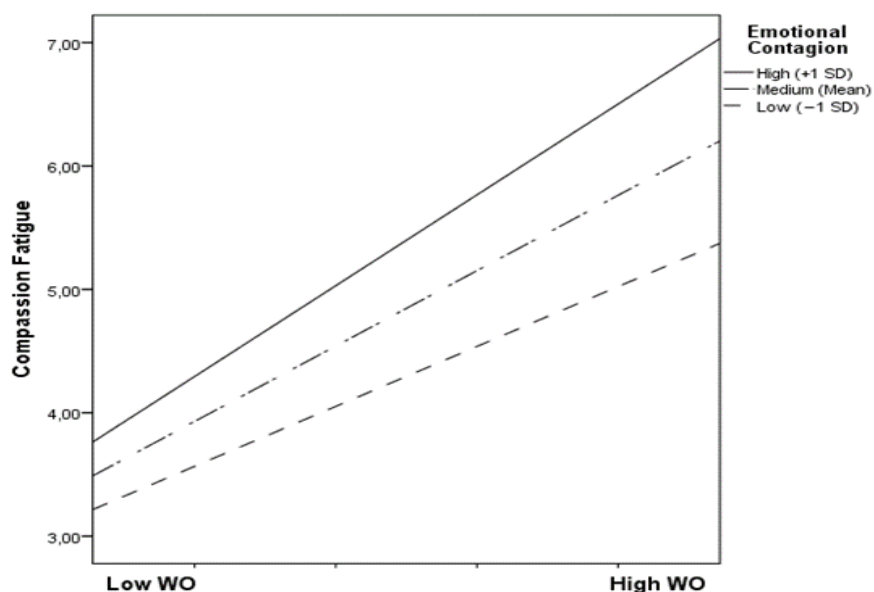


Figure 1 shows the effect of work overload on compassion fatigue at different levels of emotional contagion. As shown in Figure 1, work overload's positive effect on compassion fatigue strengthens as emotional contagion increases.

The index of moderated mediation (IMM) shows that the indirect effect depends on the emotional contagion and changes according to the emotional contagion's value. Hence, mediation is moderated (IMM = 0.076, 95% CIs = (0.029, 0.132)). The bootstrapping results show that the conditional indirect effect is positively significant and strong in the high emotional contagion condition ( $b = 0.339$ ; 95% CIs = (0.247, 0.441)), while it is positively significant but weaker in the low emotional contagion condition ( $b = 0.223$ ; 95% CIs = (0.146, 0.309)). Indirect effects at low, medium, and high levels of emotional contagion are statistically different from each other. Consequently, H6 is supported.

## DISCUSSION

Various studies conducted in the health sector demonstrate that nurses are exposed to multiple occupational stressors, especially work overload and patients' emotional reactions. Therefore, nurses are at risk of severe distress, burnout, and many mental and physical illnesses [6]. Within the scope of this study, a moderated mediation model was established to test whether work overload has an indirect effect on emotional exhaustion through compassion fatigue and whether emotional contagion moderates this indirect effect. To the best of our knowledge, this is the first study to consider compassion fatigue in the relationship between work overload and emotional exhaustion in nurses.

This study discussed the variable of work overload to explain the emotional exhaustion behavior of nurses. The findings indicate that, as work overload increases, emotional exhaustion increases in nurses. The previous studies support this finding [17, 18]. In the literature, the relationship between compassion fatigue and burnout is generally approached conceptually, and it is stated that burnout results from compassion fatigue [29, 30]. On the other hand, the findings of the limited number of empirical studies support the results of our research [31, 32]. We also discovered that work overload has a positive effect on compassion fatigue. In a qualitative study by Maytum et al. [33] with nurses, 60% of pediatric nurses stated that work overload triggered compassion fatigue. Frank & Karioth

[16] reported a positive correlation between work overload and compassion fatigue in a study conducted with the nurses who served during the hurricane in Florida. The findings of those studies supported our results. In this context, the mediating role of compassion fatigue in the relationship between work overload and emotional exhaustion was tested. The findings indicate that compassion fatigue mediates this relationship. The fact that compassion fatigue mediates this relationship demonstrates that compassion fatigue is noteworthy as an explanatory mechanism in this relationship.

Furthermore, the study's findings indicate that the effect of work overload on compassion fatigue varies according to the emotional contagion levels of nurses. In nurses with high levels of emotional contagion, work overload leads to higher levels of compassion fatigue. In addition, emotional contagion moderates the effect of work overload on emotional exhaustion through compassion fatigue. Therefore, the effect of work overload on emotional exhaustion is stronger in nurses with high emotional contagion levels. Morley [34] stated that employees who can create distance and disconnect between themselves and patients are exposed to less stress. However, this situation is seen as very difficult in nursing practice. The necessary empathic relationship between the nurse and the patient increases compassion fatigue unless conscious steps are taken [14, 15]. Gleichgerricht & Decety [35] define empathy as the contagious sharing of the other person's emotional state. Therefore, it is stated that this aspect of empathy involves emotional contagion [36]. The study by Shi et al. [37] with 794 oncology nurses concluded that empathy increases compassion fatigue. White's [38] study also reported that emotional contagion increases compassion fatigue. Thus, these results support our findings.

### Theoretical implications

The findings obtained within the scope of this study have contributed to the enrichment of understanding by offering a different perspective on the definition of the relationship between work overload and emotional exhaustion. Previous research, which has studied the effect of work overload on emotional exhaustion, is also available, and the results support our research findings [17, 18]. However, this study suggested a different perspective for clarifying emotional exhaustion by testing the possibility that work overload may indirectly affect emotional exhaustion through compassion fatigue. In addition, we revealed that both the effect of work overload on compassion fatigue and the indirect effect of work overload on emotional

exhaustion through compassion fatigue vary depending on the emotional contagion levels of nurses. Addressing emotional contagion in clarifying compassion fatigue and emotional exhaustion improves the understanding of these variables. Many authors have already clarified the concept of emotional exhaustion through different variables. However, this study provides a different perspective in clarifying emotional exhaustion, which constitutes its theoretical contribution.

## PRACTICAL IMPLICATIONS

The mediating role of compassion fatigue will provide insights for nurses, nursing management, and health organizations in assessing and preventing emotional exhaustion. Although it is impossible to eliminate the work overload during periods of intensive services, such as the COVID-19 pandemic, the interventions for nurses' compassion fatigue may reduce emotional exhaustion. As Powell [39] stated, nurses pay attention to their self-care despite the difficulties they encounter, creating an environment of peers and colleagues who will support them, organizations provide the appropriate consultancy or training services for nurses, and nursing managers evaluate the workload of nurses and if possible, regulating it, and taking measures to create a healthy working environment by including, for example, regular breaks and check-in times, can help to prevent compassion fatigue and thus reducing emotional exhaustion, albeit partially. In addition, nursing managers need to be aware of emotional contagion and not ignore its adverse effects on compassion fatigue and, thus, emotional exhaustion. Otherwise, it will be hard to eliminate the negative consequences of emotional contagion. Also, the Balint Group method's use, which contributes greatly to strengthening the communication between health professionals and patients, increasing the empathy levels of health professionals, and decreasing burnout levels [40], can also contribute to obtaining positive results.

## LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

First, due to the study's cross-sectional design, each variable was measured simultaneously, with no temporal precedence. The causality in the research design is based on past studies and theories. Therefore, causal inferences from the findings of this research should be made carefully. In future studies, adopting longitudinal or experimental research designs within this model's scope will contribute to verifying the research findings. Secondly, the convenience sampling method, one of the nonprobability sampling methods, was used within the scope of the study due to the

limitations of the financial, time, and working environment. This method limits the generalizability of the research results and thus limits external validity.

## CONCLUSIONS

In summary, this study indicates that work overload is an effective factor in the emotional exhaustion of nurses. Furthermore, the mediation analysis suggests that compassion fatigue may be an important mechanism underlying this relationship. Additionally, examining the conditional indirect effect revealed that work overload moderates the indirect effect of compassion fatigue on emotional exhaustion. This indirect effect will strengthen in parallel to increased nurses' emotional contagion level.

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