Original Article

Moral Distress, Burnout, and Job Satisfaction in Emergency Medical Technicians during the COVID-19 Pandemic

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Background: Emergency medical technicians (EMTs) or paramedics may not be able to do according to their moral standards during the COVID-19 pandemic, which can cause burnout and job dissatisfaction. Objectives: This study aimed to evaluate moral distress (MD), job satisfaction, and burnout among EMTs during the COVID-19 pandemic. Methods: This cross-sectional study was conducted in Bam, Iran in 2020. In total, 134 EMTs completed the online survey that included demographic information, a MD scale, the Maslach Burnout Inventory, and an item for assessing job satisfaction. Descriptive statistics along with independent samples t-test, one-way analysis of variance, Mann-Whitney U, and Kruskal-Wallis tests, as well as multiple linear regression analysis were used to analyze data. Results: The mean scores of MD and job satisfaction were 25.44 ± 12.78 and 3.63 ± 1.07 , respectively. Concerning severity, the mean scores of emotional exhaustion, depersonalization, and personal accomplishment (PA) were 35.45 ± 5.04 , 20.61 ± 3.40 , and 33.04 ± 4.07 , respectively. All three burnout subscales were significantly correlated with job satisfaction (P < 0.05) and MD (P < 0.05). Access to personal protective equipment and education level significantly predicted MD (P < 0.05). Conclusion: Despite high burnout and moderate MD, EMTs reported high job satisfaction, possibly because of increased social respect and salary. EMTs can avoid MD and burnout by learning how to handle ethical challenges during the COVID-19 pandemic.

Keywords: Burnout, Emergency care, Emergency medical service, Job satisfaction, Moral distress, Prehospital

INTRODUCTION

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COVID-19 was first identified in China in December 2019.^[1] The virus then spread rapidly worldwide.^[2] The high prevalence of the disease has increased the workload of healthcare providers, including emergency medical technicians (EMTs).^[3] EMTs care for patients in high-risk settings such as homes, public places, and crime scenes, which may can place them in a variety of moral dilemmas.^[4]

Moral distress (MD) occurs when a person knows what is ethically right but cannot do it.^[5] Unresolved and frequent MD can lead to low self-esteem, impaired interpersonal relationships, psychological harm, behavioral changes, confusion,^[6] job dissatisfaction, and burnout.^[7] Emotional exhaustion (EE), depensionalization (DP), and reduced

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personal accomplishment (PA) are the dimensions described for burnout.^[8] Fatigue, pessimism, and poor performance are all the symptoms of burnout.^[9]

Healthcare workers experience higher levels of burnout compared with the general population.^[10] EMTs are prone to burnout due to the stressful nature of prehospital situations.^[8] A study in Sanandaj, Iran reported that EMTs suffer from moderate EE, DP,

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and low PA.^[11] Another study in Iran also reported that EMTs have moderate EE, DP, and PA in terms of intensity and low EE, moderate DP, and high PA in terms of frequency.^[12] Similarly, a study in Spain found that EMTs have moderate EE, DP, and low PA.^[13]

Contradictory findings are available on the relationship between MD and burnout. In a study in Sanandaj, Iran, no association was found between MD and burnout in nurses.^[11] However, in a study of medical students, a significant relationship was found between MD and DP.^[14]

Job satisfaction is the level of satisfaction that employees feel with their jobs.^[7] It can be influenced by workload, tasks and duties, salary, and job security.^[15] Job satisfaction is associated with enhanced quality of care, reduced burnout, and low EE.^[16]

Some studies also investigated mental workload and job satisfaction,^[17] burnout and coping methods,^[12,18,19] and MD,^[4] among EMTs before the COVID-19 pandemic. However, only one study in Spain examined the impact of the COVID-19 pandemic on stress and burnout levels among EMTs.^[13] In addition to the controversies about the severity and prevalence of MD, burnout, and job satisfaction in EMTs, no study examined the association between MD, burnout, and job satisfaction in EMTs who were in charge during the COVID-19 pandemic. Due to the lack of studies on the impact of the COVID-19 pandemic on MD, burnout, and job dissatisfaction among Iranian EMTs, and given the adverse effects of MD, burnout, and job dissatisfaction, the question is how did COVID-19 affect MD, burnout, and job satisfaction in Iranian EMTs and is there an association between MD, burnout, and job satisfaction in EMTs who served during the COVID-19 pandemic?

Objectives

This study was conducted to examine the association between MD, burnout, and job satisfaction in EMTs who were on duty during the COVID-19 pandemic.

Methods

Study design and participants

This descriptive cross-sectional study was conducted in Bam, Kerman from June 1 to July 30, 2020. The study population was all EMTs, who provided prehospital care in Bam, Iran, during the COVID-19 pandemic.

The Cochran's formula (n = Z^2 pq/d²) was applied to calculate the sample size based on a pilot study that was carried out on 30 EMTs and 9% of the participants demonstrated MD. Then, considering the values of P = 0.09, q = 0.91, $\alpha = 0.05$, and d = 0.05, the sample size was estimated at 131. Therefore, we decided to

conduct a census sampling. EMTs who have worked in EMS centers since the onset of the COVID-19 pandemic and provided prehospital services in Bam city were eligible to participate. Those who did not provide complete answers were excluded. To comply with social distancing rules, an online survey was designed and a link was sent to eligible EMTs. EMTs were asked to provide informed consent by answering the first item on the survey. If they replied yes, they were asked to answer other items. Only 134 eligible EMTs completed the survey.

Data collection instruments

The survey included demographic information, Jafari *et al.*'s MD scale, the Maslach Burnout Inventory (MBI), and an item to measure job satisfaction. The demographic data comprised age, years of prehospital work, number of work shifts per month, location of EMS center, education level, marital status, previous attendance at ethics workshops, frequency of inter-hospital and intra-hospital patient transfer tasks from the inception of the pandemic until the study's time, and access to personal protective equipment (PPE).

Jafari *et al.*'s MD scale^[4] consists of 20 items. The items are scored on a five-point Likert scale ranging from 0 to 4. The total score ranges from 0 to 80, with higher scores indicating higher MD. In the present study, the reliability of the MD scale was calculated to be 0.90.

The MBI is a 22-item questionnaire containing three subscales of DP (5 items), EE (9 items), and PA (8 items). The MBI has no total score and each subscale is scored separately. The three subscales were measured in frequency (DPf, EEf, and PAf) and severity (DPs, EEs, and PAs). All MBIs items are scored on a seven-point Likert scale ranging from "never = 0 to "daily = 6." In the EE subscale, scores <16, 17–26, and \geq 27 indicate low, moderate, and high EE. Scores <6, 7–12, and \geq 13 show low, moderate, and high DP, and scores \leq 31, 32–38, and \geq 39 indicate low, moderate, and high PA, respectively. The presence of high EE and DP scores with a low PA score indicates burnout. The Cronbach's alpha for the subscales of the MBI ranges from 0.78 to 0.98.^[9]

One question, "How satisfied are you with your job?" was used to assess overall job satisfaction, with scores on a five-point Likert scale ranging from "not at all = 0" to "completely satisfied = 4."

Data analysis

The mean, standard deviations, and frequency measures were used to describe the characteristics of the subjects. The one-sample Kolmogorov–Smirnov test was applied to examine the normality of quantitative variables. Independent samples *t*-test, one-way analysis of variance, and the Scheffe post hoc test were used to compare the mean scores between the subgroups of participants. Mann-Whitney U and Kruskal - Wallis tests were applied to nonnormal data. Multiple linear regression analysis was applied to predict the total variance of the main variables. All independent variables that were significant in univariable analyses were entered into the regression model using the Enter method. Statistical analysis analyses were conducted using the SPSS statistical software version 16 (SPSS Inc., Chicago, Illinois, USA).

Ethical considerations

The ethics committee of Bam University of Medical Sciences approved the current study (Ethics Code: IR. MUBAM. REC.1399.062). All subjects were informed that all the data would be managed anonymously, that they are free to withdraw from the study without any consequences and were provided with informed consent at the start of the online survey.

RESULTS

Most **EMTs** were married (78.3%), had а bachelor's degree (50.7%), and were between 20 and 30-year-old. Most had worked in prehospital centers for 1-10 years (58.6%), had 11-20 shifts per month (98.51%), and worked with limited PPE (46.2%) [Table 1].

Most EMTs (56.71%) reported high job satisfaction. In total, 57 EMTs (42.54%) had low MD, whereas 20 (14.93%) and 57 (42.54%) reported high and moderate MD, respectively. Only two (1.49%) and seven (5.22%) EMTs had moderate EEs and EEf, respectively, whereas 98.51% and 94.78% experienced high EEs and EEf. Almost all EMTs showed high DP, both in terms of severity and frequency. Similarly, 81 EMTs (60.45%) reported moderate PAs and 73 participants (54.48%) had low PAf.

The mean scores for MD and job satisfaction were 25.44 ± 12.78 and 3.63 ± 1.07 , respectively, indicating moderate MD and high job satisfaction. The mean scores for different subscales of the MBI are presented in Table 2.

The mean MD scores differed significantly between subjects who had attended ethics workshops and those who had not (P = 0.042). Mean MD scores also differed between EMTs who had contact with COVID-19 patients and those who had not (P = 0.013). Furthermore, EMTs with enough access to PPE showed significantly lower MD than others (P = 0.038). Mean MD scores did not differ significantly regarding age groups, years of work experience, number of shifts

Table 1: Characteristics of study su	
Variables	Frequency (%
Age (years)	51 (20.04)
20-30	51 (38.06)
31-40	42 (31.34)
41-50	41 (30.60)
Experience in prehospital settings (year)	
1-10	79 (58.69)
11-20	48 (35.82)
21-30	7 (5.22)
Working days (per month)	
1-10	35 (26.12)
11-20	97 (72.39)
21-30	2 (1.49)
Type of EMS	
Urban	45 (33.58)
Road	53 (39.55)
Both urban and road	36 (26.87)
Level of education	
Associate degree	57 (42.54)
Bachelor	68 (50.72)
Master	9 (6.72)
Marital status	
Married	105 (78.36)
Not married	29 (21.64)
Attending an ethics workshop	
Yes	83 (61.94)
No	51 (38.06)
Contact with a COVID-19-positive	
patient in the past	
Yes	128 (95.52)
No	6 (4.48)
Access to PPE	. ,
Without accessibility	26 (19.40)
Limited accessibility	62 (46.27)
Enough accessibility	46 (34.33)
JS	()
Not at all	4 (2.99)
Low	8 (5.97)
Moderate	46 (34.33)
High	47 (35.07)
Very high	29 (21.64)
MD	2) (21.04)
Low	57 (42.54)
Moderate	57 (42.54)
High	20 (14.93)
EEs	0
Low	0 (1.40)
Moderate	2 (1.49)
High	132 (98.51)
EEf	
Low	0
Moderate	7 (5.22)
High	127 (94.78)

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Table 1: Contd						
Variables	Frequency (%)					
DPs						
Low	0					
Moderate	0					
High	134					
DPf						
Low	0					
Moderate	1 (0.75)					
High	133 (99.25)					
PAs						
Low	44 (32.84)					
Moderate	81 (60.45)					
High	9 (6.75)					
PAf						
Low	73 (54.48)					
Moderate	52 (38.81)					
High	9 (6.72)					

EMS: Emergency medical service, PPE: Personal protective equipment, MD: Moral distress, EEs: Emotional exhaustion severity, EEf: Emotional exhaustion frequency, DPs: Depersonalization severity, DPf: Depersonalization frequency, PAs: Personal accomplishment severity, PAf: Personal accomplishment frequency, JS: Job satisfaction

Table 2: Mean and standard deviation of ethical distress and burnout with its sub-scales scores (n = 134)

Variable	Mean ± SD
JS	3.63 ± 1.07
MD	25.44 ± 12.78
Burnout	
EEs	35.45 ± 5.04
EEf	36.04 ± 4.95
DPs	20.61 ± 3.40
DPf	19.47 ± 3.31
PAs	33.04 ± 4.07
PAf	31.14 ± 4.76

EEs: Emotional exhaustion severity, EEf: Emotional exhaustion frequency, DPs: Depersonalization severity, DPf: Depersonalization frequency, PAs: Personal accomplishment severity, PAf: Personal accomplishment frequency, SD: Standard deviation, MD: Moral distress, JS: Job satisfaction

per month, EMS center locations, education level, and marital status (P > 0.05) [Table 3].

EMTs with sufficient access to PPE reported higher job satisfaction than those with low or no access to PPE (P < 0.05). However, job satisfaction did not differ significantly, considering other demographic variables (P > 0.05). Furthermore, EMTs who worked in urban areas had more EEs than those who worked in the rural areas. Furthermore, there was a significant difference in the EEf mean scores between age groups (P = 0.0149), number of shifts per month (F = 3.40, P = 0.036), and location of EMS centers (P = 0.022), such that EMTs who worked in and out of the city, those who aged 20–30 years, and those who worked between 11 and 20 shifts per month reported significantly higher EEf than others (P < 0.05). The DPf scores also varied significantly in terms of PPE accessibility (P = 0.043). Furthermore, the mean DPs, PAs, and PAf scores did not differ significantly in terms of demographic variables (P > 0.05).

As shown in Table 4, job satisfaction and MD were significantly correlated with all three subscales of the MBI in terms of frequency and severity (P < 0.05). This means that job satisfaction declines when EEs, EEf, DPs, and DPf increase and MD increases simultaneously. Furthermore, higher PAs and PAf were associated with higher job satisfaction and lower MD.

The linear regression models predicting MD and job satisfaction are shown in Table 5. The study variables predicted 12% and 14% of the variance of MD and job satisfaction, respectively. Only low access to PPE (P < 0.05) and low education level (P < 0.05) significantly predicted MD. Access to PPE was the only significant predictor of job satisfaction (P < 0.05).

DISCUSSION

According to our study, a majority of EMTs experienced moderate to high MD during the COVID-19 pandemic. No foreign studies are available on the level of MD among EMTs during the COVID-19 pandemic. However, contradictory findings existed about the level of MD in healthcare providers before the pandemic. For example, studies conducted in Saudi Arabia,^[20] and Tehran, Iran,^[21] prior to the COVID-19 pandemic reported that healthcare providers including nurses, suffered from severe MD. However, some studies in the United States and Turkey reported low MD among nurses before the pandemic.[22,23] Nonetheless, a study in British Columbia reported that many health-care providers experienced MD during the initial phase of the COVID-19 pandemic.^[24] These variations could be attributed to various factors, such as differences in organizational support, and public beliefs, religion, culture, and people's attitudes toward EMTs.

Our findings demonstrated that almost all EMTs suffered from high EE and DP. Studies have reported varying degrees of burnout in EMTs. A meta-analysis reported that 40% and 41% of emergency medicine physicians experienced high levels of EE and DP, respectively, whereas 35% reported low levels PA.^[25] A study in Saudi Arabia also reported that 88.7% of emergency nurses and physicians had high levels of EE, while 20.6% and 41.1% reported high DP and low PA, respectively.^[26] Furthermore, a study in Turkey found that 44.7% and 33.2% of Turkish nurses reported high

Variables ^a	Variable levels	MD		JS		EEf		DPf		
		Mean ± SD	Pb	Mean ± SD	Pb	Mean ± SD	Pc	Mean ± SD	Pc	
Age	20-30	25.13 ± 12.77	0.122	3.80 ± 0.98	0.294	33.62 ± 5.06	0.0149	19.25 ± 3.68	0.663	
	31-40	28.14 ± 12.97		3.47 ± 1.04		35.66 ± 4.60		19.85 ± 3.30		
	41-50	23.04 ± 12.38		3.68 ± 0.90		36.82 ± 5.03		19.36 ± 2.83		
Working days \pm per month	1-10	27.88 ± 13.31	0.317	3.71 ± 1.10	0.665	34.25 ± 5.48	0.036	18.25 ± 3.22	0.038	
	11-20	24.54 ± 12.66		3.63 ± 0.94		35.72 ± 4.65		19.91 ± 3.24		
	21-30	26 ± 5.65		4 ± 0		36.5 ± 2.12		19.5 ± 4.94		
EMS center location	Urban	23.95 ± 12.25	0.426	3.73 ± 1.00	0.722	37.42 ± 5.10	0.022	19.17 ± 3.14	0.579	
	Road	27.09 ± 12.82		3.62 ± 0.98		35.26 ± 4.64		19.41 ± 3.19		
	Both	24.86 ± 13.45		3.63 ± 0.96		34.97 ± 4.82		19.94 ± 3.70		
Attending an ethical	Yes	24.91 ± 12.53	0.042	3.62 ± 0.95	0.514	36.08 ± 4.68	0.906	19.22 ± 3.17	0.268	
workshop	No	26.29 ± 13.26		3.72 ± 1.02		35.98 ± 5.41		19.88 ± 3.51		
Contact with COVID-19	Yes	25.08 ± 12.78	0.039	3.69 ± 0.96	0.203	36.12 ± 4.85	0.388	19.54 ± 3.34	0.264	
positive patient in the past	No	33 ± 11.18		3 ± 1.26		34.33 ± 7.08		18 ± 2.19		
Accessibility to PPE	Without accessibility	29.42 ± 12.61	0.038	3.26 ± 1.28	0.042	35.46 ± 3.79	0.564	20.07 ± 3.12	0.043	
	Limited accessibility	26.5 ± 12.98		3.62 ± 0.81		35.83 ± 5.35		18.70 ± 3.31		
	Enough accessibility	21.76 ± 11.91		3.93 ± 0.92		36.65 ± 5.00		20.17 ± 3.25		

^aThe mean scores of EEs, DPs, DPf, PAs, and PAf did not significantly differ in terms of demographics variables, ^bKruskal-Wallis or Mann-Whitney *U*-tests were done, ^cAnalysis of variance or *t*-test was done. EEf: Emotional exhaustion frequency, EMS: Emergency medical service, PPE: Personal protective equipment, SD: Standard deviation, JS: Job satisfaction, MD: Moral distress, EEs: Emotional exhaustion severity, PAs: Personal accomplishment severity, PAf: Personal accomplishment frequency, DPs: Depersonalization severity, DPf: Depersonalization frequency

Table 4: Correlation coefficient matrix among outcome										
variables $(n = 134)^a$										
JS	MD	EEs	EEf	DPs	DPf	PAs	PAf			
1										
-0.70	1									
-0.68	0.38	1								
-0.78	0.65	0.41	1							
-0.78	0.35	0.45	0.46	1						
-0.79	0.39	0.39	0.54	0.65	1					
0.77	-0.41	-0.39	-0.45	-0.64	-0.65	1				
0.32	-0.13	-0.12	-0.18	-0.32	-0.28	-0.38	1			
	$ \begin{array}{r} 1 \\ -0.70 \\ -0.68 \\ -0.78 \\ -0.78 \\ -0.79 \\ 0.77 \\ 0.32 \end{array} $	$\begin{array}{ccccccc} 1 & & & \\ -0.70 & 1 & & \\ -0.68 & 0.38 & & \\ -0.78 & 0.65 & & \\ -0.78 & 0.35 & & \\ -0.79 & 0.39 & & \\ 0.77 & -0.41 & & \\ 0.32 & -0.13 & & \end{array}$	$\begin{array}{c ccccc} \textbf{JS} & \textbf{MD} & \textbf{EEs} \\ \hline 1 & & & \\ -0.70 & 1 & & \\ -0.68 & 0.38 & 1 & \\ -0.78 & 0.65 & 0.41 & \\ -0.78 & 0.35 & 0.45 & \\ -0.79 & 0.39 & 0.39 & \\ 0.77 & -0.41 & -0.39 & \\ 0.32 & -0.13 & -0.12 & \\ \end{array}$	JS MD EEs EEf 1 -0.70 1 -0.68 0.38 1 -0.68 0.38 1 -0.78 0.65 0.41 1 -0.78 0.65 0.41 1 -0.78 0.35 0.45 0.46 -0.79 0.39 0.39 0.54 0.77 -0.41 -0.39 -0.45 0.32 -0.13 -0.12 -0.18 -0.18 -0.12 -0.18	JS MD EEs EEf DPs 1 -0.70 1 -0.68 0.38 1 -0.78 0.65 0.41 1 -0.78 0.35 0.45 0.46 1 -0.79 0.39 0.39 0.54 0.65 0.77 -0.41 -0.39 -0.45 -0.64 0.32 -0.13 -0.12 -0.18 -0.32	JS MD EEs EEf DPs DPf 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.70 1 -0.78 0.65 0.41 1 -0.78 0.35 0.45 0.46 1 -0.79 0.39 0.39 0.54 0.65 1 0.77 -0.41 -0.39 -0.45 -0.64 -0.65 0.32 -0.13 -0.12 -0.18 -0.32 -0.28	JS MD EEs EEf DPs DPf PAs 1 -0.70 1 -0.68 0.38 1 -0.70 1 -0.78 0.65 0.41 1 -0.78 0.35 0.45 0.46 1 -0.79 0.39 0.39 0.54 0.65 1 0.77 -0.41 -0.39 -0.45 -0.64 -0.65 1			

^aAll correlation coefficients are significant with *P*<0.001. EEs: Emotional exhaustion severity, EEf: Emotional exhaustion frequency, DPs: Depersonalization severity, DPf: Depersonalization frequency, PAs: Personal accomplishment severity, PAf: Personal accomplishment frequency, MD: Moral distress, JS: Job satisfaction

EE and DP, respectively, while 28% of them reported low PA.^[27] A study also reported that between 16% and 56% of Scottish paramedics suffer from burnout.^[18] In our study, the mean scores for EEs, EEf, DPs, DPf, PAs, and PAf were 35.45, 36.04, 20.61, 19.47, 33.04, and 31.14, respectively. A study conducted in Iran before the COVID-19 pandemic indicated that the mean scores for EE, DP, and PA were 20.7, 10.6, and 13.9, respectively.^[28] Unlike our study, most studies of burnout in paramedics, emergency physicians, and nurses were conducted before the COVID-19 pandemic. Several factors such as workload and severity of cases EMTs have to manage, working conditions, salary, and the number of shifts per

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month may all contribute to burnout, and the pandemic may have worsened all or most of these factors. If so, it is reasonable to assume that our EMTs experienced higher levels of burnout during the pandemic.

In the current study, more than half of the participants experienced high to very high job satisfaction. Different studies have reported varying levels of job satisfaction. For example, a study reported that 68% of healthcare workers in emergency departments were satisfied with their work.^[29] A study found that more than 80% of workers in emergency medical services were satisfied or very satisfied with their jobs.^[30] However, an earlier study in Iran found that only 40% of EMTs were highly satisfied with their jobs. The same study also found a significant relationship between job satisfaction and frustration.^[17] It appears that high levels of MD and burnout could not significantly decrease job satisfaction perhaps due to increased social respect and salary after the COVID-19 pandemic. Factors other than MD and burnout might also affect job satisfaction. More studies are therefore needed to examine the factors affecting job satisfaction among EMTs, especially during the COVID-19 pandemic.

In the present study, the subscales of job satisfaction, MD, and burnout were all strongly correlated. Job satisfaction was directly associated with PA, but had a significant inverse relationship with MD, EE, and DP. An earlier study also reported that EMTs with high job satisfaction had significantly lower MD, EE, DP, and higher PA.^[31] However, we found no significant

Table 5: Predictors of moral distress and job satisfaction $(n = 134)$												
Variable	MD						JS					
	β	SE	T	Р	95%	6 CI	β	SE	T	Р	95%	o CI
Age	-0.36	0.30	-1.20	0.231	-0.95	0.23	-0.01	0.02	-0.06	0.953	-0.04	0.04
Work experience (year)	0.31	0.37	0.84	0.404	-0.43	1.06	0.01	0.02	0.56	0.552	-0.03	0.06
Days at work (month)	-0.17	0.40	-0.43	0.671	-0.97	0.62	-0.00	0.03	-0.06	0.950	-0.06	0.05
Type of EMS		1.56	0.31	0.759	-2.61	3.58	-0.02	0.11	-0.24	0.811	-0.26	0.20
Level of education		1.98	-0.84	0.043	-5.60	2.27	-0.29	0.14	-2.00	0.048	-0.58	0.00
Marital status		3.35	-0.91	0.363	-9.71	3.58	0.35	0.25	1.39	0.166	-0.14	0.85
Participating in ethic workshop previously		2.55	0.78	0.436	-3.07	7.05	-0.05	0.19	-0.30	0.768	-0.44	0.32
History of contact with COVID-19 positive patient		5.63	1.10	0.273	-4.95	17.31	-0.63	0.42	-0.49	-0.138	-1.47	0.20
Accessibility to PPE		1.68	-2.34	0.021	-7.28	-0.60	0.31	0.12	2.45	0.016	0.05	0.59
EEs		0.25	0.66	0.502	-0.33	0.66	0.00	0.01	0.06	0.956	-0.03	0.03
EEf	-0.14	0.27	-0.56	0.606	-0.69	0.40	-0.01	0.02	-0.79	0.432	-0.05	0.02
DPs	0.30	0.36	0.82	0.413	-0.42	1.03	0.01	0.02	0.45	0.655	-0.04	0.06
DPf	-0.71	0.37	-1.92	0.051	-1.45	0.02	0.03	0.02	1.37	0.173	-0.01	0.09
PAs	0.12	0.29	0.41	0.683	-0.46	0.70	0.01	0.02	0.55	0.581	-0.03	0.05
PAf	0.09	0.24	0.40	0.692	-0.46	0.70	0.01	0.01	0.57	0.572	-0.02	0.04
cons	42.30	20.97	2.02	0.046	0.76	83.85	2.56	1.59	1.61	0.111	-0.59	5.71

EEs: Emotional exhaustion severity, EEf: Emotional exhaustion frequency, DPs: Depersonalization severity, DPf: Depersonalization frequency, PAs: Personal accomplishment severity, PAf: Personal accomplishment frequency, MD: Moral distress, PPE: Personal protective equipment, EMS: Emergency medical service, CI: Confidence interval, JS: Job satisfaction, SE: Standard error

differences in MD and job satisfaction mean scores according to the EMTs' demographic variables except for access to PPE. Also, in the regression model, only access to PPE and education level significantly predicted job satisfaction and MD. Consistent with these findings, two earlier studies reported that neither demographic variables nor work experience predicted job satisfaction.^[6,17] However, a systematic review reported a negative correlation between work experience, PA, job satisfaction, and EE. The same study also found a negative correlation between DP and organizational satisfaction.^[30] Since lack of access to PPE can endanger EMTs lives, health system authorities should provide EMTs with appropriate and adequate PPE. Then, EMTs will experience less MD and more job satisfaction.

We also found that older EMTs and those with more shifts suffered more from EEf than younger ones with fewer shifts. Additionally, working in the city was associated with a higher mean score of EEf. Furthermore, limited access to PPE was associated with high DPf. In line with this study, a previous study showed that the mean score of EE was significantly associated with age.^[26] However, an earlier study in emergency departments reported that healthcare workers who work for a long time and those with higher ages experience less burnout and more job satisfaction.^[29]

Because the data were collected online, it was impossible to answer participants' likely questions at the time they completed the questionnaires. Furthermore, the COVID-19 pandemic circumstances and excessive workload of EMTs, inhibited all of them from participating in the current study. Although our study had a small sample size, this may not have affected the results because the sample was highly representative.

CONCLUSION

Although EMTs suffered from high burnout and moderate MD, they experienced high job satisfaction. All burnout dimensions were reported as moderate or high in terms of severity and frequency, which can decrease the quality of care and patient dissatisfaction. Supporting methods and adaptation training may help prevent burnout in EMTs. Given the significant relationships between MD and dimensions of burnout, it is crucial to develop strategies, such as adequate education and support, to deal with ethical challenges in the clinical environments and reduce levels of MD and burnout in EMTs.

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Conflicts of interest

There are no conflicts of interest.

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