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*Surveying mental health stressors of emergency  
management professionals: Factors in recruiting  
and retaining emergency managers  
in an era of disasters and pandemics*

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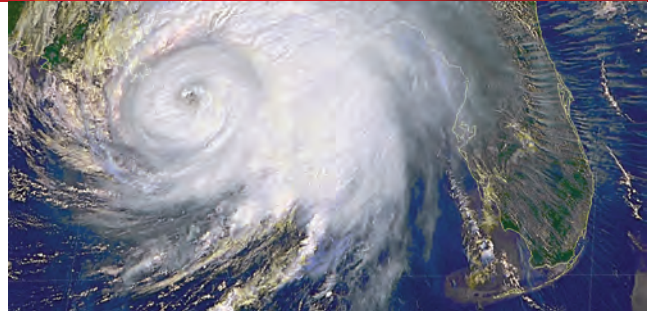
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*Surveying mental health stressors of emergency management professionals: Factors in recruiting and retaining emergency managers in an era of disasters and pandemics*

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**ABSTRACT**

*Emergency managers are responsible for managing crises and disasters, and while their work is essential, it can be stressful and impact their mental health, particularly during the COVID-19 pandemic. This study aimed to examine the mental health of professional emergency managers and factors associated with their intent to leave the field before and during the COVID-19 pandemic. A total of 903 respondents completed an online survey assessing their secondary traumatic stress, emergency reaction strategies, organizational culture, age, length of time in primary position, the highest level of education as well as other metrics. The Secondary Traumatic Stress Scale (STSS) was used to determine scores of secondary traumatic stress symptoms, and the Emergency Reaction Questionnaire (ERQ) index was used to evaluate levels of predominant personality types and its tendency towards “fight or flight” reactions in emergency situations. Results revealed significant differences among respondents who reported considering leaving the field before or during the COVID-19 pandemic in terms of secondary traumatic stress scores, ERQ levels, perceived organizational culture (OC), age category, length of time in primary position, and the highest level of education ( $p < 0.05$ ). Logistic regression analysis indicated that respondents with higher secondary traumatic stress scores, poorer organizational culture, younger age, less experience, and a bachelor’s degree had nearly three times the odds of reporting considering leaving the field ( $p < 0.05$ ). Additionally, respondents with a graduate*

*degree had nearly four times the odds of reporting leaving the field ( $p < 0.05$ ), while those who had directly managed between three and five disasters had nearly two times the odds of reporting and considering leaving the field ( $p < 0.05$ ). These findings underscore the importance of addressing secondary traumatic stress, promoting positive organizational culture, and providing support for emergency managers now and in the future. By addressing the factors identified in this study, such as secondary traumatic stress symptoms, promoting positive organizational culture, and providing adequate support, emergency management organizations can improve the mental health and well-being of their personnel, reduce attrition rates, and ensure that they are better equipped to respond to future crises.*

*Key words: emergency managers, COVID-19, pandemic, disasters, mental health, survey, stressors, professional development, secondary traumatic stress*

**INTRODUCTION**

The field of emergency management is experiencing growth in demand, scope, and professionalization on a global scale. While there are many contributing factors to this growth, one constant is the “24×7×365” nature of disaster response and emergency management, as “disasters do not wait.” Over the past decade, additional pressures, including technological and communication advances, have created a demand for instantaneous information and action.<sup>1-3</sup> Disasters and emergencies have also increased in scope, pace, scale, and concurrent nature.<sup>4</sup> These events, such

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as “super storm,” “super cell,” “rapid acceleration cyclone,” and “firenado,” continue to intensify and are amplified by human- and technology-caused emergencies.<sup>5</sup> Anecdotal stories and trends prior to the coronavirus disease 2019 (COVID-19) pandemic suggested that emergency managers (EMs) were experiencing increasing rates of burnout and fatigue, and talent recruitment and retention were becoming more challenging.<sup>6-8</sup> Complex factors such as generational and shifting differences in work/life philosophies, communication demands, and technology advances have created worker shortages, making disaster management more challenging.<sup>5</sup> As a result, talent recruitment and retention have become increasingly competitive. A recent US General Accountability Office study details the challenges faced by US Federal Emergency Management Agency in hiring and retaining their workforce. The report states that the COVID-19 pandemic exacerbated its challenges.<sup>9</sup>

EMs are an amalgamation of diverse experience, certified education, training, emotional intelligence, and leadership skills. EMs function in critical leadership and decision-making roles that are often complicated by budgetary, interpersonal, political, and social issues.<sup>10</sup> Trained seasoned EMs do not necessarily emerge from higher education but are the product of years of training and experiential knowledge.<sup>11</sup> EMs are not traditional frontline workers, first responders, or emergency medicine healthcare workers; however, they are called to manage, oversee, support, and resource those who are. They drive a holistic, inclusive approach to preparedness, mitigation, response, and recovery from natural disasters and human-induced emergencies.

The mental health and well-being of first responders and frontline personnel have been well documented, especially in regard to levels of stress observed.<sup>5,12,13</sup> However, EMs have been understudied as a group in terms of mental health stressors and preventative health. A search of PubMed and brief review of the available literature showed a concentration of research on mental health and stressors on first responders, emergency medical services, and public health professionals; however, there were no specific articles or research directly targeting

emergency management professionals. Prior to the COVID-19 pandemic, anecdotal accounts and case studies described increasing levels of stress, burnout, and suicides with decreased well-being and mental health variability among EMs.<sup>13-16</sup> These also suggested that experienced EMs could be exiting the field at an increasingly alarming rate.<sup>9</sup> The pandemic and other concurrent disasters accelerated those departures and appeared to decrease field retention and recruitment of new leaders.<sup>9,17</sup> The current rate of departure portends a shortage of adequately trained EMs to respond to future disasters and pandemics.

The goal of this study is to present the initial survey results from the Stressors and Mental Health Survey of Emergency Management Professionals carried out by the *Journal of Emergency Management (JEM)*. The survey sought to establish a baseline and determine the current state of mental health of EMs in the field as defined using the Secondary Traumatic Stress Scale (STSS). Additionally, the survey explores the contributing factors to EM’s mental health, including organizational culture (OC), personal characteristics, stress relief, mental hygiene, personal stressor impacts, education and training levels, and years in the field. The objective is to understand better how the various factors contribute to the perceived exodus of EMs in the field and identify potential solutions to increase EMs individual and collective resilience, capacity, and capability as disasters and emergencies increase in frequency, size, scope, scale, and complexity.

## METHODS

From October 16, 2021 through March 30, 2022, a cross-sectional survey was conducted online, targeting emergency management professionals via convenience sampling. Survey respondents were recruited to take the survey via eight email requests to a consolidated database of EMs provided by the *JEM* (approximately 22,000 contacts). The survey recruitment language utilized “EMs and affiliated professionals” in order to capture personnel who perform emergency management duties in any form, eg, collateral duties or functions. Thus, the convenience sampling included recruitment efforts led by organizations affiliated with emergency management. Multiple social media posts

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were subsequently posted to motivate EMs to take the survey online. Printed and mailed invitations were sent to a random set of EMs to complete the survey. Finally, two dedicated emails were sent to the membership of a major association representing professional EMs, along with a QR code link to the survey during their annual professional conference. A detailed informed consent form was provided before respondents enrolled in the survey, and the survey was built online via the Kobo Toolbox. The inclusion criterion required respondents to self-report their involvement in any form of emergency management. Exclusion criteria included those not in emergency management and affiliated professions.

The *JEM* carried out the survey, with the input of various academics and professionals in the field. Upon review of *US Department of Health and Human Services's Human Subject Regulations Decision Charts: 2018 Requirements* decision tree, it was determined that this survey is considered as a public health surveillance activity with the target population being EMs and excluded under *Chart 1 of 45 CFR 46.102(I)(1)-(4)*.<sup>18</sup> A public health epidemiologist reviewed the survey, and the appropriate informed consent and mental health trigger protections were added to the survey at the request of the *JEM*. No personally identifiable information was collected, and no survey tracking was implemented.

#### *Development and rationale of survey questions*

A 153-question survey was constructed in the Kobo Toolbox utilizing the Secondary Traumatic Stress Scale (STSS) and Emergency Reaction Questionnaire (ERQ) abbreviated surveys. The initial part of the survey measured the mental health of the survey respondent. The second part of the survey determined the target's disaster personality type. Additional questions were added to quantify and examine many other aspects of an EM's work and social life to obtain an accurate picture of their stressors and mental health stability.

*STSS index scores.* The STSS is well validated and had been utilized recently to assess the mental health of nursing staff during the ongoing COVID-19 pandemic in Italy.<sup>19-21</sup> Figley defines Secondary Traumatic Stress (STS) as comprising "the natural, consequent behaviors and emotions resulting from knowledge

about a traumatizing event experienced . . . It is the stress resulting from helping or wanting to help a traumatized or suffering person" (p. 10).<sup>22</sup> To further this definition, STS can be defined as the development of symptoms characterized as post-traumatic stress disorder (PTSD) following indirect exposure to trauma. The STSS had an abbreviated version, and previous validations showed the shorter version to be accurate in assessing the target's mental health. The 17-question STSS was added to the survey immediately after the informed consent and mental health notifications.

*ERQ index scores.* Personality type plays an important role in how humans manage and react to stressful situations. Our team determined it was critical to assess individual personality types, "fight versus flight" instincts and their impacts on the overall mental health of EMs. A PubMed search yielded the ERQ. The ERQ was originally created to look at personality types during an air disaster response. The ERQ was incorporated into the overall survey question set after the STSS questions.<sup>23</sup>

*Organizational culture.* It was postulated that OC might be a major contributing factor to an EM's mental health. Team members specializing in organizational development and industrial/organizational psychology developed a novel short series of seven questions to assess and quantify the impacts of OC on a subject's mental health.

#### *Data analysis*

Responses from the survey were analyzed with IBM Statistical Package for the Social Sciences version 27.0 (IBM Corp, Armonk, New York) and Microsoft Excel®, and the statistical significance was defined as  $p < 0.05$ . For analysis, we employed principal component analysis to create index scores for STS, ERQ, and OC. We used the unrotated principal component of each to constitute their index scores. Bivariate analyses used Pearson's  $\chi^2$  two-tailed tests. We tested for differences in respondent characteristics between respondents who reported considering leaving the field of emergency management before and/or during the COVID-19 pandemic. We dichotomized continuous

data STSS index scores (Cronbach's  $\alpha = 0.944$ ), ERQ index scores ( $\alpha = 0.723$ ), and OC index scores ( $\alpha = 0.918$ ) at the median, and we included them in analyses with respondents' categorical variables addressing race, sex, age category, number of major disasters managed, time spent in their primary position, and the highest level of education. To further explore the possible associations among STSS, ERQ, and OC respondent characteristics on the odds of considering leaving the field, these variables were included in a logistic regression model. Initial findings were presented at the International Association of Emergency Managers 2022 Annual Conference, November 2022, Savannah, Georgia.<sup>24</sup>

## RESULTS

Of the 903 respondents, 46 percent were female, and 54 percent were male. Most respondents were older than 46 years old (57 percent), and 85 percent of the respondents were Caucasian. A majority of respondents had managed more than 1 major disaster (59 percent), and nearly two-thirds had been in their primary job position for more than 6 years (64 percent) (Table 1). Among survey respondents, 50 percent believe that they do not receive enough pay for the level of stress in the job, and 52 percent of survey respondents reported their job was "too political." When asked about considering changing jobs, 43 percent of respondents reported considering changing jobs prior to the COVID-19 pandemic, and 64 percent of respondents considered changing jobs during the pandemic. Of those considering changing jobs, 46 percent considered a different field completely.

There were significant differences among the EMs surveyed as to whether they had or had not ever considered changing jobs before and/or during the COVID-19 pandemic. Respondents with higher STS scores and respondents reporting poorer OC in their workplaces had higher rates of reporting having ever considered changing jobs ( $p < .001$ ). Younger respondents, respondents with fewer years in their primary position, and respondents with higher levels of education also had higher rates of reporting having ever considered changing jobs ( $p < .001$ ). Finally, respondents with lower ERQ scores had higher rates

of reporting having ever considered changing jobs ( $p < .05$ ) (Table 2).

In multivariate analysis, respondents with higher STS scores and respondents reporting poorer OC in their workplaces both had nearly three times the odds of reporting having considered changing jobs (adjusted odds ratio [aOR] 2.97, 95 percent confidence interval [CI] 1.98-3.93 and aOR 2.85, 95 percent CI 2.03-4.01, respectively). Additionally, the youngest age category of respondents, those 18-35 years old, had nearly three times the odds of reporting having considered changing jobs compared to those who were 56 years old or older (aOR 2.77, 95 percent CI 1.53-5.02), and those with a year or less in their primary position also had nearly three times the odds of considering changing jobs compared to those with 20 or more years (aOR 2.80, 95 percent CI 1.31-5.99). Respondents with bachelor's degrees and respondents with graduate degrees had three times the odds (aOR 2.74, 95 percent CI 1.15-6.56) and three and a half times the odds (aOR 3.48, 95 percent CI 1.49-8.15), respectively, of considering changing jobs compared to those with fire, police, military, or other training. Finally, EMs who had managed three to five disasters as incident commanders or equivalent emergency management leadership positions had two times the odds of having considered changing jobs compared to those who had never managed a disaster (aOR 1.93, 95 percent CI 1.15-3.24) (Table 2).

## DISCUSSION

This study aimed to investigate the factors associated with EMs' consideration of leaving their field, particularly before or during the COVID-19 pandemic/concurrent disaster phase. Our analysis revealed significant differences among respondents based on their sociodemographic and organizational characteristics. These findings provide valuable insights into the factors associated with EMs' retention and turnover intentions, especially considering the challenges posed by the COVID-19/global concurrent disaster phase. They also highlight the importance of addressing OC and promoting effective emotion regulation strategies to enhance overall job satisfaction and well-being.

The role of stress in emergency management is critical, as it can either enhance or hinder the

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performance and productivity of EMs. Our study found that a significant proportion of EMs (52.9 percent) experienced mild to severe secondary traumatic stress, while almost one-third (29.3 percent) reported moderate to severe symptoms. Moderate to severe secondary traumatic stress directly affects decision-making and leadership skills.<sup>21</sup> This trend is alarming, as our findings show that untreated or undertreated secondary traumatic stress can increase the likelihood of leaving the field by almost three times.<sup>9</sup> It is important to note that chronic or traumatic stress can have severe impacts on an individual's long-term physical and mental health.<sup>13</sup> Moreover, the contributions of untreated or undertreated stress may link to poor OC and result in increased workplace stress. Interestingly, 61 percent of respondents reported not having access to available mental health services, which should be addressed in practice.

In our survey, poorer OC tended to increase the odds of participants considering leaving their jobs or the field entirely. Furthermore, this survey found that 50 percent of respondents felt they did not receive adequate pay for the level of stress on the job. Inadequate total compensation remains a primary reason people leave a position.<sup>25</sup> However, employees will often remain in jobs for lesser pay if their OC or supervisors are empathetic, and the work environment (OC) is viewed as positive and supportive and achieves greater work-life balance.<sup>26-29</sup> Empathetic, engaged, and creative leadership is crucial for solving the complex issues faced by EMs today. Multiple leadership and organizational studies cite empathy as the most important leadership skill for individual performance and organizational success.<sup>29-32</sup> Empathy, however, can be reduced when PTSD/STS is present.<sup>33</sup> A leading cause of employee turnover also remains uncaring or uninspiring leaders.<sup>26-29</sup> Prior investigations cite direct supervisor relationships as a leading cause of departures and individual stress.<sup>27,34</sup> The field of emergency management often requires navigating complex and challenging political environments, which can lead to significant stress and frustration for personnel. These results suggest that political tension could be a component of the reported poor OC and contribute to EMs' desires to leave their

jobs—or possibly even the field of EM completely. Future studies will directly explore the propensity to remain in the position when OC is more supportive.

Respondents who had directly managed between three and five disasters had nearly two times the odds of reporting and considering leaving the field. That number was substantially less for those who had managed 6+ disasters—suggesting that the number of disasters may not be the primary source of stress and perceived exodus from the field. EMs with less than 1 year of experience were 2.7 times more likely to leave the field.

More work is needed to fully determine causation; however, the trend is concerning. Our survey findings have implications for leadership development, enhanced screening for future EMs, the need for additional experiential learning for those seeking a college degree, mental health for current staff, and position hiring. Untreated or undertreated mental health and unresolved organizational issues raised in the survey impact the ability to recruit, train, and retain staff. They affect well-being, impair decision-making, and influence countless other variables that are important to maintain healthy effective emergency management professionals. Findings from this study underscore the importance of addressing STSS, promoting positive OC, and providing ongoing and increased support for EMs. A healthy, vibrant, experienced EM workforce is critical to protect people, property, and the environment now and in the future as the frequency, scope, scale, and cost of disasters increase.

#### *Limitations and future directions*

This study provides important insights into the mental health stressors experienced by emergency management professionals in the United States (US). However, the study's limitations must be taken into consideration when interpreting the results. Further efforts are needed to determine causation and address the limitations mentioned later, in order to provide a more comprehensive understanding of the mental health stressors of emergency management professionals in the era of increased disasters, pandemics, and impacts of climate change. First, the sample size for the questions varied based on completeness. The survey was distributed to emergency management professionals

<b>Table 1. Characteristics of respondents to the JEM Mental Health Survey for Emergency Management and Affiliated Professions, United States of America, 2022 (N = 903)</b>			
<b>Respondent characteristics</b>	<b>Median*</b>	<b>Interquartile range</b>	
Secondary Traumatic Stress Index	0.08	-0.81	0.78
Emergency Reaction Questionnaire Index	0.05	-0.62	0.69
Organizational Culture Index-Negative Culture <sup>†</sup>	-0.13	-0.81	0.65
		<b>n</b>	<b>Percent</b>
<b>Sex</b>			
Female		416	46.10
Male		487	53.90
<b>Age category</b>			
18-35 years old		162	17.90
36-45 years old		223	24.70
46-55 years old		277	30.70
56+ years old		241	26.70
<b>Race</b>			
Asian		20	2.20
Black		32	3.50
Caucasian		772	85.50
Hispanic		48	5.30
Other		31	3.40
<b>Highest level of education</b>			
Fire, police, military, or other training		30	3.30
High school graduate or less than college		129	14.30
Bachelor's degree		254	28.10
Graduate degree (masters or doctorate)		490	54.30
<b>How many major disasters have you directly managed as incident commander or equivalent leadership position?</b>			
0 disasters		376	41.60
1-2 disasters		196	21.70

<b>Table 1. Characteristics of respondents to the JEM Mental Health Survey for Emergency Management and Affiliated Professions, United States of America, 2022 (N = 903) (continued)</b>			
<b>Respondent characteristics</b>	<b>Median*</b>	<b>Interquartile range</b>	
3-5 disasters		131	14.50
6-10 disasters		76	8.40
10+ disasters		124	13.70
<b>How long have you been in your primary position?</b>			
0-1 year		79	8.70
2-5 years		253	28.00
6-10 years		181	20.00
11-15 years		121	13.40
16-20 years		96	10.60
20+ years		173	19.20
<b>Considering changing jobs before or during the pandemic</b>			
Never considered changing		269	29.80
Has considered changing		634	70.20
<b>Trajectory of Considering Job Change before or during the pandemic (n=634)</b>			
Has considered changing jobs but remaining in emergency management		437	69.0%
Has considered changing jobs outside of emergency management		292	46.10%
Has considered retirement		111	17.51%
Has considered more education		163	25.70%
Has considered other		62	9.78%
<p>*The Secondary Traumatic Stress, Emergency Reaction Questionnaire, and Organizational Culture index scores were computed using principal component analysis. Reporting means and standard deviations would result in each variable having a mean of 0 and a standard deviation of 1. Therefore, we present a median and an interquartile range to report each index score's central tendency and spread.</p> <p><sup>†</sup>Given the association we found between poor organizational culture and greater odds of considering leaving the field, we provide an inverse version of the organizational culture index score to facilitate interpretation and communication of our findings.</p>			



**Table 2. Predictors of considering changing jobs before or during the COVID-19 pandemic among respondents to the JEM Mental Health Survey for Emergency Management and Affiliated Professions, United States of America, 2022 (N = 903)**

Respondent characteristics	Considering changing jobs before or during the pandemic		p value <sup>†</sup>	aOR (95 percent CI)
	Never considered leaving (n [percent])	Has considered leaving (n [percent])		
<b>STS Index</b>				
Lower STS	191 (43.00)	253 (57.00)	<.001	1.00
Higher STS	78 (17.00)	381 (83.00)		2.790 (1.979-3.934)**
<b>ERQ Index</b>				
Lower ERQ	118 (26.40)	329 (73.60)	.027	1.00
High ERQ	151 (33.10)	305 (66.90)		0.782 (0.560-1.092)
<b>Organizational Culture Index-Negative Culture<sup>‡</sup></b>				
Better culture	192 (42.20)	263 (57.80)	<.001	1.00
Poorer culture	77 (17.20)	371 (82.80)		2.852 (2.028-4.011)**
<b>Race</b>				
Asian	4 (20.00)	16 (80.00)	.198	1.375 (0.411-4.599)
Black	11 (34.40)	21 (65.60)		1.093 (0.474-2.520)
Caucasian	222 (28.80)	550 (71.20)		1.00
Hispanic	19 (39.60)	29 (60.40)		0.572 (0.288-1.135)
Other	13 (41.90)	18 (58.10)		0.530 (0.221-1.273)
<b>Sex</b>				
Female	113 (27.20)	303 (72.80)	.111	1.00
Male	156 (32.0)	331 (68.00)		1.136 (0.812-1.589)
<b>Age category</b>				
18-35 years old	27 (16.70)	135 (83.30)	<.001	2.766 (1.525-5.017)**
36-45 years old	55 (24.70)	168 (75.30)		1.48 (0.929-2.384)
46-55 years old	85 (30.70)	192 (69.30)		1.50 (0.990-2.273)
56+ years old	102 (42.30)	139 (57.70)		1.00
<b>How many major disasters have you directly managed as incident commander or equivalent emergency management leadership position?</b>				
0 disasters	114 (30.30)	262 (69.70)	.289	1.00
1-2 disasters	59 (30.10)	137 (69.90)		1.217 (0.795-1.865)
3-5 disasters	30 (22.90)	137 (69.90)		1.931 (1.151-3.240)*
6-10 disasters	22 (28.90)	54 (71.10)		1.314 (0.699-2.473)
10+ disasters	44 (35.50)	80 (64.50)		1.342 (0.803-2.241)

**Table 2. Predictors of considering changing jobs before or during the COVID-19 pandemic among respondents to the JEM Mental Health Survey for Emergency Management and Affiliated Professions, United States of America, 2022 (N = 903) (continued)**

Respondent characteristics	Considering changing jobs before or during the pandemic		p value <sup>†</sup>	aOR (95 percent CI)
	Never considered leaving (n [percent])	Has considered leaving (n [percent])		
How long have you been in your primary position?				
0-1 year	14 (17.70)	65 (82.30)	<.001	2.796 (1.305-5.994)*
2-5 years	62 (24.50)	191 (75.50)		1.455 (0.864-2.452)
6-10 years	42 (23.20)	139 (76.80)		1.700 (0.995-2.906)
11-15 years	48 (39.70)	73 (60.30)		0.774 (0.447-1.341)
16-20 years	32 (33.30)	64 (66.70)		1.160 (0.643-2.091)
20+ years	71 (41.00)	102 (59.00)		1.00
Highest level of education				
Fire, police, military, or other training	17 (56.70)	13 (43.30)	<.001	1.00
High school graduate or less than college	51 (39.50)	78 (60.50)		2.069 (0.834-5.135)
Bachelor's degree	76 (29.90)	178 (70.10)		2.743 (1.146-6.564)*
Graduate degree (masters or doctorate)	125 (25.50)	365 (74.50)		3.481 (1.487-8.149)*
STS: Secondary Traumatic Stress; ERQ: Emergency Reaction Questionnaire; aOR: adjusted odds ratio; CI: confidence interval. <sup>†</sup> Pearson's chi square. <sup>‡</sup> Given the association we found between poor organizational culture and greater odds of considering leaving the field, we provide an inverse version of the organizational culture index score to facilitate interpretation and communication of our findings. <sup>*</sup> Significant at the p < .05 level. <sup>**</sup> Significant at the p < .001 level.				

from different parts of the country. Future efforts should consider a larger sample size, consistently answering all scales for better representativeness. Additionally, this study focused on emergency management professionals in the US. The results may not apply to emergency management professionals in other countries, where the emergency management system and cultural context may differ significantly. Thus, future work should include a diverse sample of respondents from different countries and cultures and include qualitative methods to capture the human lived experience.

Team members specializing in organizational development and industrial/organizational psychology developed a novel short series of seven questions to initially explore the impacts of OC on a respondent's mental health. A strong Cronbach's  $\alpha$  (0.918)

from this newly developed scale indicates good internal consistency among the items for OC. Given the statistical significance of these findings, future efforts should seek to validate the OC scale.

The survey utilized a convenience sampling technique and self-reported responses from the respondents. Due to the recruitment strategy, there could be a potential selection bias issue, as respondents were selected through convenience sampling. Future surveys should consider using randomization in sampling methods of EMs, and possibly random quota sampling to ensure underrepresented groups are included. Another limitation is the potential for self-report bias. This study relied on self-reported data from respondents, and, thus, the results may be subject to the respondents' individual perception of

their mental health stressors. Although validated scales were sought and employed, respondents may have under-reported or over-reported their stressors, which could affect the accuracy of the study's findings. In future studies, surveys should use a combination of self-reported and objective measures to gain a more comprehensive understanding of mental health stressors in emergency management professionals. Additionally, our study focused on gathering data through the online survey to assess the prevalence of the problem and did not rely on a specific theoretical framework to guide our survey. We believe that the absence of a conceptual framework does not detract from the validity and relevance of the findings presented in this study. However, we acknowledge that future studies involving experiments and comparisons may benefit from adopting a theoretical framework. Other areas requiring research are EMs who come from military or first response organizations and may already have some PTSD/STS prior to entering EM.

### CONCLUSIONS

This survey sought to determine and quantify the unique stressors on emergency management professionals. Disasters (natural and human caused) are increasing in cost, scale, and frequency. Findings from this study underscore the importance of addressing STSS, promoting positive OC, and providing ongoing and increased support for EMs now and in the future. A healthy workforce is critical to protect people, property, and the environment as the frequency and cost of disasters continue to skyrocket. OC directly impacts an EM's mental health and their propensity to leave their job or their field completely.

In our survey, 64 percent of EMs considered changing jobs during the pandemic, which is greater than the 43 percent reporting considering changing jobs prepandemic. Of those considering changing jobs at any point, before and/or during the pandemic, 46 percent considered changing fields altogether. While the COVID-19 pandemic dramatically increased stressors, the 43 percent statistic is unsustainable in a highly trained professional workforce. It is challenging to have a resilient organization capable of solving current and future EM issues with a high turnover rate.

Leadership in every sector cited recruitment, retention, and a multigenerational workforce among their top challenges. Overall population decline, generational and shifting differences in work/life philosophies and communication, technology advances, and other complex factors are creating worker shortages and making managing and leading more challenging. Talent recruitment and retention are increasingly competitive. Eighty-three percent of EMs who considered leaving their jobs or the field altogether cited poor OC as a primary cause.

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