

Professional quality of life and resilience in pre-hospital emergency technicians during COVID-19 in Iran: a cross-sectional study

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Abstract

The professional quality of life of pre-hospital emergency technicians has been adversely affected during the COVID-19 pandemic. The present study was performed to investigate the professional quality of life and resilience and their relationships in pre-hospital emergency technicians of Kermanshah Province, Iran during the COVID-19 pandemic.

This cross-sectional, descriptive correlational study was conducted on 412 pre-hospital emergency technicians in Kermanshah Province in 2020 using the census method. Data collection tools were the Stamm Professional Quality of Life Questionnaire and the Emergency Medical Services Resilience scale.

Pre-hospital emergency technicians experienced moderate levels of the professional quality of life dimensions and high/acceptable levels of resilience. There was a significant correlation between resilience and the dimensions of the professional quality of life.

The results of the regression test showed that resilience had a significant effect on all three components of the professional quality of life. Therefore, the use of resilience enhancement strategies is recommended to improve the professional quality of life of pre-hospital emergency technicians.

Keywords: *Professional quality of life; Resilience; Emergency medical services; Iran; COVID-19.*

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Introduction

The most important component of the pre-hospital emergency system is efficient and operational technicians (1). Pre-hospital emergency technicians are faced with problems such as tragic scenes, time constraints, patients' critical conditions, expectations and requests from patients' family and friends, fear of failure to rescue critical patients, and the pressure to make swift decisions in serious situations (2). It seems that the tension has escalated during the COVID-19 pandemic. The potential risk of the disease, fear of transmitting the infection to the family, lack of effective treatment strategies, doubts about the duration of the pandemic, and lack of personal protective equipment may result in or worsen psychological stress. All this can affect the professional quality of life of health-care workers, particularly the staff in the emergency departments, since they are at the forefront of treatment for patients with suspected or confirmed infections (3). According to Stamm, professional quality of life is defined as a person's perception of his or her work (4). It includes the dimensions of "compassion satisfaction" and "compassion fatigue". Compassion satisfaction is a positive attitude toward care; in other words, it is a feeling of satisfaction that comes from being able to accomplish something properly and perfectly, and it makes one enjoy helping others, which is one of the most important determinants of the productivity of an organization (5). Compassion fatigue is an occupational hazard for people experiencing psychological trauma (6) and occurs in medical staff that witness patients' physical and psychological suffering but do not receive emotional support at work (7). Compassion fatigue can make caregivers feel apathetic, indifferent and ruthless toward their patients (8). It includes the components of "secondary traumatic stress" and "burnout" (5). Secondary traumatic stress, also known as stress secondary to an accident, includes negative emotions that emerge as a result of fear or occupational accidents that occur to others. This kind of stress is not the result of a person's direct confrontation with accidents. Secondary stress may occur unexpectedly and without prior warning. Its symptoms may include feelings of helplessness, confusion and being deprived of others' support (9). Burnout due to compassion fatigue causes emotional exhaustion, apathy, and low self-esteem; it also increases medical errors, personal and professional problems, and patient dissatisfaction,

and leads to decreased health-care quality (10). Ultimately, both secondary traumatic stress and burnout affect the quality of patient care and threaten the patient's safety (11). The results of a study on Italian health-care workers during the COVID-19 pandemic showed that health-care professionals at the forefront of treating COVID-19 patients tended to have a lower professional quality of life than those treating other patients (12). In another study in Hong Kong, emergency department health-care professionals reported moderate levels of compassion satisfaction, secondary traumatic stress and burnout during the COVID-19 outbreak (13). Furthermore, according to studies in Spain (14) and Singapore (15), emergency department health-care professionals reported moderate to high levels of secondary traumatic stress and burnout during the COVID-19 pandemic. In such situations, resilience can certainly be helpful (13, 16).

Resilience is defined as the ability to overcome and master difficult life situations (17). Connor and Davidson defined resilience as the ability to endure harms or threatening conditions, and efficiently and actively participate in the event, leading to the realization of a psychobiological balance in stressful situations (18). Resilience is described as the positive potential of humans to cope with stress

and critical situations. In this way, resilience is viewed as a protective factor against future risks (19). The results of a study showed that the higher a person's resilience, the lower their physical symptoms, anxiety levels, social dysfunction, and depressive tendencies. It can therefore be concluded that resilience improves the psychological health of individuals (20). Another study found that resilience skills training improved resilience in nurses and consequently reduced their job stress and increased their professional quality of life (21). Based on the results of another study, psycho-education improves the resilience of emergency staff and enables them to control their anger (22). Shojafard et al. evaluated the relationship between burnout and resilience in pre-hospital emergency technicians in Tehran and found a significant inverse relationship between resilience and burnout (23). Santarone et al. found that during the COVID-19 pandemic, resilience has been an important characteristic that enables health-care professionals to overcome challenges (24).

Several studies have evaluated the professional quality of life, resilience, and their determinants in health-care professionals. Nonetheless, they have not been clear with respect to pre-hospital emergency technicians, especially during the

COVID19 pandemic. Therefore, it is important to evaluate the above-mentioned issues in pre-hospital emergency technicians during this critical period. The present study was conducted to assess the professional quality of life, resilience, and their relationship in pre-hospital emergency technicians in Kermanshah Province, Iran, during the COVID-19 pandemic.

Methods

A cross-sectional, descriptive, correlational study was conducted between August 2020 and January 2021. The study population included all pre-hospital emergency technicians in Kermanshah Province, northwest of Iran. The total number of pre-hospital emergency operational personnel working in 63 urban, road and air bases of Kermanshah Province was 412 individuals who entered the study by census method. The inclusion criteria were as follows: at least six months of field experience and operation in the field, willingness and consent to participate in the study, and no history of family problems such as divorce or losing a family member or friends in the past three months.

Data collection tools included the Stamm Professional Quality of life Questionnaire, the

Emergency Medical Services Resilience Scale, and a demographic information form.

The Stamm Professional Quality of Life Questionnaire:

This is a 30-item questionnaire including three dimensions of compassion satisfaction, burnout, and secondary traumatic stress, measured on a five-point Likert scale (never = 1 to always = 5) as a self-report. This questionnaire was designed and psychometrically assessed by Stamm (5). The modified Persian version of the questionnaire with 25 valid and reliable items was psychometrically evaluated by Ghorji et al. (25). In the modified version, five reverse scored items in the main questionnaire related to the burnout dimension were removed. The ultimate version included three dimensions: compassion satisfaction (10 items), burnout (5 items), and compassion fatigue or secondary traumatic stress (10 items). In the first dimension, a score higher than 45 indicated high compassion satisfaction, a score less than 32.6 low compassion satisfaction, and values between 32.6 and 45 showed moderate compassion satisfaction. Regarding the second dimension, a score greater than 18.16 indicated high burnout, a score lower than 8.74 low burnout, and a score between 8.74 and 18.16 showed moderate burnout.

As for the third dimension, a score higher than 32.72 revealed high secondary traumatic stress, a score lower than 21.52 low secondary traumatic stress, and scores between these two values showed moderate secondary traumatic stress. Ghorji et al. calculated the reliability of the questionnaire using internal consistency (Cronbach's alpha), and coefficients of 0.73, 0.87, 0.87, and 0.74 were obtained for the whole instrument, compassion satisfaction, burnout, and secondary traumatic stress, respectively. In the present study, a Cronbach's alpha coefficient of 0.72 was obtained for the whole questionnaire indicating the acceptable reliability of the scale.

The Emergency Medical Services Resilience Scale:

This scale consists of 31 items covering six dimensions, including job motivation (13 items), communication challenges (3 items), social support (2 items), remaining calm (5 items), self-management (5 items), and consequence of stress (3 items). It was designed and psychometrically assessed by Ebadi et al. (26), and is a self-report questionnaire completed on a five-point Likert scale (strongly disagree = 1 to strongly agree = 5). The total score of the scale ranges from 31 to 155, with higher scores indicating higher resilience. Ebadi et al. reported a Cronbach's alpha coefficient and intraclass correlation coefficient of 0.91 and

0.85, respectively. In the present study, a Cronbach's alpha coefficient of 0.89 was obtained for the whole questionnaire indicating the acceptable reliability of the scale.

The demographic information form:

This form included questions about age, work experience, education level and marital status.

After obtaining approval and making the necessary appointments with the Kermanshah Medical Emergency and Accident Center technicians, the researcher proceeded to data collection through distributing the questionnaires. For this purpose, the first author and co-authors visited different medical emergency bases in the cities of Kermanshah Province during their off-duty hours for questionnaire distribution and data collection.

Ethical Considerations

This study was part of a master's thesis in nursing approved by the Nursing Faculty of Alborz University of Medical Sciences, Karaj, Iran. Ethical clearance was obtained from the Ethics Committee of Alborz University of Medical Sciences (IR.ABZUMS.REC.1399.087), and all ethical considerations were observed in this study. The research subjects (pre-hospital emergency field technicians) participated voluntarily in the study and were provided with the necessary information before completing the questionnaires.

Completion and return of the questionnaires were considered as informed consent to participate in the study. The questionnaires were completed anonymously, and the participants' information was confidential.

Statistical Analysis

After data collection, descriptive and inferential statistics were used for data analysis. First, the demographic characteristics of the research population were determined, and the main variables were examined using mean and standard deviation. The total resilience score and the scores of all three components of the professional quality of life, including compassion satisfaction, burnout, and secondary traumatic stress, had P -values lower than 0.001 according to Kolmogorov-Smirnov normality test, indicating that the research variables did not have a normal distribution ($P < 0.001$). Since the variables in the study did not have a normal distribution, Spearman's correlation coefficient was used to examine the relationship between resilience and the professional quality of life dimensions. Multiple and simple linear regression models were used to predict the professional quality of life factors. The regression

test was performed using the concurrent method. Data analysis was done using SPSS software version 22, and the significance level was set at $P \leq 0.05$.

Results

Of the 412 questionnaires that were distributed to the whole research population, 370 were completed and returned (response rate: 89.80%). The mean \pm standard deviation of the participants' age was 32.19 ± 6.37 years (22 to 53 years). In addition, the mean \pm standard deviation of the participants' work experience was 8.47 ± 5.90 years, ranging from 1 to 29 years. As for the other demographic factors, 229 participants (61.9%) were married, 164 (44.3%) had an associate degree, and 206 (55.7%) had a bachelor's degree. In accordance with the requirements of the pre-hospital emergency structure in Iran, all field technicians must be male, and therefore there were no female participants in the study.

The mean scores of compassion satisfaction, burnout, secondary traumatic stress, and resilience were 39.37 ± 8.06 , 10.82 ± 4.39 , 22.85 ± 6.06 , and 126.53 ± 12.89 , respectively (Table 1).

Table 1. Resilience and professional quality of life (N = 370)

Dimensions of Resilience	Mean (SD)
Job motivation	53.48 ± 6.35
Self-management	20.67 ± 2.63
Remaining calm	20.75 ± 2.87
Communication challenges	12.34 ± 1.62
Social support	7.88 ± 1.51
Consequence of stress	11.38 ± 2.61
Total	126.53 ± 2.61
Dimensions of Professional Quality of Life	Mean (SD)
Compassion satisfaction	39.37±8.06
Burnout	10.82±4.39
Secondary traumatic stress	22.85±6.06

SD: standard deviation

There was a significant correlation between professional quality of life ($P < 0.001$) (Table 2). resilience and all three dimensions of the

Table 2. Correlation between the six components of resilience and the three components of professional quality of life

Details	Job Motivation	Self-Management	Remaining Calm	Communication Challenges	Social Support	Consequence of Stress	Resilience
Compassion Satisfaction	r = 0.59*	r = 0.44*	r = 0.46*	r = 0.35*	r = 0.37*	r = 0.33*	r = 0.63*
Burnout	r = - 0.43*	r = - 0.25*	r = - 0.23*	r = - 0.28*	r = - 0.25*	r = - 0.43*	r = - 0.47*
Secondary Traumatic Stress	r = - 0.31*	r = - 0.21*	r = - 0.19*	r = - 0.27*	r = - 0.23*	r = - 0.45*	r = - 0.40*

r: Spearman's correlation coefficient * $P < 0.001$

According to the findings, resilience had a positive correlation with compassion satisfaction, but a negative correlation with burnout and secondary traumatic stress. The correlation coefficient of the relationship between resilience and compassion satisfaction, burnout, and secondary traumatic stress was 0.63, - 0.47, and - 0.40, respectively. The results also showed that all dimensions of resilience were correlated with the professional quality of life dimensions. The relationship between resilience components and compassion satisfaction was

positive, but it was negative for burnout and secondary traumatic stress.

Table 3 presents the results of the regression analysis to predict the three components of the professional quality of life (compassion satisfaction, burnout, and secondary traumatic stress) based on the six components of resilience (job motivation, communication challenges, social support, remaining calm, self-management, and consequence of stress). The coefficient of determination for compassion satisfaction,

burnout, and secondary traumatic stress indicated that the resilience components could predict 32% of compassion satisfaction changes, 24% of burnout changes, and 22% of secondary traumatic stress changes.

Table 3. Predicting the components of professional quality of life based on the six components of resilience

Dependent Variable	Independent Variable	Unstandardized Coefficients	Standardized Error	Standardized Coefficients	P-Value	Alignment Indices		R ² Coefficient of Determination
						Variance Inflation Factor	Tolerance	
Compassion satisfaction	Job motivation	0.451	0.085	0.356	< 0.001	2.41	0.414	0.32
	Communication challenges	0.093	0.186	0.030	0.619	2.01	0.499	
	Social support	0.249	0.163	0.089	0.128	1.83	0.545	
	Remaining calm	- 0.334	0.272	- 0.067	0.221	1.62	0.617	
	Self-management	0.882	0.276	0.165	0.002	1.45	0.690	
	Consequence of stress	0.557	0.141	0.181	< 0.001	1.12	0.891	
Burnout	Job motivation	- 0.241	0.049	- 0.348	< 0.001	2.41	0.414	0.24
	Communication challenges	0.020	0.107	0.012	0.848	2.01	0.499	
	Social support	0.142	0.094	0.093	0.131	1.83	0.545	
	Remaining calm	0.009	0.156	0.003	0.954	1.62	0.617	
	Self-management	- 0.307	0.158	- 0.106	0.053	1.45	0.690	
	Consequence of stress	- 0.500	0.081	- 0.298	< 0.001	1.12	0.891	
Secondary traumatic stress	Job motivation	- 0.181	0.068	- 0.190	0.008	2.41	0.414	0.22
	Communication challenges	0.062	0.150	0.027	0.678	2.01	0.499	
	Social support	0.150	0.132	0.071	0.255	1.83	0.545	
	Remaining calm	- 0.208	0.219	- 0.056	0.342	1.62	0.617	
	Self-management	- 0.351	0.222	- 0.088	0.115	1.45	0.690	
	Consequence of stress	- 0.869	0.113	- 0.375	< 0.001	1.12	0.891	

Multiple linear regression model (simultaneous method)

Three components of resilience, including job motivation, self-management, and consequence of stress, were also found to be effective in improving compassion satisfaction ($P < 0.05$) and could significantly predict compassion satisfaction. All three components of job motivation, self-

management, and consequence of stress had positive effects on compassion satisfaction. Comparison of standard coefficients showed that job motivation had the largest influence on compassion satisfaction with a coefficient of 0.356. Job motivation and consequence of stress as two components of resilience had a considerable impact on burnout ($P < 0.05$) and were able to significantly predict it. Job motivation and consequence of stress had negative effects on burnout. Comparison of standard coefficients showed that job motivation had the strongest impact on burnout with a coefficient of - 0.348.

Findings also showed that two components of resilience including job motivation and consequence of stress had a strong negative effect on secondary traumatic stress ($P < 0.05$) and significantly predicted it. Comparison of standard coefficient showed that consequence of stress had the highest impact on secondary traumatic stress with a coefficient of - 0.375.

Table 4 presents the results of the regression test with the aim of predicting compassion satisfaction, burnout, and secondary traumatic stress based on the total resilience score.

Table 4. Predicting the components of professional quality of life based on the total resilience score

Dependent Variable	Independent Variable	Unstandardized Coefficients	Standardized Error	Standardized Coefficients	P-Value	R ² Coefficient of Determination
Compassion satisfaction	Resilience	0.335	0.026	0.552	< 0.001	0.30
Burnout	Resilience	- 0.143	0.016	- 0.434		0.19
Secondary traumatic stress	Resilience	- 0.164	0.022	- 0.359		0.13

Simple regression model (simultaneous)

The results showed that resilience had a considerable impact on all three components of the professional quality of life ($P < 0.001$). Accordingly, resilience could significantly predict the three components of compassion satisfaction, burnout, and secondary traumatic stress. Resilience

had a positive effect on compassion satisfaction, while it had a negative effect on burnout and secondary traumatic stress. The comparison of standard regression coefficients showed that resilience had the strongest impact on compassion satisfaction with a standard coefficient of 0.552,

while burnout was the second most affected variable with a standard coefficient of - 0.434.

Discussion

This study investigated the professional quality of life, resilience, and their relationship in pre-hospital emergency technicians in Kermanshah Province, Iran during the COVID-19 pandemic for the first time. In general, the subjects experienced overall moderate levels of all dimensions of the professional quality of life (compassion satisfaction, burnout, and secondary traumatic stress), which was consistent with the results of a study by Wong et al. in Hong Kong. Health-care professionals working in emergency departments in Hong Kong also experienced overall moderate levels of compassion satisfaction, burnout, and secondary traumatic stress during the COVID-19 pandemic (13). Before the COVID-19 pandemic, Norouzinia et al. found that the pre-hospital field staff of Alborz Province, Iran had moderate levels of compassion satisfaction (27). Smart et al. reported similar findings in the United States (28). Ducar et al. also found moderate levels of the professional quality of life components including compassion satisfaction, burnout, and secondary traumatic stress in pre-hospital emergency technicians before mindful intervention (29).

People working in occupations such as pre-hospital emergency are more prone to acute and chronic stress (30) as well as consequences such as burnout, depression, anxiety, sleep disorders, heart disease, substance abuse and suicide due to frequent exposure to scenes of death, pain, torment and sufferings of others (31). Burnout and secondary traumatic stress are effective factors in reducing efficiency, loss of ability, and physical and psychological complications among pre-hospital emergency technicians, which can adversely affect professional performance, safety and care standards provided to patients (32).

During the COVID-19 pandemic, there were several factors that could cause psychological stress, for instance the potential risk of infection, fear of transmitting the infection to the family, lack of personal protective equipment, lack of effective treatment strategies, and doubts about the duration of the pandemic (12, 14). Efforts to enhance the employees' professional quality of life reduce complaints, absenteeism and disciplinary procedures, and increase positive attitudes and engagement (33). Thus, there is an urgent need for efforts aiming at improving the professional quality of life of health-care professionals working in emergency departments as well as pre-hospital

emergency technicians during this critical time (13).

The results revealed high/acceptable levels of resilience in the study participants. Before the COVID-19 pandemic, Norouzinia et al. found acceptable levels of resilience in the pre-hospital staff of Alborz Province (27). Froutan et al. measured the pre-hospital emergency workers' resilience in Khorasan Razavi Province, Iran, and found high/very high levels of resilience (21). Although the results of the present study are consistent with other studies in this field, differences in management practices, facilities, equipment and infrastructure in other regions and countries may affect the resilience of staff. Studies have shown that supportive facilities and structures such as family, social and organizational support, available resources, and balance between life and work are among the external factors affecting resilience in personnel. These factors help individuals adapt better to stressful work conditions (34), which has been especially important during the Covid-19 pandemic (13, 16). The findings revealed significant relationships between compassion satisfaction, burnout, and secondary traumatic stress among pre-hospital emergency technicians in Kermanshah Province, Iran during the COVID-19 pandemic. Higher

levels of compassion satisfaction were associated with lower levels of burnout and secondary traumatic stress, suggesting that compassion satisfaction can serve as a protective factor against poor psychological health in pre-hospital emergency technicians. Studies investigating health-care professionals working in various settings have found similar results (13, 14, 35). However, O'Callaghan et al. found no relationship between the dimensions of the professional quality of life (36). In the present study, there was a significant correlation between resilience and the different dimensions of the professional quality of life. The relationship between resilience and compassion satisfaction was positive, while it was negative for burnout and secondary traumatic stress. In other words, an increase in resilience increased compassion satisfaction and reduced burnout and secondary traumatic stress. The results also showed that resilience had a significant effect on all three components of the professional quality of life. The effect of resilience was positive on compassion satisfaction, and negative on burnout and secondary traumatic stress. When standard regression coefficients were compared, it was found that resilience had the greatest impact on compassion satisfaction, followed by burnout. Studies investigating medical staff and emergency

workers in Italy (37) and health-care professionals in emergency departments in Hong Kong (13) during the COVID-19 pandemic reported similar results. Before the COVID-19 pandemic, Norouzinia et al. and Miller et al. found a significant positive relationship between resilience and compassion satisfaction, indicating that resilience was associated with higher compassion satisfaction (27, 38). According to Miller et al., resilience was inversely related to burnout and secondary traumatic stress (38). Shojafard et al. found a significant inverse relationship between resilience and burnout (23). Studies on nurses in Australia (39) and Saudi Arabia (40) also showed similar results. A review of the literature suggests that personnel with higher resilience and those who use more resilient behaviors and actions through resilience enhancement techniques when faced with occupational issues are less prone to emotional fatigue and burnout (13, 37). The results of a study by Abrishamkesh et al. showed that the higher a person's resilience, the lower their physical symptoms, anxiety levels, social dysfunction, and depressive tendencies (20). Higher levels of resilience consequently improve the psychological health of individuals. Dyer and McGuinness found that resilience, indefatigability, self-awareness and altruism were among the characteristics of resilient

individuals. According to these two researchers, proficiency and coping skills are among the major predictors of resilience (41). Thus, in stressful situations such as pre-hospital emergency care, resilience can be one of the most important and effective factors in increasing compassion satisfaction and reducing burnout and secondary traumatic stress.

Findings regarding the relationship between resilience and the professional quality of life showed that three components of resilience, i.e., job motivation, self-management, and consequence of stress, affected and significantly predicted compassion satisfaction and burnout. The effect of all three components of job motivation, self-management, and consequence of stress on compassion satisfaction was positive, while it was negative for burnout. The strongest impact on compassion satisfaction and burnout was related to job motivation. The data also revealed that two components of resilience, i.e., job motivation and consequence of stress, influenced and strongly predicted subsequent traumatic stress. Job motivation and consequence of stress negatively affected secondary traumatic stress, and the strongest impact on secondary traumatic stress was related to the consequence of stress. These findings are consistent with the results of a study by

Norouzinia et al. (27). Thus, priority should be given to improving resilience in medical staff, emergency workers and pre-hospital emergency technicians in order to prepare them for the difficult situations rising due to the COVID-19 pandemic (13, 42). Previous studies revealed that resilience could be acquired and improved. For instance, according to a study by Ahmadi et al., resilience skills training promotes resilience in nurses and consequently reduces job stress and improves their professional quality of life (43). In addition, Mohamadi Sadegh et al. found that psycho-education improved emergency workers' resilience and enabled them to control their anger by enhancing resilience (22). It has been proposed that pre-hospital emergency staff should receive in-service training programs including psycho-education to improve resilience and anger control in those exposed to high stress levels. Thus, it is important to employ training programs to enhance resilience and improve the professional quality of life of pre-hospital emergency technicians. This also improves the general situation and preparedness for dealing with and managing future pandemics.

This study had some limitations. First, it was performed only on pre-hospital emergency technicians of Kermanshah Province located in the

northwest of Iran. Thus, it is recommended to design and implement larger, multi-center, descriptive-analytical studies to compare the data and measure the relationship between the main variables of the study (resilience and professional quality of life) in other Iranian cities and other countries, taking into account the cultural and social factors prevailing in different societies. Second, the self-reporting nature of the surveys and the psychological condition of the participants at the time of completing the questionnaires might have affected the results, which was beyond the control of the researcher. Third, this study had a cross-sectional design and data collection was performed within a period of six months. Longitudinal studies during and after the COVID-19 pandemic are recommended for a better and more comprehensive understanding of the relationship between the professional quality of life and resilience of pre-hospital emergency technicians.

Conclusion

Pre-hospital emergency technicians of Kermanshah Province in Iran experienced moderate levels of the professional quality of life dimensions (compassion satisfaction, burnout, and secondary traumatic stress) during the COVID-19

pandemic. They also had acceptable/high levels of resilience. There was a significant correlation between resilience and the professional quality of life, that is, resilience had a strong impact on all three dimensions of the professional quality of life. Due to the significant relationship between resilience and the professional quality of life dimensions, resilience enhancement strategies should be adopted to improve the professional quality of life of pre-hospital emergency technicians.

This study investigated the professional quality of life, resilience, and their relationship in pre-hospital emergency technicians in Kermanshah Province, Iran during the COVID-19 pandemic for the first time; while the pre-hospital emergency

technicians around the world have been affected by this pandemic, and therefore the results of the present study may be useful for similar international professional groups.

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Conflict of Interests

The Authors declare there is no conflict of interests.

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