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OCCUPATIONAL BURNOUT IN PARAMEDICS: A SYSTEMATIC REVIEW OF CURRENT RESEARCH[7]

Abstract:
Purpose. *The purpose of this paper was to analyze the current state of research on the burnout syndrome in paramedics, focusing on studies conducted in the past two decades.* ***Methods.*** *8 academic databases with published research papers and articles were analyzed: Academic Search Complete, Eric, Health Source-Consumer Edition, Health Source Nursing/Academic Edition, MEDLINE, PsychARTICLES, PsychINFO, SOCINDEX with Full Text. The analysis focused on original research on occupational burnout in paramedics*

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that met the following criteria: it had used the survey method and it had been done between 1997-2017. The 18 papers selected for analysis included the surveys of a total of 5478 emergency medicine professionals. 17 of the papers were cross-sectional studies and one was a 4-year longitudinal. A majority of the studies used the MBI questionnaire. ***Results*** *The overall results show that between 39% and as much as 75% of the surveyed paramedics exhibit severe emotional exhaustion. According to some of the studies, one in every five paramedics suffers from depression. The research also points to the correlation between exposure to traumatic events and somatic symptoms, such as back pain and sleep loss. Among the potential factors that might protect against burnout, the literature mentions primarily social support (from colleagues, the management or the partner) and personal characteristics (such as high self-efficacy and hope for success).* ***Conclusions.*** *All our outcomes suggest a huge necessity for more research to create targeted, counteract burnt down syndrome programs.*

Keywords:
Burnout, paramedics, occupational health, job satisfaction, social support, prevention

Introduction

Since the 1980s, Cristina Maslach, the inventor of the most commonly used instrument for measuring burnout (the MBI – Maslach Burnout Inventory), has been keenly interested in the issue of work engagement. Initially, she defined occupational burnout as a mental state, which is the result of prolonged work-related stress [1]. With the development of better diagnostic tools, she further elaborated her understanding of this problem, coming to the conclusion that the burnout syndrome is an emotional inner reaction caused by external factors, which may lead to loss of personal and social resources. In its essence, it is the discrepancy between what the employee is expected to do, and what he or she is actually capable of doing. This is connected with the core values adopted by the individual, the sense of decency, dignity, and free will. Once an individual becomes affected with burnout, his or her symptoms will gradually increase in magnitude over time, making the recovery increasingly more difficult [2]. In cases of extended exposure to a given stressor, the body may attempt to adapt to the new situation by going through three stages. In the first stage, the so called alarm stage, the General Adaptation Syndrome (GAS) allows the body to protect itself against stress, but at the same time it also negatively impacts the efficacy of the immune system. In this stage, the endocrine system, circulatory system, nervous system, muscular system, and the metabolism are all mobilized to allow

for the quickest possible resolution of the stressful event. In the second stage, i.e. the adaptation stage, the efficacy of the previously activated biological mechanisms starts so decrease. This happens due to the extended exposure to the stressor, as the body cannot continue to function on the same, elevated level of activity for extended periods of time. At this point, the body may also temporarily adapt to the situation by slightly increasing its own resistance (hence, the alternative name of this stage: the resistance stage). The end result of this stage is passive tolerance of the stressors. The stressful event should persist, the body will enter the exhaustion stage, which may even lead to death of the individual in some extreme cases. Progression through the stages is reversible, however. By using appropriate medical interventions, it is possible to normalize the individual's mental state [3].

The patients themselves may be the cause of severe stress for paramedics [4]. The desire to help, combined with unsuccessful intervention attempts, and sometimes helplessness have a direct impact on the paramedics' mental state. Popa et al. (2010) identifies lack of control and direct threats, e.g. made by intoxicated patients, as the main stressors present in this profession. Moreover, paramedics can never be certain of the results of the administered emergency treatment: it may lead to immediate improvement of the patient's condition or to his or her sudden death. Such uncertainty is also the basis for the feeling of powerlessness [5].

The dynamic character of the work is also an important aspect when considering burnout, as the situations of increased stress, to which the paramedics are often exposed, are punctuated with periods of relative calm [6]. Establishing personal relations in such conditions is more difficult, and the unaddressed trauma can affect the relations in the entire team, which may also pose a potential risk of burnout.

Being faced with such a multitude of factors that apparently have an impact on the work of paramedics, it is imperative to summarize the current state of research and draw general conclusions that will help to create prevention programs custom-tailored to the needs of this particular occupational group.

Methods. Purpose

The purpose of this paper is to analyze the current state of research on the burnout syndrome in paramedics, focusing on studies conducted in the past two decades.

The systematic review will allow for a better evaluation of the burnout levels in paramedics (1) and also for a more in-depth investigation of the factors involved in burnout, considering both individual and profession-specific characteristics (2).

This summary will also show how this problem has been addressed in research over the years. Thanks to the comprehensive approach adopted in this study, it will help to bring a better understanding of the specific needs of paramedics, and thus become a stepping stone for future attempts at creating concrete strategies for combating occupational burnout.

Used methods

8 academic databases with published research papers and articles were analyzed: Academic Search Complete, Eric, Health Source-Consumer Edition, Health Source Nursing/Academic Edition, MEDLINE, PsychARTICLES, PsychINFO, SOCINDEX with Full Text. The analysis focused on original research on occupational burnout in paramedics that met the following two criteria: it had used the survey method and it had been done in the past two decades (1997-2017). The preliminary results were then analyzed. For more precise search results, different combinations of the following keywords were used: paramedics, paramedic, EMP, emergency medical personnel, EMS, emergency medical service, ambulance work team, work stress, burnout, burnout syndrome, M.B.I.

Further analysis included articles that met the following criteria: A. Original research based on the survey method; B. the respondents were paramedics; C. the study was concerned with the factors of burnout.

Method description

The review of the literature available in the analyzed databases yielded 492 hits, some of which included articles that were not concerned with the problem of burnout in paramedics, but merely mentioned some of the keywords in the body of the text. To eliminate any unrelated articles, the search was narrowed down to only those that included a combination of keywords related to emergency medical services (paramedics, paramedic, EMP, emergency medical personnel, EMS, emergency medical service, ambulance work team) and those related to occupational burnout (work stress, burnout, burnout syndrome, M.B.I.). Thus, 90 articles that are directly connected with the burnout syndrome in emergency medical personnel were singled out. By restricting the search results to original research focused on paramedics (not nurses or physicians), 42 articles were excluded.

Due to the temporal scope of the analysis (past two decades of research), 7 additional articles were excluded. Furthermore, studies that did not include an English translation (i.e. were available only in Russian [7] or Chinese [8]) were also excluded from the analysis.

The final selection included 18 articles that met all three inclusion criteria.

A brief description of the selected studies, sorted chronologically, can be found in Table 1.

Results and discussion. Sampling and survey form

The 18 papers selected for analysis included the surveys of a total of 5478 emergency medicine professionals. Some of the studies, such as Schooley et al. (2016), make no distinction between different occupational groups [9], while others also introduce firefighters into the analysis [10] in addition to other analyzed occupations. The results, however, are presented separately.

The majority of the authors decided to separate the occupational groups to emphasize their individual characteristics. Not every study, however, compared the results between the groups. The rationale for treating emergency medicine professionals as a homogeneous group was that the nature of their work, the exposure to a strong stressor, and the connection with medicine constitute sufficient common denominators for that purpose.

The size of the samples was between 20 and as many as 1403 participants, which on average gives 79 respondents per survey. Not all of the authors provided the response rate of the conducted surveys. Based on the data, of the Canadian team led by Halpern (2012) made available by them, the return rate can be estimated to have been only 38.3% [11] and [12]. The remaining studies did not provide such information; however, it is worth noting that some of the respondents were soldiers of the People's Republic of China [13], who probably participated in the survey as part of their military duties.

The review included articles published in English by researchers from different countries: Canada (three articles), Republic of South Africa and Turkey (two articles each), but also Mexico, Italy, Romania, the Netherlands, France, Pakistan, India, Iran, China, and Hong Kong.

Due to the fact that the research teams did not publish any information on the work experience or gender of the respondents, it was not possible to formulate any general conclusions with regard to these factors.

17 of the reviewed articles presented the results of cross-sectional studies, which were conducted to analyze the chosen variables over a fixed period of time. Only the team from the Netherlands [14] conducted a 4-year longitudinal study to investigate the long-term effects of exposure to traumatic events.

Measurement instruments

The Maslach Burnout Inventory (MBI) or an adapted version of it was the most commonly chosen measurement instrument (it was used in 11 out of 18 studies), as it allows for evaluation with regard to the following scales:

emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). One article used the version of the instrument standardized for use in China i.e. the China Maslach Burnout Inventory or CMBI for short (Ho S.Y,&Lo R.Y, 2011 [15]). Five of the reviewed articles also used a version of the MBI questionnaire adapted for people working in human services (MBI HSS).

This version is usually used for social services and healthcare employees. Regardless of the MBI version used, burnout can be identified with high scores on the emotional exhaustion and depersonalization (cynicism) scales and low scores on the personal accomplishment (professional accomplishment) scale [16].

Four of the articles use the 30-item ProQOL scale (Professional Quality of Life). The following teams: Amjad et al. (2013) [17], King et al. (2014) [18], Chang (2011)[13] and Zaidi from Pakistan (2017) [10] used this instrument to control the overall level of burnout, without referring to any specific scales. One team chose an interesting combination of measurement instruments, using both surveys (ICI, Self-Efficacy Scale, SPS, BDI) and interviews to determine the feeling of support in a qualitative evaluation [19].

Regardless of the number of people surveyed, some researchers used few measurement instruments. For instance, Pereda-Torales et al. [20], Stein [21], Khatiban [22], and Popa[23] used only one survey. On the opposite end of this spectrum, there are research teams, such as those from Hong Kong [15] and RSA [24], who used four full surveys for only 35 and 20 respondents respectively.

Comprehensive burnout evaluation

Due to the considerable diversity in the research methods used to evaluate burnout throughout the past two decades, a general overview of the selected articles would not be comprehensive enough. However, the comparisons between specific results presented in the articles are worth exploring, especially if they share a common scale. Despite of the MBI survey being the common thread in all of the studies, the slight differences between some of its versions make summary of descriptive statistics difficult. Nevertheless, three of the articles (the ones from Iran [22], Turkey [9], and Mexico [20]) present their results in a very similar way. They do not provide the mean scores, using a percentage of the highest scores in each scale instead. The overall numbers for burnout presented in the above mentioned studies are, without any exaggeration, alarming. Between 39% [20] and as much as 75% [9] of the surveyed paramedics exhibit severe emotional exhaustion. Between 38% [22] and 84% [9] of the respondents also score high on the depersonalization scale. In accordance with the assumptions of the survey, the third scale, which

should be negatively correlated with the remaining two scales and the entire instrument in general, had the lowest scores. This means that the lower the PA score, the higher the risk of burnout. The PA scores in the reviewed articles were between 2.69% [22] and 56% [9].

Three of the research teams decided to correlate their results with regard to the burnout syndrome. Ho S.Y. (2011)[15] points to the negative correlation between burnout and hope for success (r=-0.62 $P<0.001$). Interestingly, two Canadian teams ([18] and [12]) have conducted independent investigations of the correlation between burnout and stress. Their results suggest a positive correlation between exposure to highly stressful events (trauma) and the onset of burnout symptoms in paramedics. In King et al., r=0.50 $P<0.001$, while in Harpeln et al. R=0.22 $P=0.003$.

Risk factors of occupational burnout

When investigating the correlates of occupational burnout in paramedics, some research teams decided to factor the mood of the participants into the analysis, although not in a direct manner. For instance, the Dutch team [14] has analyzed the sick leaves of the paramedics who participated in rescue operations after an explosion in a firework factory in 2000. The researchers have characterized this event as highly traumatic and considered it to be a potential catalyst for negative changes, both mental and somatic. Their study compared the number of sick leave days before the rescue operations and throughout the four years after the incident. The researchers noted a significant increase in the frequency of somatic symptoms, including back pain and loss of sleep. The number of sick leaves issued due to emotional problems and those issued by a neurologist has also increased. Although the study does not corroborate the correlation between trauma and burnout with statistical data, the authors strongly suggest that such a link exists.

Harpeln et al. [11] has come to the same conclusion on the matter after analyzing a group of 189 paramedics. The results of their analysis have shown a positive correlation between burnout and somatic symptoms (R=0.24 $P<0.003$). Furthermore, the researchers have also uncovered a correlation between the burnout syndrome and depression (R=0.38 $P<0.001$). The severity of depression was also analyzed by the Turkish team [25], who used the Beck Depression Inventory (M=10.00 SD=7.84). Unfortunately, all of the correlations between particular MBI and BDI scales posited by the researchers did not meet the threshold for statistical significance. The above mentioned scale was also used by Rogehr [19]. By analyzing a group of 86 paramedics, Rogehr has determined that 2.3% of them suffer from severe depression and 18.6% has had symptoms of moderate depression in the past. In other words,

one in every five of the surveyed paramedics suffers from clinical depression that might be connected with the nature of their work.

Protective factors in occupational burnout

By conducting cross-sectional studies, the researchers have also attempted to investigate the factors that may help to prevent burnout. Two of the reviewed articles put considerable emphasis on social support. Setti et al. [26] has shown a negative correlation between burnout and social support on a sample of n=782. An analysis of the particular scales also reveals a correlation between support offered by colleagues (EE r=-0.23 $P<0.01$; DP r=-0.204 $P<0.01$; PA r=-0.152 $P<0.01$) and support provided by the management (EE r=-0.203 $P<0.01$; DP r=-0.236 $P<0.01$; PA r=-0.114 $P<0.01$). Unfortunately, the results on the correlation between family support and burnout presented in the above mentioned study are not statistically significant.

On the other hand, the study conducted by King [18] has shown that the partners of paramedics, who are not themselves employed in healthcare, were exposed to equally high stress because they were worried about the welfare of their partner; however, King has also found that the emotional bond shared by the partners is contributing to a faster recovery from stress and better coping for both of them.

In the reviewed articles, two teams have identified certain personal characteristics that are negatively correlated with burnout. Therefore, if we help individuals to maintain a high level of these characteristics, the risk of developing burnout will decrease. According to Pratti et al. [27], self-efficacy is one of such characteristics, as the study has shown a negative correlation between perceived self-efficacy and potential occupational burnout (r=-0.29 $P<0.001$).

Hope for success seems be another personal characteristic that can work as a preventive measure against the effects of emotionally exhausting work. The study conducted by the researchers from Hong Kong [15] has revealed a strong negative correlation between burnout and hope for success (r=-0.62 $P<0.001$). It has also demonstrated as link between PTSD symptoms and burnout, but it is not as robust (r=-0.39 $P<0.05$). The results of the two studies mentioned above provide a compelling reason for putting more emphasis on the development of prevention programs that monitor personal characteristics such as self-efficacy and hope for success.

Conclusions and future perspective

The primary goal of this systematic review of the literature on occupational burnout in paramedics was to analyze of the state of the research

done in the past two decades. However, a preliminary investigation of the available articles on burnout has revealed that research devoted to this problem reaches further back. At the beginning of the 21st century, the focus of burnout researchers has shifted from corporate employees [28] to healthcare professionals, and thus the first instruments for that type of research were developed. Initially, the very definition of what constitutes burnout was controversial, which has made the efforts to create specialized surveys more difficult (there whereas many as 48 different definitions of burnout in the 80s). Hence, actual research on occupational burnout started to get published only after the concept of burnout had been more precisely delineated [30].

Although this review set out to analyze articles published during the past two decades, the analysis was eventually limited to studies conducted between 2007 and 2017. This is due to the fact that earlier research on the topic was mostly descriptive.

However, thanks to this phase of theoretical deliberations, research teams were offered a greater choice of measurement instruments and could choose one that would be the best fit for their target group. The Maslach Burnout Inventory and its modified versions are still the most popular choice ([20], [15], [11], [22], [9], [18], [26], [23], [24], [25]). Despite of the fact that this instrument allows for separate analysis of different scales (emotional exhaustion, depersonalization and personal accomplishment), some studies only provide the overall level of burnout. This is helpful in putting the general picture of the burnout syndrome together across different countries.

Some of the teams have chosen less common but more highly specialized instruments, adapting their methods to the research problem at hand. For instance, the South African group [21] used the Copenhagen Burnout Inventory (CBI), which distinguishes between the different causes of burnout instead of grouping them together, as it is the case with the MBI. The CBI includes scales that can be used to determine whether the reason for burnout stems from issues related to patients, work management or personal life. This instrument has allowed the researchers to develop a rapid intervention plan that could be used to stop the progression of burnout, which was especially important given the fact that the respondents in their study were medical rescue students whose work experience was limited to apprenticeship.

For a more individual approach, the researchers have also used interviews. Although this method is less common in this field of study, two teams from Canada have independently decided to include interviews in their cross-sectional studies [11][19]. It is worth noting, however, that the team led by Harpeln was gathering qualitative data on highly traumatic events (which exposes the respondents to potential re-traumatization), and that Roger (2007) analyzed responses on the perceived social support, which may lead to a decrease in emotional stress [31].

On the basis of the cross-cultural data provided by this review, we conclude that occupational burnout is not correlated with place of residence and the religious or cultural background of the emergency medicine professionals. The review included studies conducted in highly developed countries, such as Canada [11][12][19], France [26], Italy [27]; and developing countries, such as India [17], Pakistan[10], Turkey [9], and Romania [23]; but also in communist states [13]. It is the profession of the respondents and the nature of their work environment that constitutes the common thread in all of the reviewed articles.

Gender, on the other hand, does not seem to influence of the risk of burnout [27]. Women working in emergency medical teams seem to be at equally high risk of developing burnout as men.

The main factors of burnout, i.e. potential threat to life, diminished sense of control, organizational difficulties, feeling of failure, and constant stress [29], are independent from demographic factors. Hence, being employed in emergency medicine itself raises the risk of burnout.

It is noteworthy that some health workers underestimate interpersonal communication at work, which increases the sense of solitude [26][32].

However, if we consider the increase of quality of life and that the subjective assessment of happiness may increase, we would possibly contribute to reducing the risk of professional burnout [33].

Data gathering was an important step in preparing for this review. Thus, 8 databases were examined with burnout-related keywords. With articles which showed similar structure, the scope of the review was narrowed down to a few key terms [34]. The greatest advantage of this review is its comprehensive nature.

The number of articles published on burnout in paramedics also provides interesting insights about the problem. Most international studies on medical professions focus on different target groups. A cursory analysis of the ’burnout’ + profession name combination in the databases have been chosen for this review have revealed 15,606 hits for nurses, 11,210 hits for psychologists, and 9,236 hits for physicians. This shows the great need for further research on paramedics that will help to create effective prevention programs.

Only a comprehensive examination of the emotional and somatic state of people who are at risk of burnout, and of their work environment will allow for the creation of programs that will effectively protect against occupational burnout. This paper took a closer look at burnout in a specific occupational group, and thus can be a stepping stone for future research on the problem of how to help paramedics maintain their job satisfaction.

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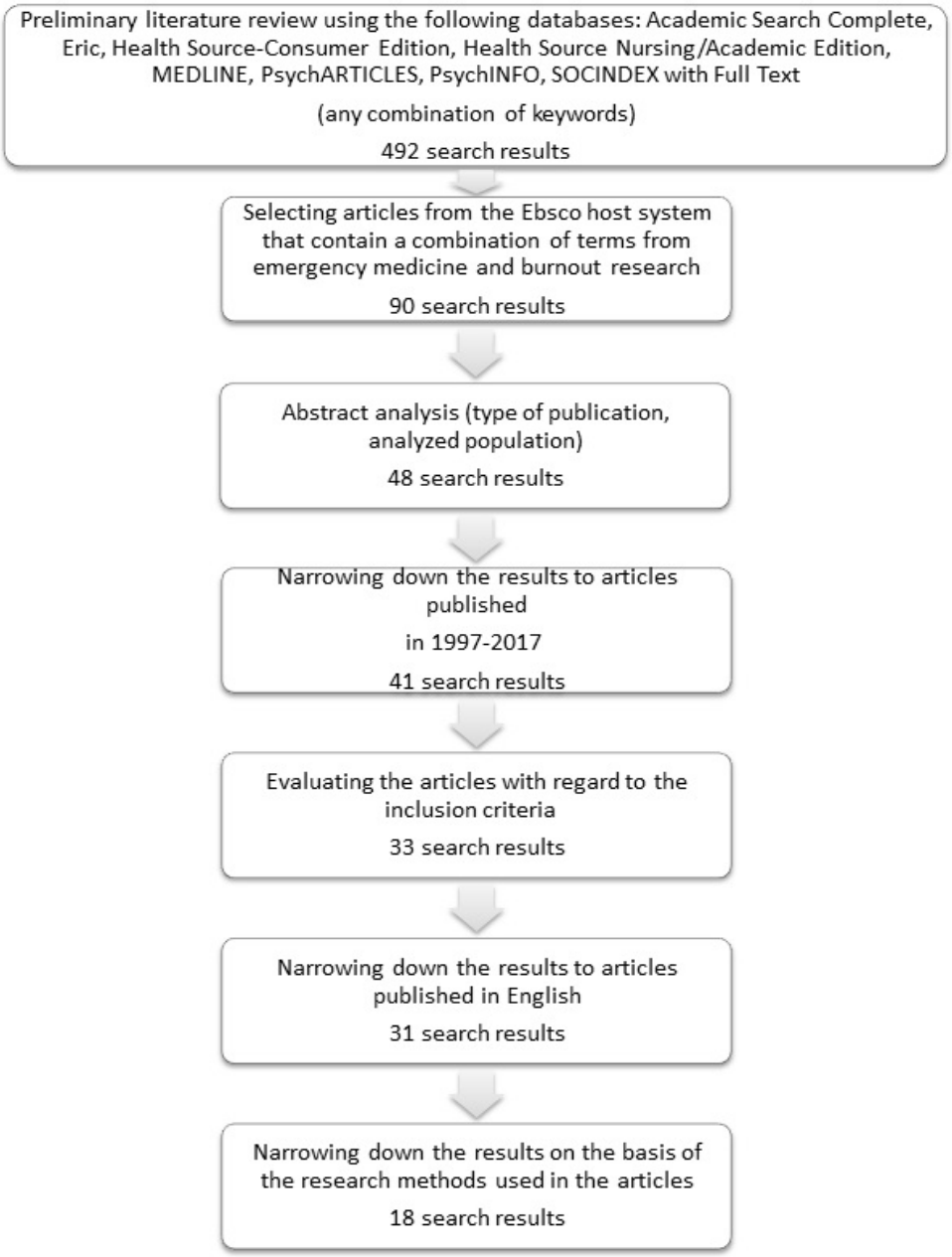
Figure 1. Strategies used to search from the literature



Source: own study.

Table 1. Summary of data

Author, date published country of origin	Type of publication	Survey participants	Research instruments	Analyzed variables	Burnout	Emotional exhaustion (EE)	Depersonalization (DP)	Reduced sense of personal accomplishment (PA)	Other
Zaidi et al. (2017) [10] Pakistan	CS	N=185 100 paramedics 85 firefighters	Professional Quality of Life ProQOL	-Burnout -Secondary stress - Compassion	M= 22.48 SD=4.46	N.D.	N.D.	N.D.	
Setti et al. (2016) [26] France	CS	N=782	-Secondary Traumatic Stress Scale STSS -MBI -Support Appraisal for work stressors Inventory -Family Support Inventory for workers -The Affective Subscale of Organizational Commitment Questionnaire	-Burnout -Social support: colleagues, management, family -Traumatization	N.D.	M= 1.73 SD= 1.30	M= 1.60 SD =1.36	M= 1.73 SD= 1.10	
Stein et al. (2016) [21] RSA	CS	N= 110 Fourth year medical rescue students	-Copenhagen Burnout Inventory CBI	- Burnout	N.D.	N.D.	N.D.	N.D.	Burnout identified in 31% of the students
Schooley et al. (2016) [9] Turkey	CS	N=250 Emergency medicine professionals (nurses, physicians, technicians)	- MBI - own survey	- Burnout - Demographic data	N.D.	75.6% of respondents with the highest score	84.4% of respondents with the highest score	56.12% of respondents with the highest score	
Khatiban et al.	CS	N=260 Emergen	- MBI	-Burnout -Quality	N.D.	46.54% of res-	38.85% of res-	2.69% of responde	

(2015)[22] Iran		cy medicine professionals		of life -Sense of accomplishment		pondents with the highest score	pondents with the highest score	nts with the highest score	
King et al. (2014) [18] Canada	CS	87 teams of two, in which one person is a paramedic	-Perceived Stress Scale PSS-4 -MBI HSS - Rumination Reflection Questionnaire RRQ	-Work-related stress -Coping with partner's stress	M=1.36 SD=1.23	N.D.	N.D.	N.D.	Stress + burnout r= 0.5 *P*<0.001
Nel et al. (2013) [24] RSA	CS	N= 20	-Emotional Intelligence Scale EIS -Utrecht Work Engagement Scale UWES -MBI HSS -Work Evaluation Scale WES	-Emotional intelligence -Sense of accomplishment - Job requirements - Sense of professional accomplishment	N.D.	M= 15.24 SD= 7.21	M= 13.59 SD=9.26	N.D.	
GÖKÇEN et al. (2013) [25] Turkey	CS	N= 347 Emergency medicine professionals including 122 paramedics	-Minnesota Satisfaction Questionnaire MSQ -MBI -Beck Depression Inventory (BDI)	-Burnout -Severity of depression -Sense of professional accomplishment	N.D.	M=12.32 SD=7.31	M=5.92 SD=4.11	M=18.90 SD=6.52	Depression M = 10.00 SD = 7.84
Amjad et al. (2013) [17] India	CS	N=1122	-ProQOL -Organizational Commitment Questionnaire OCQ	-Quality of life -Work engagement	M=69.45 SD= 5.83	N.D.	N.D.	N.D.	
Halpern et al. (2012) [12] Canada	CS	N=189 ambulance paramedics	- Relationship Scale Questionnaire RSQ - Perit-	-Sense of uncertainty - Severity of depression -Burnout	N.D.	N.D.	N.D.	N.D.	Correlations: Burnout + depression (R = 0.38 p<0.001) Burnout +

			raumatic Dissociation Experience Questionnaire -MBI HSS -Brief COPE -Center for Epidemiologic Studies Depression Scale CES 10 - trauma survey	-PTSD symptoms					Trauma (R = 0.22 *P*<0.003) Burnout + somatic symptoms (R = 0.24 *P*<0.003)
Halpern et al. (2011) [11] Canada	CS	N=189 ambulance paramedics	-Relationship Scale Questionnaire RSQ -Peritraumatic Dissociation Experience Questionnaire -MBI HSS - Brief COPE - Posttraumatic Dissociation Experience Questionnaire - CES 10 for Depression	-Distress -Effects of exposure to stress	M=21.8 SD=11.6	N.D.	N.D.	N.D.	
Chang et al. (2011)[13] China	CS	N=102 military medical personnel	-ProQOL -Resilience Scale -Life Status Review Scale	-Burnout -Secondary trauma -Sense of personal accomplishment - Resilience	N.D.	N.D.	N.D.	N.D.	Trauma + Burnout correlation Chi2 = 1.76 *P*<0.05
Ho et al. (2011)[15] Hong	CS	N= 35 Emergency	-Impact of Event Scale	-Burnout -Hope of success	N.D.	M=46.58 SD=8.63	M=49.56 SD=9.29	M=45.00 SD=10.3	

Kong		medicine profess-sionals	Revised China CIES-R -MBI China -Adult Trait Hope ATH	-PTSD symp-toms					
Prati et al. (2010)[27] Italy	CS	N = 451 Emer-gency medicine profes-sionals including fire-fighters	-ProQOL	-Burnout -Self-efficacy -Compa-ssion	M = 1.90 SD=0.64	N.D.	N.D.	N.D.	
Popa et al. (2010)[23] Romania	CS	N= 4725 Emergen-cy medi-cine pro-fessionals including 258 para-medics	-MBI HSS	-Burnout	N.D.	0.63 with 95%Cl	0.46 with 95%Cl	5.01 with 95%Cl	
Pered-Torales et al. (2009) [20] Mexico	CS	N= 160 Emergen-cy medi-cine pro-fessionals	-MBI	-Burnout	N.D.	39.1% of respon-dents with the highest score	56.5% of respon-dents with the highest score	43.5% of respon-dents with the highest score	
Rogehr et al. (2007) [19] Canada	Mix CS + qualita-tive	N=86	-Internal Control Index -Self Efficacy Scale -Social Provi-sions -Social Provi-sions Scale SPS -Beck Depres-sion In-ventory BDI -Social support questionn aires	-Distress -Sense of control -Sense of support	N.D.	N.D.	N.D.	N.D.	2.3% showing severe depres-sion 77% of paramedi cs show no signs of depres-sion
Morren et al. (2007)[14] The Nether=lands	Longitu-dinal Descrip-tive	N=1403	-own survey on somatic symptoms and work absence	-Days of sick leave -Leave causes	N.D.	N.D.	N.D.	N.D.	