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# Compassion fatigue among emergency medical services personnel: an integrative review of contributing factors and consequences

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**Key words:** integrative review, compassion fatigue, emergency medical services personnel, paramedics, emergency medical services.

## Abstract

This integrative review focuses on the phenomenon of compassion fatigue in Emergency Medical Services (EMS). Specifically, it explores the available literature on the causes of compassion fatigue and its impact on personal well-being, performance, and the quality of care delivered by emergency medical services professionals. An integrative literature review was conducted following the PRISMA 2020 guidelines. Relevant studies were searched using PubMed, ScienceDirect, Google Scholar, ProQuest, and EBSCO/CINAHL electronic databases, and after further analysis 13 were selected for review. A qualitative approach involving content and thematic analyses was used to identify repeated patterns. This integrative review was carried out from January 15 to June 30, 2026. In total, there were thirteen (13) articles that met the requirements for inclusion in this paper. Five major themes were found: trauma experience, occupation-related stressors, self-criticism, accumulation of emotional burden, and work environment. All of the mentioned issues had negative consequences for personal welfare and job performance. Major outcomes were poor psychological well-being, dissatisfaction, deterioration of care standards, increased risk of experiencing burnout, and detachment. Despite the few studies focused specifically on EMS providers, the literature indicates that compassion fatigue is quite prevalent. This review not only underscores its significant contributions but also brings out issues that may arise within the institution when implementing this initiative. With such findings, there is an increased need for further research to validate the effectiveness of this initiative and address future challenges.

## Introduction

The provision of healthcare services is the core of any nation, as it ensures the health and well-being of its citizens. These include activities and resources involved in health promotion, maintenance, and restoration. This encompasses activities such as preventative measures, health education, diagnosis, treatments, and rehabilitation.<sup>1</sup> There are approximately 59 million healthcare service workers globally.<sup>2</sup> But at the same time, these healthcare services pose a threat to workers' health. Exposure to psychosocial risks associated with the design, organization, and management of the workplace has been noted as one major threat faced by these workers. Among all professionals, emergency service personnel are noted as facing some of the biggest challenges in their professional lives. This includes traumatic incidents, violence, and even death occurring almost every day.<sup>3</sup> Working conditions for healthcare personnel remain difficult due to the care of patients who are ill or injured.<sup>4</sup> The need to take care of patients experiencing trauma requires the use of their emotional, physical, and psychological abilities by these health care providers.<sup>5</sup> Prehospital ambulance work, otherwise referred to as emergency medical services, is inherently high-stress in various circumstances.<sup>6</sup> Despite the difficulties, EMS is significant to the entire healthcare industry because it serves as a crucial access point and responds to emergencies and acute situations.<sup>7</sup> The EMS clinicians, who include paramedics and emergency medical technicians, are professionals who use their skills to provide services that meet various patient needs.<sup>8</sup> Emergency medical service professionals visit the site of an emergency and perform various actions, including but not limited to conducting a primary assessment, treating patients, and performing CPR.<sup>9</sup>

Nevertheless, it should be noted that the contribution of EMS clinicians remains hidden from other health professionals and is misunderstood and overlooked by health professionals and patients.<sup>8</sup> The importance of this factor lies in the fact that, according to the reviewed literature, when there is no recognition at various levels within the system, compassion fatigue is always just around the corner, as it is the manifestation of an unhealthy system, not an unhealthy individual.

It is evident that the complexity of the healthcare sector and the challenges associated with providing quality services put professionals under extreme stress, thereby predisposing them to various conditions, including but not limited to compassion fatigue.<sup>3</sup> Compassion Fatigue (CF), on the other hand, is described as the loss of benevolence experienced immediately after encountering a critical incident. Described as the "cost of caring", the condition may influence how one deals with similar stress in the future and negatively affects the caregiver.<sup>10</sup> Compassion fatigue was identified in 1992 when Joinson suggested that prolonged exposure to patients with illnesses or trauma can cause both physical and emotional tiredness in the caregiver, making them less capable of feeling empathy towards their patients.<sup>4</sup> Consistent with this, termed the phenomenon as the deep, painful wear and tear to the distress of others.<sup>11</sup>

In light of the fact that EMS practitioners are helping professions that are repeatedly exposed to trauma and suffering, this implies that there is an increased risk for compassion fatigue. Indeed, there is a need for further research to understand how much the experiences paramedics are subjected to, especially those involving suffering and trauma, can lead to compassion fatigue.<sup>6</sup> Certainly, many cases arose not just because of the heavy caseloads, but also because of the repeated exposure to overdose patients every single day.<sup>12</sup> In the same line, as explained that

prehospital emergency medicine practitioners are repeatedly exposed to stressful and extreme incidents.<sup>13</sup>

Well-being among ambulance staff is crucial because it affects ambulance organizations directly.<sup>14</sup> When it is ignored, the outcome is an erosion of professionals' ability and willingness to be empathetic when dealing with situations involving stress or distress in others. In the end, dealing with this problem can help improve workers' well-being and contribute to a culture of safety and peace, among other benefits.<sup>3</sup>

Whereas compassion fatigue among emergency medical service professionals is well-known as an important issue worldwide due to its negative influence on mental well-being, happiness, and job satisfaction, possible deterioration in patient care, and risk of burnout and emotional detachment, there are few pieces of work that focus on the primary causes, effects, and consequences of compassion fatigue and its effects on the well-being of prehospital care professionals. To address this gap, the researchers chose "Compassion Fatigue Among Emergency Medical Services Personnel: An Integrative Review of Contributing Factors and Consequences" as their study topic. Using an integrative review, the researchers aim to conduct a thorough documentation analysis and provide a deeper understanding of how compassion fatigue affects emergency medical service professionals' lives and work.

## **Materials and Methods**

### ***Search methods***

An integrative review was conducted to examine the existing literature on compassion fatigue among emergency medical service workers and the factors that may contribute to or result from it. This review was carried out systematically via a broad literature search across various databases, including PubMed, ScienceDirect, Google Scholar, ProQuest, and EBSCO/CINAHL, which constituted a serious research effort. The search strategy was developed using a combination of Medical Subject Headings (MeSH), subject headings, title headings, and free-text keywords related to compassion fatigue and emergency medical services personnel. Core terms and subject headings were synthesized utilizing Boolean operators (AND, OR) to expand retrieval of pertinent literature. The primary search terms included: "compassion fatigue"; "emergency medical services "; "emergency medical services personnel"; "prehospital care"; "paramedics"; "emergency medical specialists"; "emergency medical technician".

The following search string was adapted according to the indexing requirements of each database: ("compassion fatigue" OR "compassion-fatigue" OR "compassionate fatigue") AND ("emergency medical services" OR EMS OR paramedic\* OR "prehospital care" OR "emergency medical specialist" OR "emergency medical technician"). Database-specific subject headings and indexing terms were incorporated where applicable. Reference lists of relevant articles were also reviewed to identify additional studies that may have been missed during the electronic search.

### ***Search outcomes***

Several literature sources related to and eligible for this topic have been published over the past twelve (12) years. Thirteen (13) relevant research papers were identified and selected concerning the contributing factors and effects of compassion fatigue among emergency medical services personnel. Key search terms of the study include: i) research literature should be written/transcribed in English; ii) research literature should be published in peer-reviewed journals or electronic databases; iii) research studies should have been conducted from 2014 to 2026; iv) the test subjects

should have consisted of compassion fatigue among emergency medical services personnel only; and v) must have contained at least one of the key terms, such as compassion fatigue, emergency medical services personnel, paramedics, emergency medical technicians, first responders, and emergency medical services. Thus, all collected related literature that met the inclusion criteria were included for the final evaluation.

In contrast, exclusion criteria have been established to clearly exclude the article from the study. The exclusion criteria must contain: i) research literature published in other dialects or languages; ii) research literature with subjects who are from other discipline (nursing, physiotherapy, medicine); iii) all case reports and studies were excluded due to probable prejudices; and lastly iv) research literature which employed secondary source of data like systematic review, integrative review, scoping review, meta-synthesis and meta-analysis.

### ***Data extraction***

Keywords, research design, title review, subject review, and study sample were gathered from selected research literature. Information analysis involved three (3) evaluators to determine the quality and suitability of written literature. Abstraction from the literature was conducted independently by the first two authors, whereas the last two authors proofread the entries prepared by the first two authors. Data collection took place in the selected educational institution (Rorayro International Institute of Health and Sciences Inc.) from January 15, 2026, to June 30, 2026.

To critique and evaluate the research articles in this study, the researcher used the Critical Appraisal Skills Program (CASP) checklist. This particular checklist consists of four categories (validity of basic study design, process of methodology, results, and contribution). Based on this information, as Figure 1 shows the number of research papers retrieved in this study totaled 5, 164 from the electronic databases (1, 424 from PubMed, 297 from ScienceDirect, 3, 219 from Google Scholar, 166 from ProQuest, and 58 from EBSCO/CINAHL). Following this, 4,551 research papers passed the title screening. A total of 1, 289 were excluded (3, 262 research papers were removed).

Afterward, 613 research papers had undergone an abstract screening stage. A total of 205 research papers have been excluded (289 papers have been excluded). Then, 408 research papers were included or excluded according to the inclusion/exclusion criteria. In this phase, 205 research papers were excluded. After the full manuscript evaluation process (research design, sample participants, research focus, and study outcomes), 72 research papers remained suitable (336 research articles were excluded). Finally, 13 pieces of literature were reviewed for critical appraisal.

### ***Data synthesis***

Thematic and content analyses were used in the systematic review of the relevant literature. The technique of content analysis was used to analyze the phenomena of interest by examining the existing literature systematically. Thematic analysis was then conducted to synthesize the information obtained from the integrative literature review.

### ***Results and discussion***

Five (5) general themes were identified in this integrative review of compassion fatigue among emergency medical services personnel: trauma exposure, work-related stressors, self-criticism, cumulative emotional burden, and organizational conditions.

#### ***Trauma exposure***

Accordingly, workers who are constantly exposed to trauma that their clients suffer through, such as medical professionals, are prone to suffering from psychological issues.<sup>15</sup> Along the same lines, paramedics who encounter traumatic events daily due to the nature of their work face high levels of uncertainty and stress on a daily basis.<sup>16</sup> Traumatic events and deaths have become commonplace in the day-to-day activities of EMS workers.<sup>17</sup> Nevertheless, despite their qualifications, even seasoned paramedics cannot guarantee favorable patient outcomes, and they often end up feeling differently about things than when they started their shift.<sup>18</sup> Furthermore, paramedics exhibit various psychological responses as a result of the trauma, but discussing their emotional state can be challenging because of the fear of being labeled as not tough enough to handle the task.<sup>17</sup> On this note, secondary traumatic stress as a result of experiencing the pain of others makes it more likely for paramedics to suffer from Compassion Fatigue (CF) because of feeling overwhelmed, helpless, unsupported, and incompetent as a result of this stress.<sup>19</sup>

### ***Work-related stressors***

One significant theme is about stressors at work that can cause compassion fatigue. According to Tikkanen *et al.*,<sup>20</sup> the practice of prehospital emergency medical services is highly uncertain and emotionally stressful for clinicians who operate ambulances. Likewise, occupational stressors among ambulance personnel are receiving increasing attention, which can be attributed to specific occupational conditions, including demands and stress.<sup>21</sup> In addition, workload and extended work shifts are considered among these stressors. Specifically, workload and shifts are among the factors contributing to excessive stress among paramedics.<sup>22</sup> Based on this idea, that such extended and permanent interaction with patients, their deaths, and stress will ultimately result in compassion fatigue.<sup>23</sup> Another aspect of this condition is repeated exposure to the same clients or crises. As stated, a constant stressful situation, along with repetitive exposure to others' suffering, makes an individual more susceptible to compassion fatigue.<sup>24</sup> This results in adverse outcomes for the person, the patient, the workplace, and the healthcare system. Besides, increasing demands during a state of emergency can be considered an additional source of stress. For instance, the COVID-19 pandemic is associated with this situation, although assisting people and making changes in their lives can be enjoyable for a professional under normal conditions, the current situation with the COVID-19 pandemic is a real danger for the mental well-being of practitioners and possibly causes compassion fatigue.<sup>25</sup> In turn, this impacts the quality of assistance received by the patient and his/her relatives.

### ***Self-criticism***

The findings indicate that personal psychological factors contribute to vulnerability to compassion fatigue. One such element is self-criticism, since, owing to their profession, EMS practitioners have repeated exposure to trauma and stress, and thus they remain vulnerable to compassion fatigue.<sup>26</sup> Self-criticism is defined as the negative, unrelenting judgment of oneself, followed by feelings of shame, inadequacy, guilt, or worthlessness, and the ability to manifest as one's own internal criticism, issuing different suggestions, instructions, convictions, or emotions.<sup>27</sup> In the prehospital setting, self-criticism significantly correlated with EMS employees' work-related stress, work satisfaction, and well-being.<sup>28</sup> In a direct extension of these findings, a multiple regression analysis to predict compassion fatigue based on self-criticism and found that self-criticism was the strongest contributor.<sup>27</sup>

### ***Cumulative emotional burden***

The accumulation of emotional stress is likely to lead to compassion fatigue among healthcare workers. That is, working under unpredictable and highly risky circumstances can worsen emotional distress. Accordingly, the work characteristics of ambulance practitioners have made them vulnerable to feelings of frustration, helplessness, apprehension, and emotional exhaustion.<sup>29</sup> The prehospital emergency medical service workplace is associated with uncertainties and significant emotional challenges for EMS professionals.<sup>20</sup> Due to their occupational environment, EMS professionals may encounter emotionally distressing situations at work.<sup>30</sup> This implies that EMS workers are often faced with substantial physical and psychological stressors while attending to critically ill patients or victims of accidents.<sup>31</sup> In summary, the culmination of emotions together with ongoing stress ultimately resulted in compassion fatigue.

### ***Organizational conditions***

The other main theme covered is the impact of organizational and social context on compassion fatigue outcomes. Accordingly, the main organizational factors associated with compassion fatigue include a lack of recognition and organizational support, a lack of work-life balance, excessive work pressure without adequate recovery, and a lack of mental health care resources. Specifically, the lack of appreciation has led to reduced well-being among healthcare professionals, as they realized that people underestimated their efforts and contributions.<sup>32</sup> Similarly, compassion fatigue is likely to develop when work-related stress leads to feelings of being unsupported.<sup>19</sup> Hence, the connection between lack of recognition and poor outcomes becomes apparent. Work-life balance is essential for both personal happiness and professional longevity. Nonetheless, challenging conditions in the health care industry often disrupt this equilibrium, as compassion fatigue levels increase, leading to lower life satisfaction.<sup>33</sup> On a similar note, based on one study, that system problems, including difficult tasks and extra working days, were risk factors for compassion fatigue.<sup>15</sup> Similarly, emergency medical services organizations have difficulty ensuring workplace psychological safety so that employees can thrive in their roles without being subjected to any form of harm.<sup>34</sup>

The paramedic personnel contribute to excellence in the prehospital environment and ensuring a seamless continuum of healthcare.<sup>40</sup> However, the effects of compassion fatigue are evident on both the personal and professional levels. Some of the important effects observed include psychological stress, low well-being and job satisfaction, possible deterioration in the standard of patient care, and an increased likelihood of burnout and disengagement. To address such effects, research was conducted on intervention techniques and coping strategies, including mind-body therapies and resilience-building, debriefing and peer counseling initiatives, and work-life balance enhancement. Table 1 summarizes the 13 selected research articles. The articles feature 8 cross-sectional/correlational studies and 2 qualitative studies, with 1 mixed-methods study, 1 quasi-experimental study, and 1 pilot intervention study. Therefore, in total, there are approximately 8 cross-sectional/correlational studies, 2 qualitative studies, 1 mixed-methods study, 1 quasi-experimental study, and 1 pilot intervention study. In primary empirical studies, the number of subjects is about 3,256 emergency medical personnel and healthcare providers. Sample sizes varied, ranging from small qualitative samples of 23 subjects to large cross-sectional survey samples of more than 686 participants. The subjects were mainly paramedics, emergency medical technicians, and emergency responders. However, other disciplines, such as nurses, physicians, firefighters, police officers, and psychologists, were involved in the selected studies. As for the

geographic representation of the studies, there is a strong presence from across the globe, including the United States, the United Kingdom, Finland, France, Türkiye, Brazil, Iran, and Slovakia. In terms of findings, there was consistency in reporting moderate to high levels of compassion fatigue, burnout, and secondary trauma among emergency medicine service providers, with the main causes identified as workload, cumulative trauma exposure, emotional labor, and work-related stress. Some of the factors that have been found to act as protective mechanisms against mental disorders include emotional intelligence, self-compassion, mindfulness, and the presence of workplace support systems. Interventions such as mindfulness-based programs and structured debriefing were discussed in some of the literature on this topic. Nonetheless, there is consensus among these 13 articles regarding the methodological shortcomings inherent in each. The main challenges in the methodologies of each article included the lack of a longitudinal approach, a cross-sectional design, excessive reliance on self-report measures, leading to recall bias and social desirability bias, small sample sizes, and poor representation of the population under study. There were other challenges related to sample selection bias, cultural specificity, intervention heterogeneity, and limited experimental rigor. All these have been reported across the studies reviewed here, and their summary is provided in Table 1.

Based on Table 2, most of the included studies demonstrated acceptable methodological rigor, with clear research purposes, generally appropriate research designs, ethical considerations, and structured approaches to data analysis. The studies, however, showed variation in methodological alignment, particularly in recruitment strategies, data analysis, and collection procedures, and several did not fully meet all appraisal criteria. Of the thirteen (13) studies appraised, four (4) were classified as high quality, reflecting strong coherence between the research purpose, methodological design, appropriate recruitment, and rigorous data analysis. Meanwhile, the remaining nine (9) studies were assessed as moderate quality, primarily due to limitations such as incomplete or unclear recruitment strategies, weaknesses in data collection methods, or insufficient methodological justification in certain areas. Despite these limitations, the moderate-quality studies still demonstrated clear research objectives, consistent analytical approaches, and meaningful findings, thereby contributing valuable evidence to the overall synthesis.

## **Conclusions and recommendations**

This integrative review endeavors to explore current documentation more thoroughly and to provide enhanced insight into how compassion fatigue affects the well-being and professional performance of emergency medical services personnel. The review was comprehensively analyzed through a wide range of literature searches using search engines and electronic databases such as PubMed, ScienceDirect, Google Scholar, ProQuest, and EBSCO/CINAHL to support a meticulous, high-stakes investigation. Five (5) general themes were discovered in this integrative review of compassion fatigue among emergency care providers, and they are trauma exposure, work-related stressors, self-criticism, cumulative emotional burden, and organizational conditions. The findings demonstrate that EMS personnel experience compassion fatigue as a multifactorial condition shaped by both occupational demands and individual psychological factors. Overall, these findings highlight that compassion fatigue not only affects individual well-being but also has implications for professional performance, including reduced job satisfaction, increased burnout, and potential decline in the quality of patient care.

As recommendations, EMS organizations should implement comprehensive and evidence-based strategies to mitigate compassion fatigue. Firstly, strengthening organizational support systems is

essential, especially for emergency healthcare providers, including a psychologically safe work environment and recognizing the value and contributions of EMS personnel. Secondly, EMS institutions should integrate structured mental-health programs, such as resilience training, mindfulness-based interventions, and coping-skills development, for their employees to enhance emotional regulation and psychological readiness among personnel. Thirdly, provide regular structured debriefing sessions and peer-support programs following critical incidents to provide opportunities for emotional processing and support. Fourthly, promoting work–life balance through manageable shift scheduling, adequate rest periods, and flexible work arrangements for the staff. Finally, efforts should be made to reduce stigma associated with seeking psychological help, encouraging EMS personnel to openly address emotional challenges without fear of judgment. Through these combined individual and organizational interventions, the risk of compassion fatigue can be reduced, and ultimately improving both the well-being of EMS personnel and the quality of care delivered to patients.

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**Ethical statement:** ethical approval was not required because this study is a review of previously published literature. Also, the protocol was not registered in PROSPERO by the National Institute

for Health and Care Excellence (NICE), United Kingdom, because the said body does not allow the registration of traditional integrative literature reviews.

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### **Online supplementary materials**

Figure 1. PRISMA Flowchart

Table 1. Characteristics of Included Studies

Table 2. Quality Appraisal of the Included Studies