"Stress management strategies among emergency personnel: a systematic review of influencing factors and support mechanisms"

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81

Altowairqi Althomail Almalki Althomali Altalhi Alharthi Alruhaymi Albatath
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Abstract:

Emergency personnel face intense physical, emotional, and organizational stressors due to the high-pressure demands of their work. Exposure to traumatic events, long and unpredictable shifts, and insufficient resources significantly affect their physical health, mental well-being, and job performance. This paper examines the common stressors experienced by emergency workers, including compassion fatigue, organizational challenges, and the difficulties of balancing personal and professional lives. The impact of these stressors is profound, leading to fatigue, burnout, and mental health challenges such as anxiety and PTSD. Addressing these issues requires a multifaceted approach, including individual strategies like resilience training, organizational reforms such as improved communication and access to mental health support, and community-level initiatives to raise awareness. Policymakers and organizations must also collaborate to implement workplace safety standards and tailor mental health programs to the unique needs of emergency personnel. This study underscores the critical importance of prioritizing the well-being of emergency personnel, recognizing that supporting them not only enhances their capacity to perform effectively but also reflects a broader humanitarian commitment to their health and dignity.

Keywords: Stress management, Stress management strategies, Emergency personnel, Support mechanisms.

EMERGENCY MEDICAL TECHNICIAN, SAUDI RED CRESCENT AUTHORITY

Introduction:

Emergency medical service providers are frequently exposed to a variety of stressors as a result of their work environment. These stressors can have detrimental effects on individuals' physical and mental health [1]. The term work stress refers to the emotional, cognitive, behavioral, and physiological responses to negative aspects of work, the work environment, and the work organization. These responses can lead to negative psychological and physiological consequences for the individual. These reactions can lead to negative psychological and physiological consequences for the individual [2].

The prehospital emergency environment is one of the most stressful areas of the healthcare system. Emergency medical services (EMS) providers, as frontline personnel providing emergency services in this scope, are uncovered to many stressful factors. These factors include exposure to accidents and horrific scenes, as well as the need to make quick decisions to save the lives of injured people [3]. Some of the stressors faced by EMS providers include rescuing critically ill patients, caring for critically ill patients, facing patient deaths, excessive expectations from people, lack of organizational support, exposure to violence and threatening situations at the scene, and the risk of contracting illness from injured patients and staff.

Study aims and objectives

Study aim

The aim of this study was to systematically review and analyze the stress management strategies utilized by emergency personnel, focusing on the influencing factors and support mechanisms that impact their effectiveness.

Objectives:

1. Examine the primary stressors encountered by emergency personnel across various roles, including first responders, paramedics, firefighters, and emergency room staff.

2. Review and categorize the strategies employed by emergency personnel to cope with occupational stress, including individual, organizational, and systemic approaches.

3. Analyze the factors that influence the adoption and effectiveness of stress management strategies, such as cultural, organizational, and personal variables.

4. Investigate the role of institutional and external support mechanisms, including training programs, peer support systems, counseling services, and policy interventions.

5. Identify evidence-based practices that enhance stress management and resilience among emergency personnel.

6. Develop recommendations for stakeholders to improve stress management strategies and support mechanisms, with a focus on practical implementation in emergency settings.

Literature review

Stress can have serious effects on nurses, both physically and mentally. It can cause health issues like high blood pressure and depression, leading to absenteeism and reduced productivity. Research shows that stressed nurses are more likely to make mistakes and decrease patient satisfaction. It is crucial to address stress in nursing to improve patient care and nursing performance [4]. The concepts of stress discussed so far have covered all the causes of stress in the nursing work environment including occupational stress, environmental stress, and mental or emotional stress. While occupational stress may stem from workload requirements and managerial pressures, caregiving stress emerges firstly from the emotional load of empathizing with patients' suffering and seeing their fights firsthand [5]. In contrast to environmental stress that may arise from the physical conditions of the workplace, caregiving stress arises from the severe interpersonal dynamics inherent in nursing care. Recognizing and effectively managing stress is crucial to living a healthier, happier life. In a world where stressors are so numerous, developing a strong sense of self-awareness and using proactive strategies to combat stress is vital. Whether stress comes from work, personal life, or external factors, understanding how to deal with it can have a profound impact on your overall health [6].

Emergency personnel stress management

Emergency medical service (EMS) professionals often experience work stress, they often work in highly stressful environments, facing a unique blend of physical, emotional, and psychological challenges. Their work involves responding to life-threatening situations, witnessing trauma, and making critical decisions under pressure. This relentless exposure to stress can have profound effects on their well-being, making effective stress management strategies a humanitarian necessity [7]. High-demand occupations may lead to a gradual decline in physical and mental health.

Figure 1. The stress management approach [81].
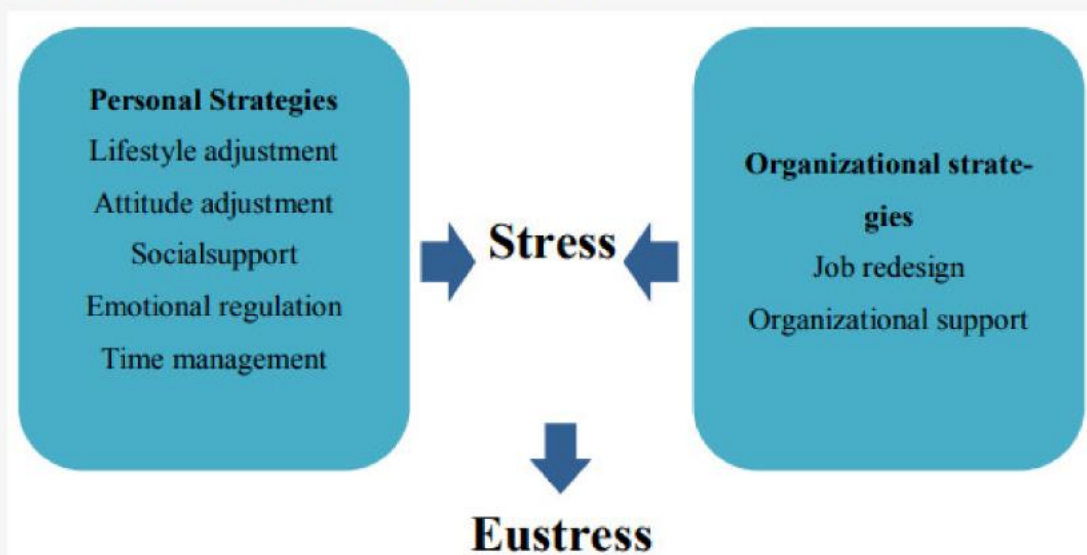
Personal strategies involve lifestyle modification, attitude adjustment, social support, emotional regulation, and time management to effectively cope with stress. Health is crucial for dealing with demands and problems, and personal choices impact physical health and well-being. Sindhu et al. noted that a personal approach can be adopted in the workplace to cope with stress. This has to do with the adjustment of how individuals react or respond to work situations. To maintain excellent health, it is crucial to consume a balanced diet, get adequate sleep, and engage in regular exercise. These actions aid in preventing some of the negative effects of stress and in coping with its symptoms. Coping with stress in an organization,

therefore, necessitates the universal acceptance of this personal approach. However, researchers stressed the role of time management as a personal approach to stress management, where managing time is handling stress. This is because good time management enhances one's ability to set and review priorities, keep track of time spent, and plan their time to better reflect their obligations, plans, and goals. This approach helps a person to be organized and reduce the stress encountered during the execution of plans [8].

Work-related stress can damage a person's physical and mental health and ultimately have a negative effect on job productivity by increasing stress levels Stress has been identified as one of the main reasons for turnover in the nursing field, also playing a very notable role in 50% of sick leaves as well as causing reduced performance, absenteeism, greater situations of violence in the work environment, and increased turnover among different professionals [9]. There are many traditional methods of managing daily stress. These include physical exercise, emotional and psychological therapies, changes in work style, or medications. The choice of management measures to follow is usually determined by the source and nature of stress and the resources available to the individual under stress [10]. It is believed that the best practice for stress management is to learn how to deal with it using healthy and positive coping strategies. The first step to effective stress management is to gain a better understanding of oneself, stress triggers, and how to deal with stressful situations. In nursing, the ability to provide high-quality health and nursing services to patients despite professional stress is considered an effective coping method [11].

The stressors faced by emergency personnel are diverse and multifaceted. They include traumatic experiences such as witnessing loss of life, long and unpredictable work hours, and the physical strain of operating in challenging conditions. Additionally, organizational shortcomings, such as limited resources and insufficient training, often exacerbate stress levels. On a personal level, the difficulty of balancing work demands with family responsibilities adds another layer of strain [12]. The impact of unmanaged stress on emergency personnel is significant and far-reaching. Physically, chronic stress can lead to fatigue, cardiovascular problems, and sleep disorders. Mentally, it increases the risk of anxiety, depression, post-traumatic stress disorder (PTSD), and burnout. These effects not only compromise the well-being of the personnel but also impair their decision-making ability and overall job performance, potentially jeopardizing the safety of the people they serve [13]. During recent years, the mental health needs of healthcare providers have been gaining attention as a major public health concern and threat to quality care delivery. Healthcare professionals are exposed to multiple stress factors within their work, which may influence their physical, mental, and emotional well-being in negative ways.

To address these challenges, humanitarian-based interventions should focus on fostering resilience and providing comprehensive support systems. At the individual level, resilience training, mindfulness practices, and physical fitness programs can empower emergency workers to manage stress more effectively [14]. Encouraging peer support and fostering a culture of camaraderie can also help them process their experiences in a safe and understanding environment.

At the organizational level, policies must prioritize the mental health of emergency personnel. This includes offering confidential counseling services, ensuring adequate rest periods, and conducting critical incident debriefings to help workers process traumatic events. Leadership plays a crucial role in these efforts, as supportive and empathetic leaders can create a workplace culture that acknowledges and addresses stress-related issues [13].

More broadly, community and policy initiatives are critical to supporting emergency workers. Raising public awareness of the unique challenges emergency workers face can increase understanding and appreciation of their work and encourage community support. By raising awareness, communities can better advocate for the resources and support systems they need to thrive [15].

The organization can assist through several strategies and processes that can be divided between cultural shifts and organizational re-design. Cultural action is required to remove the stigma associated with seeking help for work-related stress. This may mean that the service needs to organize staff to allow that fatigue, and emotional processes can be addressed. Therefore, hospital and prehospital emergency managers can reduce their staff's stress levels by reducing workplace demands and improving the work environment. By reducing stress, the health of staff members is maintained and improved, and the quality of care provided to patients increases.

Altowairqi Althomail Almalki Althomali Altalhi Alharthi Alruhaymi Albatath
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Common Stressors for Emergency Personnel

Dealing with the stressors faced by emergency personnel is far from simple. This profession is filled with daily challenges that can be both physically and emotionally draining. The work environment itself is a major source of stress, as emergency personnel are constantly exposed to traumatic events such as severe accidents or situations that demand split-second, life-or-death decisions. On top of this, long shifts and unpredictable circumstances make maintaining physical and mental stability incredibly difficult [6].

Physical strain is another significant factor. Emergency personnel often endure constant fatigue due to demanding schedules and insufficient rest. They may also face dehydration and poor nutrition because their work frequently leaves little time for breaks or self-care. Over time, this physical toll can lead to serious health problems if not properly managed.

Emotionally, the job is equally taxing. Many emergencies' personnel experience compassion fatigue from continuously empathizing with victims and their families, couple with the grief of witnessing suffering and loss. This emotional burden can accumulate and weigh heavily on their mental well-being, potentially leading to burnout or even long-term psychological issues [12].

Organizational factors further compound these stressors. A lack of adequate resources, poor communication within teams, and insufficient specialized training often leave emergency workers feeling unprepared or unsupported. When they don't have the tools or guidance they need to perform their duties effectively, it adds an additional layer of frustration and stress [3]. On a personal level, balancing work demands with personal life is an ongoing challenge. The unpredictable and intense nature of their work can strain relationships, limit time with family, and make it difficult for them to focus on their own health. Facing all these challenges simultaneously can become overwhelming [15].

Conclusion

Emergency workers face a range of challenges that stem from the demanding nature of their work, including physical, emotional, and organizational stressors. Due to the characteristics of prehospital emergency, it is inevitable that nurses will be exposed to multiple potentially dangerous and stressful factors. These challenges not only impact their health and well-being, but also their ability to perform effectively in life-saving situations. Recognizing the human toll these stressors take is essential to creating meaningful support systems. By addressing these issues through tailored mental health programs, appropriate training, adequate resources, and fostering a supportive organizational culture, we can help ease the burden on these dedicated individuals. On a broader level, raising community awareness and implementing strong policy measures are vital steps toward ensuring that emergency workers are not only prepared for their roles but also protected in their humanity. Supporting them is a collective responsibility that reflects the value we place on their commitment to saving lives and serving the community.

Recommendations:

1. Implement Comprehensive Stress Management Training Programs: Stakeholders should establish ongoing stress management training programs tailored to emergency personnel. These programs should include practical techniques such as mindfulness, cognitive-behavioral strategies, and relaxation exercises. Additionally, integrating scenario-based simulations can help personnel build resilience and effectively manage stress in high-pressure situations.
2. Develop and Promote Peer Support Networks: Emergency service organizations should establish formal peer support networks where personnel can share experiences and receive emotional support from colleagues who understand the challenges of their roles. Training to select team members as peer counselors can ensure that these networks are accessible, confidential, and effective in addressing stress-related concerns.

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86

Altowairqi Althomail Almalki Althomali Altalhi Alharthi Alruhaymi Albatath
Stress management strategies among emergency personnel: a systematic review of influencing factors and support mechanisms

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Altowairqi Althomail Almalki Althomali Altalhi Alharthi Alruhaymi Albatath
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