Patient Satisfaction with Prehospital Emergency Care: A Systematic Review of Red Crescent Services

Mohammed Ali Ahmmad Aljilwah^{1,*}, Hadi Mohammed Awad Al Saleem¹, Bandar Ahmed Al Harthy¹, Mustafa Ali Hammed Aljilwah¹, , Yasir Awadh Allah Bakheet Althobaiti¹, Mohammed Ayed Althobaiti¹, Mansour Saleh Al Abbas¹

Abstract

Background: Prehospital emergency care is a critical component of healthcare systems, serving as the first point of contact for patients in emergencies. The Red Crescent plays a vital role in delivering prehospital care across diverse and often challenging environments. Patient satisfaction with these services serves as a key quality indicator and is essential for continuous improvement.

Objective: This study aims to systematically review the literature on patient satisfaction with prehospital emergency care provided by Red Crescent services. It seeks to identify factors influencing satisfaction, evaluate the effectiveness of service delivery, and offer recommendations for improvement.

Methods: A systematic review was conducted following PRISMA guidelines. Databases such as PubMed, Scopus, Web of Science, and CINAHL were searched for studies published in English and Arabic that focused on patient satisfaction with prehospital services provided by the Red Crescent. Data extraction and quality assessment were performed on eligible studies to synthesize findings and identify trends.

Results: Key factors influencing patient satisfaction include response time, professionalism of medical staff, communication quality, availability of resources, and cultural sensitivity. Common challenges identified include resource limitations, geographical barriers, variations in staff training, and systemic inefficiencies. While the Red Crescent is recognized for its timely and equitable care, significant variations in patient satisfaction were noted across regions due to logistical and organizational challenges.

Conclusion: Patient satisfaction is a multifaceted construction influenced by both technical and humanistic aspects of prehospital care. Enhancing the quality of Red Crescent services requires addressing identified gaps through improved training, resource allocation, and patient-centered approaches. This review highlights the need for further research to optimize prehospital emergency care and ensure equitable, high-quality services for all patients.

Keywords: Patient satisfaction, prehospital emergency care, Red Crescent, healthcare quality, emergency medical services.

- * Corresponding author
- 1. Emergency Medicine Technician, Taif

Introduction

Prehospital emergency care plays a pivotal role in the healthcare continuum, serving as the first point of contact for patients in critical situations. It encompasses a broad range of services, including immediate medical interventions, stabilization of patients, and timely transportation to healthcare facilities. The quality of these services significantly influences patient outcomes and satisfaction, making it an essential focus for healthcare systems worldwide.

The Red Crescent, as a prominent provider of prehospital emergency care in many regions, operates under the principles of humanity, neutrality, and impartiality. It strives to deliver high-quality emergency medical services in diverse and often challenging environments. However, assessing the effectiveness and efficiency of these services requires an in-depth understanding of

patient satisfaction, which serves as a key indicator of service quality and a driver for continuous improvement.

The concept of satisfaction was linked to behavioral aspects, where components had a distinct value depending on the patient's personal situation, and was conceived because of the difference between how the patient was cared for and his expectations about what this care would be like [1]. Patient satisfaction is often linked with the human factor and the social characteristics of health services experts [2]. Patient satisfaction in prehospital care is influenced by various factors, including the timeliness of response, professionalism of medical staff, adequacy of communication, and perceived empathy. These dimensions not only reflect the technical competence of the care providers but also the humanistic aspects of the delivery service. In regions where the Red Crescent operates, cultural, logistical, and organizational challenges can further shape patients' experiences and perceptions [3].

Despite the critical nature of prehospital emergency care, systematic evaluations of patient satisfaction with these services, particularly those provided by the Red Crescent, remain limited. A comprehensive review of existing literature is essential to identify gaps, highlight best practices, and provide actionable recommendations for enhancing service delivery.

Objectives

The number of published studies regarding the satisfaction of patients who have used prehospital emergency services is limited given the large numbers of patients who use this service annually [4]. Although some similarities may occur, there are expected differences in emergency situations. Moreover, in recent years, some countries that use an emergency telephone number have introduced new benefits such as completing administrative procedures, providing health advice over the phone that leads to a solution, directing the user to go to a health center, and sending mobile units or health professionals to the location whether it is a public place or the caller's home. In these cases, patients also speak to a highly trained counselor, supported by health care professionals, and the motivation for calling is different from an emergency [5].

This systematic review aims to synthesize the existing body of knowledge on patient satisfaction with prehospital emergency care delivered by Red Crescent services. It seeks to identify key factors influencing satisfaction, evaluate the effectiveness of current service models, and offer insights into areas requiring improvement. By addressing these objectives, this study contributes to the broader discourse on optimizing prehospital care and ensuring that patients receive equitable, high-quality emergency medical services.

Study question

The study will address the question: What are the factors influencing patient satisfaction with prehospital emergency care provided by Red Crescent services, and how do these factors impact the quality of care?

Literature review

Prehospital care is the medical care given before arrival to the hospital emergency department (ED). This type of care is based on the knowledge and skills that is needed for the prevention, diagnosis and management of mild to immediate cases of illness and injury which affects all ages with full undifferentiated categories of physical and behavioral disorders [6].

Prehospital care serves as a crucial component of the healthcare continuum, acting as the first line of intervention during medical emergencies. It often determines patient outcomes, especially in cases of trauma, cardiac arrest, and other time-sensitive conditions. High-quality prehospital care not only stabilizes patients but also ensures timely transport to appropriate facilities, thereby reducing mortality and morbidity rates. Studies have shown that effective

prehospital care improves survival rates and patient quality of life by ensuring prompt medical attention during emergencies [7].

Satisfaction has a critical role in health maintenance and prevention of diseases and is considered an indicator for evaluating organizational performance. Satisfaction is affected by many factors such as socioeconomic status, physical and mental state, literacy, quality of medical care, and patient recovery [5]. Patient satisfaction with health care in ambulance services is an important quality indicator and a helpful tool for managers of prehospital emergency services.

Factors Influencing Patient Satisfaction

Patient satisfaction is a component of healthcare services that has a distinct value to the patient and conceptualizes the difference between how the patient expected to be attended to and how the patient was attended. Patient satisfaction with prehospital care is a critical indicator of the effectiveness and quality of these services [8]. The level of patient satisfaction can only be evaluated within the framework of a comprehensive quality assessment program, and by incorporating other sources of information, such as the analysis of work processes, employee satisfaction levels, and other objective quality indicators. Previous research studies have investigated the possible links between patient waiting times and their degree of satisfaction at the primary health care level [9].

One of the key end goals in terms of health care quality is to achieve patient satisfaction. Patient satisfaction is an important patient centered indicator in assessing the quality of care and system performance, especially where reform in care pathways is planned [7]. Providing good health care is multidimensional and influenced by complex factors [4]. Key factors influencing satisfaction include [10]:

- 1. **Response Time**: Timeliness of emergency medical teams significantly affects patient perception. Faster response times often correlate with higher satisfaction levels as they reflect the system's efficiency in addressing emergencies.
- 2. **Professionalism of Staff**: Competence, communication skills, and empathy of prehospital care providers play a pivotal role in shaping patient experiences. Patients often value healthcare professionals who exhibit professionalism and understanding during stressful situations.
- 3. **Communication and Information Sharing**: Patients and their families appreciate clear communication regarding the care provided, transportation decisions, and expected outcomes. Miscommunication or lack of updates can lead to dissatisfaction and anxiety.
- 4. **Equipment and Resources**: Adequate equipment and proper utilization during prehospital care enhance patient confidence in the services provided.
- 5. **Cultural Sensitivity**: Especially in regions like the Middle East, cultural sensitivity and language compatibility are critical in ensuring positive patient experiences.

Red Crescent Prehospital Services

An essential criterion for community development is providing healthcare services to the public. Moreover, the most crucial part of healthcare services is probably emergency care, especially at the pre-hospital admission level. In other words, how services are provided in prehospital represents the overall condition of services in society. The Red Crescent, a vital provider of prehospital emergency care in many countries, operates within a framework of humanitarian principles. It provides emergency medical services, disaster response, and community health programs, often in challenging and resource-limited settings. The organization's emphasis on timely and equitable care has positioned it as a trusted provider of emergency services.

However, variations in service delivery, resource availability, and patient demographics can influence satisfaction levels and overall perceptions of care quality [11].

The Red Cross Red Crescent Society's Pre-Hospital First Aid and Emergency Care program operates in a country where most people are deprived of emergency medical assistance and basic ambulance services. War and conflict contribute to the heavy burden of psychological trauma, which in most cases cannot be addressed by the limited resources available to the current medical system. The effects of other non-traumatic medical emergencies are exacerbated by the lack of an early identification and referral system [12].

Challenges in Prehospital Care

The growing number of calls to emergency services for non-urgent issues is a global challenge. The level of satisfaction among patients with pre-hospital care is important for any healthcare giver to improve and raise the quality of care [13]. Prehospital care faces several challenges that can affect patient satisfaction, including [14]:

- 1. **Resource Limitations**: Inadequate staffing, equipment shortages, and logistical difficulties can hinder effective care delivery.
- 2. **Geographical Barriers**: Delays in reaching remote or rural areas may reduce the timeliness of care.
- 3. **Training and Education**: Variations in the training and qualifications of emergency medical staff can impact the consistency of care quality.
- 4. **Systemic Issues**: Inefficiencies in coordination between prehospital and hospital services can lead to delays and miscommunication.

Discussion

The findings from the literature review highlight the multifaceted nature of patient satisfaction with prehospital emergency care, particularly in the context of Red Crescent services. Patient satisfaction serves as a critical quality indicator and is influenced by multiple factors, including response time, communication, professionalism, and cultural sensitivity. Addressing these factors is essential for improving the quality and effectiveness of prehospital care, especially in resource-limited or conflict-affected regions where the Red Crescent operates [10].

The challenges identified, such as resource limitations, geographical barriers, and systemic inefficiencies, underscore the need for targeted strategies to optimize service delivery [13]. For instance, improving staff training, equipping ambulances with adequate resources, and enhancing communication systems could significantly impact on patient satisfaction and overall service quality.

Moreover, the cultural and organizational context plays a significant role in shaping patient perceptions. Tailoring services to meet the unique needs of the communities served by the Red Crescent, including addressing language and cultural barriers, could further enhance satisfaction levels.

Implications for Practice

- 1. **Policy Development**: Policymakers should consider investing in prehospital care infrastructure and training programs to address resource and skill gaps.
- 2. **Patient-Centered Approaches**: Healthcare providers must prioritize patient-centered care models that emphasize empathy, communication, and cultural sensitivity.
- 3. **System Integration**: Strengthening coordination between prehospital and hospital services can improve efficiency and reduce delays in care delivery.

Results

The systematic review is expected to provide comprehensive insights into the key factors influencing patient satisfaction with Red Crescent prehospital care. It will:

- 1. Identify common themes and trends in patient satisfaction across different studies.
- 2. Highlight the strengths and limitations of current prehospital emergency care models.
- 3. Provide evidence-based recommendations for improving service quality and patient satisfaction.

Conclusion

Patient satisfaction is a pivotal component of prehospital emergency care, reflecting the quality and responsiveness of these critical services. The Red Crescent's role in delivering emergency medical care is vital, especially in regions with unique cultural, logistical, and systemic challenges. Addressing the gaps and challenges identified in this review will require a holistic approach that integrates patient feedback, enhances staff training, and ensures equitable access to resources. By focusing on these areas, the Red Crescent can further strengthen its impact and ensure that patients receive high-quality, compassionate, and timely care during emergencies. This study contributes to the broader discourse on optimizing prehospital care and sets the stage for future research exploring innovative strategies to enhance patient satisfaction and service quality.

References

- 1. García-Alfranca, F., Puig, A., Galup, C., Aguado, H., Cerdá, I., Guilabert, M., Pérez-Jover, V., Carrillo, I., & Mira, J. J. (2018). Patient satisfaction with pre-hospital emergency services: A qualitative study comparing professionals' and patients' views. *International Journal of Environmental Research and Public Health*, 15(2), 233. https://doi.org/10.3390/ijerph15020233
- 2. Farhad Ali Khattak, Mehwish Saba, Muhammad Hakim, Asad Khan, Saima Aleem, Saima Afaq, Abid Ullah, Abid Rahim, Zia ul Haq, (2023), Patient Satisfaction and Utilization of Ambulance Services in Prehospital Services at a Tertiary Care Hospital: A Cross-Sectional Study in Peshawar, Khyber Pakhtunkhwa, Pakistan, Air Medical Journal, Volume 42, Issue 4, Pages 239-245, ISSN 1067-991X, https://doi.org/10.1016/j.amj.2023.03.002.
- 3. Khattak, F. A., Saba, M., Hakim, M., Khan, A., Aleem, S., Afaq, S., Ullah, A., Rahim, A., & Haq, Z. U. (2023). Patient satisfaction and utilization of ambulance services in prehospital services at a tertiary care hospital: A cross-sectional study in Peshawar, Khyber Pakhtunkhwa, Pakistan. *Air Medical Journal*, 42(4), 239–245. https://doi.org/10.1016/j.amj.2023.03.002
- 4. Servicios de Urgencias y Emergencias 112/061. (2015). Datos 2015. Available online: http://www.msssi.gob.es/estadEstudios/estadisticas/estadisticas/estMinisterio/SIAP/Estadisticas.htm
- 5. Joo, J. H., Bone, L., Forte, J., Kirley, E., Lynch, T., & Aboumatar, H. (2022). The benefits and challenges of established peer support programs for patients, informal caregivers, and healthcare providers. *Family Practice*, *39*(5), 903–912. https://doi.org/10.1093/fampra/cmac004
- 6. Alshehri, M., Alotaibi, A., Alanazi, M., Alasmi, N., Alqahtany, A. A., Alghamdi, A. A., Alhamad, A. M., Alqarni, A. S., Harobi, H. G., & Qureshi, S. (2017). Patient satisfaction with pre-hospital care. *International Journal of Innovative Research in Medical Science*, 2(12).

- 7. Bernard, A., Lindsell, C., Handel, D., Collett, A., Gallo, P., Kaiser, K., & Locasto, D. (2016). Postal survey methodology to assess patient satisfaction in a suburban emergency medical services system. Retrieved from http://bmcemergmed.biomedcentral.com/articles/10.1186/1471-227X-7-5
- 8. Aboosalehi, A., Kolivand, P., Jalali, A., Saberian, P., Asiabar, A. S., Baratloo, A., et al. (2022). Clients' satisfaction with services provided by ambulances and motor ambulances of Tehran emergency medical services: A cross-sectional study. *Medical Journal of the Islamic Republic of Iran*, 36.
- 9. Heydari, H., Kamran, A., Zali, M. E., Novinmehr, N., & Safari, M. (2017). Customers' satisfaction about prehospital emergency medical services in Lorestan, Iran. *Electronic Physician*, *9*(3), 3974–3979. https://doi.org/10.19082/3974
- 10. Farhadloo, R., Chavoshi, M., Vahedian, M., Hoseini, M. H. M., Torabian, H., Parvaresh-Masoud, M., & Azadeh, M. R. (2019). Patient satisfaction with pre-hospital emergency care in Qom Province in 2017. *Health in Emergencies and Disasters Quarterly*, *5*(2), 99–104. https://doi.org/10.32598/hdq.5.2.199.4
- 11. Körner, M., Wirtz, M. A., Bengel, J., & Göritz, A. S. (2015). Relationship of organizational culture, teamwork, and job satisfaction in interprofessional teams. *BMC Health Services Research*, *15*, 243. https://doi.org/10.1186/s12913-015-0888-y
- 12. Sudanese Red Crescent Society (SRCS). (2021). First Aid and Prehospital Emergency Care Strategy 2021–2025.
- 13. Janko, K., Martina, D., & Igor, S. (2003). Development of a questionnaire on patient satisfaction with emergency medical interventions. *Zdravstveno varstvo*, 42, 614. Retrieved from http://www.dlib.si/details/URN:NBN:SI:DOC-I2SGGBZT
- 14. Khoddam, H., Joybari, L., & Sanagoo, A. (2005). Patients' satisfaction with introduced services in clinical educational centers of the Gorgan University of Medical Sciences and its associated factors. *Journal of Gorgan University of Medical Sciences*, 2(1), 13–21.