

DOI: [10.71854/soc.2025-1207260](https://doi.org/10.71854/soc.2025-1207260)

Pathological analysis of crisis management of road accidents in Khorasan Razavi province

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Detailed Abstract

Introduction

One of the social issues can be considered road accidents, which is one of the leading causes of mortality worldwide, and crisis management in all countries makes significant efforts to control it. The present research aims to perform a pathological analysis and examine the lived experiences of Red Crescent personnel regarding the strengths and weaknesses of crisis management strategies for road accidents, taking into account climatic conditions. In the field of research innovation, according to the National Crisis Management Program (approved in 2019), there has been an emphasis on the provincial disaster risk reduction program. Based on this program, the Provincial Disaster Management Office, in compliance with laws and regulations, and with the participation of all responsible agencies mentioned in Article 2 of this law, must prepare the national disaster risk reduction program and prioritize the identification of hazards, vulnerabilities, capacities, and risk reduction strategies in the province. Additionally, the program emphasizes enhancing the ability to identify hazards and understand the risks of disasters in the country, including preparing a national natural hazard atlas and developing provincial disaster risk reduction programs for approval by the National Headquarters. Therefore, the innovation of this research lies in conducting a practical study that aims, first, to investigate the most critical issues and problems in rescue and relief operations based on the lived experiences of the personnel and officials of the Red Crescent. It will also identify strengths and weaknesses related to service quality and strategies employed by the Red Crescent forces. Ultimately, based on existing problems and issues, it will forecast the necessary equipment and facilities to manage road accident risks effectively. The main research question is: What challenges (strengths and weaknesses) does efficient management of road accident crises (considering climatic and weather conditions on the roads of Khorasan Razavi province) face?

Literature review

Ehsan Pour et al. (2023: 61) in evaluating the impact of urban planning management methods on improving traffic discipline conclude that managerial solutions include: using the capacity of surveillance cameras and smart recording of violations, public transportation with an innovative approach involving advanced traffic management systems, geometric modifications, and enhancing the safety of roadways, which includes allocating sufficient budget to address accident-prone areas and improving urban infrastructure in the traffic domain, as well as educating safety regulations using the capacity of cyberspace to enhance proper driving culture, all having the most significant impact. Goharpour et al. (2021: 135) in their investigation of access performance in road accidents (case study of Isfahan province) conclude that the existence of improper access points and the establishment of non-standard access points lead to numerous accidents on the country's roads. Bahtu'i et al. (2020: 127) in a data mining analysis of road accidents in northwest Tehran demonstrate that the leading cause of road accidents is human factors and lack of attention, while weather conditions are not considered the primary cause of accidents but do exacerbate them. The characteristics of roads significantly influence both the occurrence and severity of accidents.

Methodology

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This research is qualitative and based on phenomenology. Therefore, using deep and open-ended interview techniques along with purposive sampling, necessary data were gathered and organized from 20 officials and personnel of the Red Crescent in Khorasan Razavi province, who have direct experience in assisting in road accidents. A semi-structured interview was used as the data collection tool. Three methods were utilized to achieve reliability criteria: member checking, analytical comparisons, and auditing techniques. Coding was conducted in three stages: open, axial, and selective coding.

Research findings

Regarding the strategies employed in managing road traffic accidents, education and swift action emerge as a primary category, characterized by subcategories such as volunteer spirit, personnel training, and rapid responses. These are identified as the most essential strategies in crisis management. Participants noted that utilizing young Red Crescent volunteers can lead to a high level of empathy and synergy in management. Emergency response teams can provide essential training to individuals, and with rapid action from the police, Red Crescent, emergency services, and other organizations, effective management of road traffic accidents can be achieved. The Red Crescent has implemented these strategies.

However, these strategies' weaknesses include issues such as outdated equipment, problems with road distances, inadequate team collaboration, negligence towards scientific approaches, deficits in training, and a lack of understanding of climatic issues. Many participants expressed concerns about worn-out equipment. Additionally, the long distances between roadside bases and the high volume of missions can sometimes be overwhelming. The lack of scientific evaluation of the measures taken and learning from past experiences is also a weakness.

Participants mentioned that strengths include specialized training for personnel, the large number of volunteers available within the Red Crescent, and the formation of emergency working groups. A significant strength in this context is the empathy and collaboration observed within the community being studied. Managers in police forces, the Red Crescent, road maintenance, and crisis management perform all possible actions with compassion during road traffic crises. As for the impacts of climate crises on effective crisis management, an increase in incidents and the difficulties in response are highlighted as the primary issues, associated with subcategories such as: the higher frequency of climate-related incidents / excessive occurrences of accidents/challenges in swift response to emergencies/managers focusing on response rather than prevention / and a lack of foresight influenced by insufficient awareness.

Conclusion

Based on the experiences of Red Crescent personnel, the study identified the role of managers, management models, and the interactions between managers and personnel as crucial elements influencing handling road incidents and their impact on preventing road accident crises.

Keywords: road accidents, crisis management strategies, climate change, assessment of actions