



The Impact of Red Crescent First Aid Awareness Campaigns on Improving Emergency Preparedness Among Vulnerable Groups: A Systematic Review for Emergency Professionals and Nursing

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Abstract

Background: Vulnerable groups are disproportionately vulnerable to the dangers of emergencies. The International Federation of Red Cross and Red Crescent Societies (IFRC) and National Societies use first aid awareness campaigns as a central public health intervention to strengthen community resilience and emergency preparedness from the ground level.

Aim: The present review seeks to critically assess the effect of Red Crescent first aid awareness campaigns on enhancing emergency readiness among vulnerable populations around the world, drawing on evidence from the past decade.

Methods: A systematic synthesis of peer-reviewed research (2015-2024), IFRC publications, and applicable case studies was used to explore the effectiveness and operational challenges of such campaigns.

Results: The results always verify that such campaigns significantly improve immediate first aid knowledge and capabilities among the respondents. They also inspire positive behavioral intentions, improve self-efficacy, and foster a broader culture of safety and self-responsibility. The effectiveness of campaigns is hugely moderated by profound socioeconomic obstacles, cultural settings, and logistical limitations in targeting the most vulnerable groups.

Conclusions: Red Crescent first aid campaigns are an effective and cost-saving method of enhancing community emergency preparedness. Their strategic integration into public health, disaster risk reduction (DRR), and universal health coverage (UHC) plans is strongly recommended. Next steps must be innovative, context-specific, and longitudinally focused to maximize impact and overcome current impediments.

Keywords: First Aid, Emergency Preparedness, Vulnerable Populations, Red Crescent, Community Resilience, Disaster Risk Reduction.

Introduction

Populations at risk, like refugees, internally displaced persons (IDPs), slum populations, rural populations with minimal healthcare access, children, older persons, and persons with disabilities, are most vulnerable to heightened morbidity and mortality during emergencies (Canton, 2021; World Health Organization [WHO], 2019). This vulnerability arises from complex interactions between poverty, social exclusion, environmental exposure, and pre-existing health inequities. In crises, from abrupt onset disasters to individual health crises, the "golden hour," that is the period immediately post-injury during which there

is the highest probability that timely medical care will preserve an individual's life, is generally beyond reach to such populations due to broken formal emergency response systems (Tamur et al., 2023; Balhara et al., 2019).

The concept of emergency preparedness has thus transformed from top-down institutional responses to emphasize community-centered and community-initiated responses. Central to this paradigm is that of local capacity building, in which individuals of the community itself are the initial and immediate responders (Canton, 2021). First aid, or the initial care provided to a wounded or sick person until

they can get complete medical care, is the central support of this capacity. Equipping individuals with first aid skills enables them to transition from being passive recipients to active producers of their own and collective survival (Berglund et al., 2022; Corey et al., 2021).

With its unique auxiliary position to public authorities and vast volunteer base, the International Red Cross and Red Crescent Movement is ideally positioned to deliver first aid awareness at scale. National Red Crescent Societies, particularly in the Middle East, North Africa, and Asia, operate within the cultural and religious context of their countries, which grants them an unparalleled level of access and confidence (O'Toole et al., 2022; Althunayyan et al., 2021). Their activities range from mass national campaigns for awareness, e.g., during World First Aid Day, to specialized training on specific threats such as earthquakes, floods, or road traffic accidents in threatened areas, and widespread education throughout schools and refugee camps (Ghasemi Siani et al., 2020; Sarhan & AlFalasi, 2023).

This systematic review aims to search and synthesize evidence from 2015 to 2024 on quantifiable impacts of these Red Crescent-led campaigns systematically. It will examine three key questions: (1) How much are the campaigns in promoting knowledge, skills, and preparedness behavior? (2) What are the most crucial moderating factors—facilitators and barriers—that affect their effectiveness? (3) What is the broader public health significance of incorporating first aid awareness within plans to build resilient communities?

Evidence of First Aid Awareness Campaign Impacts

The cumulative body of evidence gathered over the past decade consistently indicates substantial positive impacts in a variety of emergency preparedness domains. All of these impacts can be grouped into the areas of knowledge and practical skills improvement, behavioral and psychological changes, and measurable community-level outcomes (Table 1 & Figure 1).

Improvement in Knowledge and Practical Skills

The most immediate and objectively quantifiable impact of first aid education is the acquisition of knowledge and skills. Pre- and post-intervention measurements always register statistically significant gains in the subjects' emergency procedure knowledge. For instance, an Iranian Red Crescent Society (IRCS) campaign targeting university students was found to improve cardiopulmonary resuscitation (CPR), bleeding control, and fracture management by a considerable amount after a standard training session (Mobayen et al., 2020). Similar results were noted in Palestinian Red Crescent Society programs, with community members having significant gains in the correct

identification of basic life support (BLS) steps after targeted training (Garigipati, 2017).

In addition to declarative knowledge, retention and appropriate use of practical skills are crucial. Evidence demonstrates that efficient, practical training methods employed by the Red Crescent, with pictorial directions and low-fidelity manikins, are highly effective. A Turkish Red Crescent initiative among Syrian refugees for wound dressing, burn management, and relief from choking, where post-training assessment indicated over 80% of the trainees were in a position to correctly demonstrate the acquired skills (Altintas et al., 2005). This is particularly true in low-literacy communities, where learning is kinesthetic and visual as opposed to text-based learning (Reiner et al., 2020). The IFRC's global "First Aid for All" program encourages this accessible, hands-on approach, where not only learned but also retained and performed under stress (Avau et al., 2023).

Behavioral Intentions and Psychological Empowerment

Stronger than knowledge, maybe, is the change in behavioral intent and psychological empowerment that training brings. Vulnerability is frequently coupled with helplessness and fatalism. First aid training directly counteracts this by establishing a sense of self-efficacy—trust in one's ability to cope with a crisis (Bandura, 1997, as quoted in Kılıç & Şimşek, 2019). Evidence from Red Crescent responses in earthquake-affected areas of Afghanistan and Pakistan showed that trained individuals were not only more informed but also significantly more assertive in their ability to assist family members and neighbors in emergencies compared to their untrained counterparts (Shah & Rana, 2023; Wilp & El Gehani, 2022).

That empowerment is translated into higher levels of emergency readiness to act. A Jordanian cross-sectional study, both among Syrian refugees and Jordanians, revealed that individuals who had received first aid training from the Jordan Red Crescent were three times as likely as their counterparts to state they would be willing to help in a road traffic accident scenario (Aljarad et al., 2021). This shift from bystander to first responder is one of the most significant behavioral outcomes most closely enhancing a community's response capacity. Besides, training has been shown to reduce fear and anxiety towards emergencies, leading to relaxed yet effective responses (García-Suárez et al., 2019).

Community-Level Public Health Impact

The aggregated impact of individual knowledge and behavior change is actualized in tangible community-level outcomes. One of the most significant is the reduction in mortality and morbidity from time-sensitive conditions. For example, community first responder systems, often based on the premise of Red Crescent training, have been linked

with improved survival rates for out-of-hospital cardiac arrest in high-income and low-resource settings (Högstedt et al., 2022; Bakke & Wisborg, 2017). While direct causation is complex, model research suggests that mass first aid training in populations at risk can potentially reduce deaths from hemorrhage, asphyxia, and other common emergency situations (Jayaraman et al., 2009).

Public health system-wise, these campaigns are a force multiplier. They generate a layer of

community responders and thus relieve the usually stretched formal emergency medical services (EMS). This is especially necessary in mass-casualty incidents or remote communities with slow EMS responses (Soltani et al., 2023). The campaigns also act as a vehicle for other health public messages, integrating information on hygiene, disease prevention, and maternal and child health, thereby an all-embracing measure of community resilience (Canton, 2021; Red Crescent Society of Indonesia [PMI], 2018).

Table 1: Overview of Documented Major Impacts of Red Crescent First Aid Campaigns

Impact Domain	Specific Outcomes	Example Evidence (Citation)
Knowledge & Skills	Increased knowledge of CPR, bleeding control, and fracture management	Mobayen et al. (2020); Garigipati (2017)
	Improved practical skill demonstration (e.g., wound care, choking relief)	Altintas et al. (2005); Reiner et al. (2020)
	Enhanced retention of knowledge with refresher training	García-Suárez et al. (2019); Avau et al. (2023)
Behavior & Psychology	Increased self-efficacy and confidence to act	Kılıç & Şimşek (2019); Shah & Rana (2023)
	Stronger behavioral intention to provide help	Aljarad et al. (2021); Wilp & El Gehani (2022)
	Reduction in bystander anxiety and fear	García-Suárez et al. (2019)
Community & Public Health	Potential reduction in pre-hospital mortality	Högstedt et al. (2022); Jayaraman et al. (2009)
	Reduced burden on formal emergency medical services	Soltani et al. (2023)
	Integration with other public health initiatives (e.g., DRR, hygiene)	Canton (2021); PMI (2018)

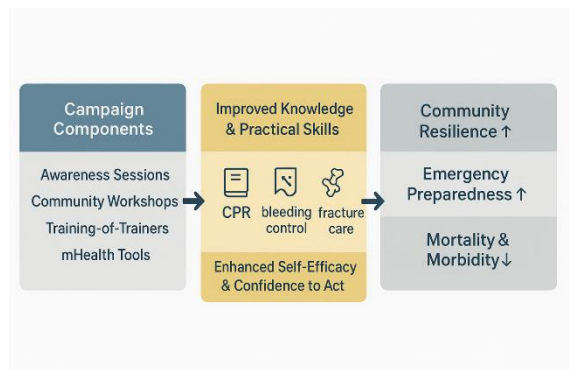


Figure 1: Framework of Red Crescent First Aid Awareness Campaign Impacts

Moderating Factors: Challenges and Facilitators

There is no universal success of first aid awareness campaigns; it depends on a constellation of contextual, socioeconomic, and programmatic factors. Effective and equitable intervention design relies on the knowledge of such moderators (Table 2 & Figure 2).

Socioeconomic and Cultural Barriers

Poor economic status remains one of the most significant barriers to long-term emergency preparedness. For individuals who are struggling to make ends meet daily, attending a multi-day training is a true opportunity cost in the form of lost wages or labor (Reiner et al., 2020). Moreover, even cheap items like gloves or bandages can be unaffordable,

rendering knowledge useless without the ability to implement (Abjam et al., 2023). In refugee and IDP environments, transience and lack of legal status can limit engagement in more extended training courses because the families are preoccupied with short-term needs like food, shelter, and security (Altintas et al., 2005).

Cultural beliefs and norms also have a great impact on first aid knowledge reception and application. In some conservative societies, gender roles may restrict women's participation in public training or prohibit them from providing first aid, most importantly CPR, to unrelated men (Alanazy et al., 2022; O'Toole et al., 2022). By contrast, training women volunteers can be extremely effective in reaching women and children within their homes. Spiritual notions of destiny, or particular traditional healing practices, may at times conflict with evidence-based first aid practice, and the Red Crescent will need to take pains to adapt messaging; accordingly, frequently, the go-to organization to help manage these cultural nuances is (Red Crescent Society of the UAE (2023).

Logistical and Pedagogical Challenges

Reaching the most isolated populations—the ones in remote villages, conflict areas, or crowded informal settlements—entails enormous logistical challenges. Security concerns could restrict trainers' movement, while the unavailability of infrastructure

could make training areas inaccessible (Jamaledini et al., 2017). High-fidelity, standardized models of training utilized in high-income nations are unrealistic and unaffordable. This has called for the development of low-cost, streamlined training packages (for example, the IFRC's "Community First Aid" model) that maintain the underlying life-saving principles but are adaptable in the presence of local resources and environments (Cross, 2003).

A problem shared by all environments is skill fade. Without practice, knowledge and psychomotor skills deteriorate over time, typically within 6-12 months following training (Yang et al., 2012; Tannvik et al., 2012). The majority of single-time awareness initiatives do not have a robust system for refreshers or ongoing practice, limiting their long-term effect. Moreover, scaling up successful pilot projects to national levels depends on substantial and sustained funding, a stable cadre of trainers, and good alliances with government education and health systems, which can be unsustainable (Canton, 2021; WHO, 2019).

Facilitators and Success Factors

Despite these challenges, there are several factors that always facilitate success. Foremost is the integrity of the Red Crescent emblem. In times of war,

political instability, or in areas where there is a general distrust of government, the neutrality, impartiality, and humanitarian nature of the Red Crescent give it access and credibility not found with other organizations (Alomar et al., 2016; Clarke et al., 2023). It is this credibility that is the foundation upon which effective community engagement is achieved.

Another robust enabler is the use of peer-to-peer and train-the-trainer models. By training local volunteers in the community, the Red Crescent ensures that information is provided in linguistically and culturally appropriate language and remains in the community long after the foreign trainers depart (El Seifi et al., 2018; PMI, 2018). It has the advantage of promoting local ownership and sustainability.

Finally, integrating first aid into more comprehensive systems significantly amplifies its use and efficacy. Learning first aid as part of education at school (as the IFRC's "Youth as Agents of Behavioral Change" initiative promotes), disaster risk reduction plans, or labor laws makes it a routine life skill rather than a stand-alone intervention (Mohammadkhani et al., 2023; Canton, 2021). Embedding at the systemic level ensures higher reach and reiterates the message through multiple touchpoints.

Table 2: The Most Important Moderating Factors on the Effectiveness of the Campaigns

Moderating Factor	Challenges	Facilitators & Mitigation Strategies
Socioeconomic	Poverty & opportunity cost; lack of supplies; transience (refugees/IDPs).	Provide incentives (e.g., food vouchers); include first aid kits in training; offer flexible, modular sessions.
Cultural	Gender norms restricting participation/practice; religious/traditional beliefs.	Culturally-adapted curricula; single-gender training sessions; engagement with community/religious leaders.
Logistical	Access to remote/insecure areas; high cost of standardized training models.	Mobile training units; low-cost, context-appropriate simulators; decentralized "training of trainers" models.
Pedagogical	Rapid skill decay; low literacy levels; scaling difficulties.	Mandatory refresher courses; visual/kinesthetic learning tools; strong government/NGO partnerships for scale.
Contextual	Distrust in external actors; political instability.	Leveraging the trusted Red Crescent/Red Cross emblem, community-led program design and implementation.

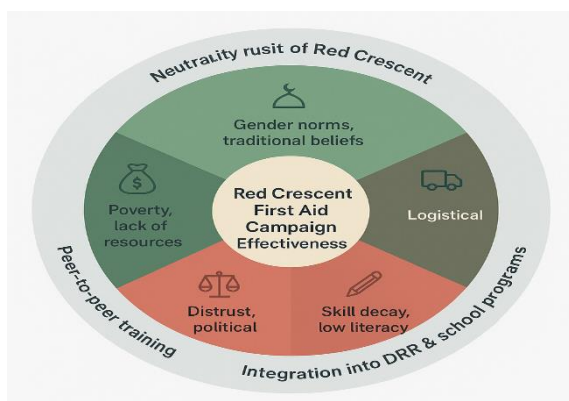


Figure 2: Moderating Factors Influencing Campaign Effectiveness

Synthesis and Future Directions

Synthesis of the evidence in this review leaves little doubt that Red Crescent first aid awareness campaigns are a potent tool for building emergency preparedness among at-risk populations. They occupy the critical interface of short-term lifesaving capacity and long-term community empowerment. Their impact is multi-dimensional, giving rise not only to a more informed citizenry but also to a more confident, active, and resilient one. The rewards of these initiatives extend beyond the health sector to generate social cohesion, disaster risk reduction, and general well-being among communities at the forefront of crises and marginalization. But the review also highlights that the "one-size-fits-all"

approach is outdated. Strategic, evidence-based adaptation is in the future of such interventions. Based on the facilitators and challenges outlined, some key directions for the future are a priority:

First, there is an urgent need for new models of delivery to overcome logistics and engagement difficulties. Mobile health (mHealth) technology, such as SMS-based training reminder refreshers, low-literacy interactive voice response (IVR) systems, and smartphone applications with instructional video guides, has great promise for reminding and maintaining interest post-training (Bashekah et al., 2023; Tannvik et al., 2012). These technologies are capable of providing just-in-time knowledge during the crisis itself, bridging the knowledge loss to the crisis gap.

Second, there must be rigorous monitoring, evaluation, and research. Although the majority of studies evaluate different knowledge gain immediately after training, there is scarce longitudinal research on observing skill retention and real-world usage over time (Yang et al., 2012). More sophisticated studies are needed to move beyond stated intentions to measure different helping behaviors and, where possible, link training coverage to population-level health outcomes like rates of injury-related mortality (Dainty et al., 2022; Mirza et al., 2020).

Third, policy integration is required. National Red Crescent Societies need to accelerate advocacy for the incorporation of first aid as an obligatory component in national school curricula, driving tests, and occupational health and safety law (Mohammadkhani et al., 2023; Canton, 2021). Institutionalization ensures financing, standardization, and mass coverage, elevating first aid from a voluntary activity to a fundamental public good.

Finally, the localization principle has to be the focus of all. This involves doing more than training local volunteers, but also drawing on local members for campaign design, planning, and evaluation from the outset. This participatory approach ensures cultural sensitivity, builds sustained local capacity, and allows communities to own their resilience (El Seifi et al., 2018; PMI, 2018)

Conclusion

Finally, the first aid awareness campaigns organized by Red Crescent Societies are much more than mundane exercises in skills transfer. They are a deep humanitarian intervention that enables the most vulnerable, develops social capital, and builds a critical first line of defense in any emergency. The evidence between 2015 and 2024 uniformly confirms their impact on enhancing knowledge, skills, and readiness behaviors, as well as shedding light on the way forward for more sustainable and equitable roll-out. Amidst a world confronting mounting climate-related crises, compounded humanitarian emergencies, and entrenched inequalities in health, the role of community-based first aid by the respected networks of the Red Cross and Red Crescent has never

been more critical. Committing resources to these campaigns is not just a public health policy; it is an investment in human dignity, voice, and in the intrinsic resilience of communities to take on the challenges of today and tomorrow.

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