

Adaptation of prehospital emergency medical services to the incident command system during the Kahramanmaraş earthquake: A qualitative evaluation

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Abstract

Background: The Incident Command System is a critical framework for coordinating emergency response; however, large-scale disasters often expose operational, structural, and communication gaps. Understanding how Emergency Medical Services personnel navigate these challenges is essential to strengthening disaster readiness and improving coordinated field operations.

Objective: This study aimed to explore the challenges faced by prehospital Emergency Medical Services personnel in adapting to the Incident Command System during the Kahramanmaraş Earthquakes.

Methods: A qualitative phenomenological design was employed to investigate the lived experiences of Emergency Medical Services professionals who participated in disaster response operations. Twenty participants were recruited through purposive sampling from the Paramedic and Pre-Hospital Emergency Medicine Association. Semi-structured interviews were conducted via Microsoft Teams between March and May 2024. Data were analyzed using inductive content analysis following Braun and Clarke's six-phase framework, supported by MAXQDA 2020 software.

Results: Seven major themes were identified: absence of a pre-incident plan, communication breakdown, inadequate scene safety, lack of inter-agency coordination, resource insufficiency, challenges in disaster triage, and inefficiencies in patient transport. These findings highlight systemic and organizational weaknesses that hindered Emergency Medical Services professionals adaptation to the Incident Command System.

Conclusion: Findings demonstrate that fragmented command structures, disrupted communication, and insufficient logistical planning impeded effective Emergency Medical Services coordination under chaotic disaster conditions. Strengthening scenario-based Incident Command System training, communication infrastructure, and inter-agency governance mechanisms is essential to improve Emergency Medical Services adaptability and resilience in future large-scale emergencies.

Keywords

qualitative research, incident command system, disaster response, emergency medical services, adaptation, disaster

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Introduction

Türkiye, located within the Alpine–Himalayan seismic belt, has experienced numerous devastating earthquakes throughout its history. In recent decades, the frequency and impact of natural disasters have increased significantly, compelling governments to strengthen their disaster management systems.¹ The earthquakes that struck southeastern Türkiye on February 6, 2023—known as the Kahramanmaraş Earthquakes—were exceptional in global disaster history due to the occurrence of two major destructive shocks on the same day and the extensive devastation that followed.² This catastrophe, which claimed more than 50,000 lives and injured thousands, has necessitated a comprehensive reassessment of disaster management systems.

Among the most critical services during the acute phase of a disaster are prehospital emergency medical services (EMS), whose effective functioning can save countless lives. Under normal circumstances, EMS personnel are trained to deliver emergency medical care and coordinate with other response teams through the Incident Command System (ICS) during disasters that generate extraordinary conditions. However, the complexity and uncertainty that characterize large-scale disasters may hinder EMS personnel's ability to adapt effectively to the ICS framework.³

The ICS, developed by the U.S. Federal Emergency Management Agency (FEMA) in the 1970s, has since become a widely adopted model for coordinated disaster response across the World.⁴ In Türkiye, the ICS is embedded within the Türkiye Disaster Response Plan (TAMP), which defines four hierarchical levels of command and aims to coordinate numerous agencies and organizations.⁵ Within this structure, EMS personnel play a pivotal role not only in the efficient allocation of limited medical resources but also in ensuring appropriate triage, emergency treatment, and patient transport.⁶

Nevertheless, large-scale disasters often disrupt these mechanisms. Command ambiguities, communication failures, and logistical deficiencies may challenge EMS adaptation to the ICS.⁷ The Kahramanmaraş Earthquakes therefore provide a critical opportunity to examine these adaptation challenges and to identify field-based solutions that could enhance disaster preparedness and response effectiveness.⁸

This study aims to explore the factors hindering EMS personnel's adaptation to the ICS during the Kahramanmaraş Earthquakes and to propose strategies to improve preparedness for future large-scale disasters.

Methods

Research design

A qualitative phenomenological design, informed by a multiple case analysis approach, was employed to explore the

lived experiences of prehospital EMS personnel regarding their adaptation to the Incident Command System during the 2023 Kahramanmaraş Earthquakes. The phenomenological approach, as outlined by Creswell,⁹ was chosen to gain a deep understanding of how EMS professionals perceived and interpreted command and coordination processes under disaster conditions. This design enabled the researchers to capture participants' individual perspectives within their operational and emotional contexts, allowing for rich, descriptive insights into field-based adaptation challenges.

Participants and sampling

The study population consisted of approximately 1500 EMS professionals affiliated with the Paramedic and Pre-Hospital Emergency Medicine Association (PARHAD). A criterion-based purposive sampling strategy was used to include participants who directly experienced ICS operations during the earthquake response. Inclusion criteria were: (a) PARHAD membership, (b) active participation in the February 6, 2023 earthquake response, and (c) direct involvement with or observation of ICS processes. Recruitment was carried out through an e-mail invitation explaining the study purpose and participation requirements. Twenty-two volunteers initially agreed to participate; data saturation was reached after the twentieth interview, and the remaining two volunteers were not included. Thematic saturation was achieved when no new codes or concepts emerged during the final interviews. The final sample represented a wide range of professional experience, geographic deployment areas, and field responsibilities within the affected regions. The characteristics of the participants are provided in Table 1.

Data collection

Data were collected between March and May 2024 through semi-structured, in-depth interviews conducted via Microsoft Teams, following the 2023 earthquake events. The data collection timeline was determined by the ethical approval process and access logistics required for participant recruitment. Each interview lasted approximately 30–45 min and was audio-recorded with verbal consent. The interview guide was structured around four key dimensions of ICS—command, communication, logistics, and safety—to facilitate comprehensive exploration of participants' experiences. Example questions included: “How did the command structure function during the response?” and “What challenges did you encounter in coordination or communication?”. All interviews were transcribed verbatim, and detailed field notes were kept to document non-verbal cues and contextual information.

Table 1. Descriptive characteristics of participants.

Participant	Occupation	Years of professional experience	Educational level	Time to reach the incident scene	Area of assignment	Existence of a reception team	Interview duration with participant (min.)
P1	Paramedic	18 years	Master's Degree	10 th hour	Debris Area/ Logistics Unit	Yes	32
P2	Paramedic	8 years	Bachelor's Degree	10 th day	Ambulance	No	35
P3	EMT	21 years	Master's Degree	4 th day	Ambulance	No	42
P4	Paramedic	13 years	Bachelor's Degree	16 th hour	Debris Area	No	30
P5	Paramedic	20 years	Associate Degree	3 th day	Field Hospital	No	33
P6	Paramedic	12 years	Bachelor's Degree	2 th day	Debris Area	Yes	45
P7	EMT	23 years	Associate Degree	8 th hour	Debris Area	Yes	39
P8	Paramedic	18 years	Master's Degree	12 th hour	Debris Area / Ambulance	No	44
P9	EMT	13 years	Associate Degree	30 th day	Ambulance	No	40
P10	Paramedic	7 years	Bachelor's Degree	3 th day	Field Hospital	Yes	42
P11	Paramedic	10 years	Associate Degree	12 th hour	Debris Area	No	31
P12	Paramedic	16 years	Master's Degree	2 th day	Debris Area / Hospital	No	38
P13	EMT	17 years	Bachelor's Degree	12 th hour	Debris Area	No	30
P14	EMT	17 years	Bachelor's Degree	20 th hour	Ambulance	No	45
P15	EMT	16 years	Bachelor's Degree	14 th hour	Ambulance	No	40
P16	EMT	16 years	Bachelor's Degree	3 th day	Ambulance	No	43
P17	Paramedic	8 years	Bachelor's Degree	Disaster victim	Ambulance	No	35
P18	Paramedic	10 years	Bachelor's Degree	Disaster victim	Ambulance	No	38
P19	Paramedic	9 years	Master's Degree	Disaster victim	Ambulance	No	43
P20	EMT	12 years	Secondary Education	Disaster victim	Debris Area / Ambulance	No	45

Data analysis

Data were analyzed using inductive content analysis following the six-phase analytical framework proposed by Braun and Clarke.¹⁰ All interview transcripts were organized and coded using MAXQDA 2020 software. Four researchers with expertise in Emergency Medical Services and Disaster Management independently coded the data, collaboratively developed themes, and reached consensus through iterative discussions. Although the interview guide was structured around predefined dimensions of the Incident Command System, coding was conducted inductively, allowing new sub-codes and experiential elements to emerge beyond the initial interview framework.

Trustworthiness

Trustworthiness To ensure the methodological rigor and trustworthiness of the study, the criteria of credibility, transferability, dependability, and confirmability proposed by Lincoln and Guba¹¹ were adopted.

Credibility: To enhance credibility, the researchers maintained prolonged engagement with the data and the field. Member checking was conducted by sharing the interview transcripts and emerging themes with the participants

to ensure that their experiences were accurately reflected. No participants requested substantive changes, confirming the accuracy of the data. Additionally, the coding process was reviewed by an expert in disaster medicine to minimize researcher bias.

Transferability: Since qualitative findings are not statistically generalizable, this study focused on transferability. A “thick description” of the participants’ working conditions, the specific context of the Kahramanmaraş earthquakes, and the organizational structure of the 112 emergency services was provided. This allows other researchers to judge the applicability of the findings to similar disaster contexts or other emergency response systems.

Dependability and Confirmability: To ensure dependability, a detailed audit trail was maintained throughout the research process, documenting all methodological decisions, raw data, and coding structures. The use of MAXQDA software facilitated a systematic analysis, ensuring that the findings emerged directly from the data rather than the researchers’ predispositions. The explicit presentation of the coding tree (Table 2) further supports the confirmability of the study by demonstrating the logical link between raw data and the final themes. In addition, the study was conducted and reported in accordance with the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist,¹² which is provided as

Table 2. Coding structure of themes and sub-themes related to EMS adaptation to the incident command system.

Main theme	Themes	Sub-themes
1. Absence of a Pre-Incident Plan (10)	<ul style="list-style-type: none"> • Role Ambiguity • Improvisation/ Self-organization • Ad-hoc systems 	<ul style="list-style-type: none"> Spontaneous intervention Lack of command structure Autonomous operations
2. Communication Breakdown (13)	<ul style="list-style-type: none"> • Isolation and Frustration • Technical Failures • Informal Digital Networks 	<ul style="list-style-type: none"> Inoperative call centers Radio/phone failure Use of WhatsApp groups
3. Scene Safety Deficiencies (15)	<ul style="list-style-type: none"> • Perceived Personal Risk • Absence of Law Enforcement • Crowd Pressure 	<ul style="list-style-type: none"> Unsecured environments Absence of incident commander Traffic and crowd chaos
4. Lack of Inter-Agency Coordination (16)	<ul style="list-style-type: none"> • Leadership Confusion • Fragmented Interaction • Loss of Situational Awareness 	<ul style="list-style-type: none"> AFAD-UMKE disconnect Unclear management Institutional fragmentation
5. Resource Constraints (18)	<ul style="list-style-type: none"> • Logistical Inequity • Moral Distress • Unified Logistics Failure 	<ul style="list-style-type: none"> Uneven supply distribution Personnel fatigue Initial equipment shortage
6. Challenges in Disaster Triage (10)	<ul style="list-style-type: none"> • Emotional/Ethical Tension • Protocol Deviations • “Grab and Go” Interventions 	<ul style="list-style-type: none"> Inability to perform triage Crowd-driven decision-making Black tag dilemmas
7. Inefficient Patient Transport (8)	<ul style="list-style-type: none"> • Infrastructural Barriers • Decision-making Constraints • Lack of Referral Chain 	<ul style="list-style-type: none"> Blocked roads Air transport underutilization Improvised referral pathways

Supplementary Material (Supplementary Table S1) to enhance transparency and reporting rigor.

EMS personnel encountered while adapting to the ICS during the 2023 Kahramanmaraş Earthquakes.

Ethical considerations

This study was conducted in accordance with the Declaration of Helsinki and approved by the Ege University Medical Research Ethics Committee (Approval No: 25.01.2024). Participants' confidentiality was ensured by assigning alphanumeric identifiers (P1–P20). Written informed consent was obtained electronically before participation, and all participants were reminded that involvement was voluntary and withdrawal was possible at any time without consequence.

Results

Seven overarching themes were identified from the interviews: (1) Absence of a Pre-Incident Plan, (2) Communication Breakdown, (3) Scene Safety Deficiencies, (4) Lack of Inter-Agency Coordination, (5) Resource Constraints, (6) Challenges in Disaster Triage, and (7) Inefficient Patient Transport (Table 2). Table 2 summarizes the analytic structure of the findings, demonstrating how inductively derived open codes were clustered into axial sub-themes and subsequently integrated into overarching themes. While these themes were conceptually related to the core dimensions of the Incident Command System, they also incorporated emerging sub-themes grounded in participants' spontaneous narratives, emotional responses, and unprompted lived experiences beyond the initial interview framework. These themes collectively illustrate the multifaceted barriers

Absence of a pre-incident plan

Participants described experiencing intense role ambiguity and a strong need to improvise and self-organize during the initial response phase in the absence of a predefined operational plan. Participants consistently emphasized that the disaster response lacked a structured intervention plan. Despite prior disaster training, the absence of a clear command framework and operational guidelines compounded operational confusion. Many EMS teams operated autonomously, developing ad-hoc systems in the field:

“We had received training before, but there was no command structure. We had to organize ourselves” (P8).

“The intervention was completely spontaneous; there was no pre-planned system” (P15).

Several respondents reported that meaningful coordination began only after the first day, largely through their own initiative. This absence of early organization delayed rescue and medical operations.

Communication breakdown

Participants reported feelings of isolation, frustration, and operational vulnerability as communication systems failed, forcing them to rely on improvised and informal

communication channels in the field. Disruptions in communication were one of the most critical challenges. Emergency call centers were either inoperative or inaccessible, compelling teams to rely on informal digital networks:

“When we arrived, the call center wasn’t working. We created a WhatsApp group to receive emergency calls” (P10).

“For the first four days, radios and phones were unreliable, so we acted independently” (P11).

The absence of centralized communication impeded information sharing between units and delayed resource allocation, particularly during the chaotic early response phase.

Scene safety deficiencies

EMS personnel described heightened stress and perceived personal risk while operating in unsecured environments, where the absence of law enforcement and command authority compromised both safety and clinical performance. Many participants highlighted that maintaining scene safety was nearly impossible during the first days of the disaster. Law enforcement presence was limited, leading to unsafe working conditions and crowd pressure:

“Law enforcement wasn’t on the field; we sometimes couldn’t find anyone to handle security issues” (P6).

“There was no incident commander or police officer to contact” (P14).

The lack of structured traffic control and crowd management heightened operational risks and hindered emergency interventions.

Lack of inter-agency coordination

Participants expressed confusion and loss of situational awareness due to unclear leadership and fragmented coordination during the early response period. Coordination among key response organizations—such as AFAD, fire services, police, and medical teams—was perceived as fragmented and inconsistent, contributing to a response environment widely experienced as chaotic:

“We couldn’t find anyone to communicate with, and there was no one coordinating between units” (P6).

“It was unclear who was managing the situation; coordination came only after several days” (P18).

Some experienced EMS personnel compared this response to previous disasters and attributed the difficulties to the event’s unprecedented geographic scale, which encompassed 11 provinces.

Resource constraints

EMS personnel described a strong sense of inequity and moral distress when confronting uneven resource distribution, particularly when essential equipment and personnel were available in some areas but entirely absent in others. Insufficient logistical support and uneven distribution of materials were among the most frequently mentioned issues. While supplies eventually improved, initial shortages of medical equipment, vehicles, and personnel impeded operations:

“On the first day there was confusion, but by the third day materials and personnel were adequate” (P11).

“There was no resource planning; some teams had plenty of supplies, others had none” (P5).

Participants stressed that the absence of a unified logistics command led to duplication of resources in some areas and severe scarcity in others.

Challenges in disaster triage

Participants reported emotional strain and ethical tension when standard triage principles could not be applied, particularly under conditions of crowd pressure, security concerns, and overwhelming casualty numbers. Participants presented varied experiences regarding the implementation of disaster triage. Some reported being able to prioritize patients effectively, while others described situations where triage could not be applied due to overwhelming conditions:

“When multiple casualties were rescued at once, we prioritized according to their conditions” (P1).

“In some areas, triage was impossible—people demanded help for their relatives, and we had to do quick ‘grab and go’ interventions” (P8).

Early-stage chaos, limited personnel, and lack of scene control often forced EMS teams to bypass formal triage procedures. Others indicated that triage became more systematic only after field hospitals and command posts were established.

Inefficient patient transport

EMS personnel described feelings of helplessness and urgency while attempting to transport patients under extreme conditions, as damaged infrastructure, blocked roads, and communication breakdowns severely constrained their decision-making. These challenges often forced rapid, improvised transport choices in the absence of coordinated referral pathways, resulting in significant delays during the early response phase:

“During the first days, blocked roads and the absence of coordination delayed patient transfers” (P11).

“With radios down, we transported patients to whichever hospital we could reach” (P8).

While later improvements included the establishment of mobile command hubs, participants emphasized that transport operations lacked an organized referral chain.

“Transfers relied mostly on road ambulances, but many routes were impassable. Air transport could have been used more effectively” (P14).

These inefficiencies not only prolonged response times but also reduced the system’s overall adaptability to ICS protocols.

Discussion

This study examined the adaptation of EMS personnel to the ICS during the February 6th, 2023 Kahramanmaraş Earthquakes. Seven main problem areas were identified: absence of an intervention plan, communication breakdown, insufficient scene security, lack of inter-agency coordination, resource shortages, disaster triage challenges, and inefficiencies in patient transport. These findings reveal how systemic and organizational barriers hindered the full implementation of the ICS in large-scale disaster conditions.

Intervention plan

The findings demonstrate that disaster response efforts lacked an effective pre-established plan, leading EMS personnel to rely on spontaneous strategies rather than structured interventions. As Toker¹³ highlights, the chaotic nature of disasters often weakens organized responses, leading to local improvisations. Similarly, Duruel¹⁴ and Yılmaz & Gülüm¹⁵ reported that the massive destruction and adverse environmental conditions during the Kahramanmaraş Earthquakes disrupted planned operations. These results emphasize that disaster response plans must not only exist as formal documents but also be designed

for real-world applicability and operational flexibility. When plans lose functionality, EMS personnel are forced to adopt autonomous approaches, undermining coordination within the ICS.

Communication and messaging

Communication failure emerged as one of the most critical barriers to ICS adaptation. Participants described the first 3–4 days as a period of complete communication collapse, during which traditional emergency call systems failed. Consequently, EMS teams conducted direct field assessments and relied on informal channels such as WhatsApp groups to coordinate. Similar patterns were noted by Şen & Akgül¹⁶ and Bozkurt & Demir,¹⁷ who found that social media platforms played a vital role in bridging communication gaps and facilitating information exchange during the earthquakes. These findings suggest that the inclusion of social media-based digital communication tools within official ICS structures may enhance operational adaptability during disasters.

Incident site security

Participants reported major security gaps in the first days following the earthquake. The lack of coordination with law enforcement and inadequate communication channels prevented the establishment of safe working environments. Tayfur et al.¹⁸ also identified safety concerns such as aftershocks, fires, and looting incidents that heightened the risks for responders. Similarly, Polat¹⁹ emphasized that stable and resilient communication systems are essential for maintaining inter-agency coordination during crises. These findings underline the importance of integrating security management and technological communication solutions into the ICS framework to ensure operational safety and continuity.

Inter-agency coordination

Inter-agency coordination is central to effective disaster management, yet participants described significant fragmentation among EMS, AFAD, fire, and law enforcement units. This aligns with Güzel & Noksan,²⁰ who noted coordination deficiencies among institutions responding to disasters. Bilici²¹ and İntepe²² similarly emphasized that successful collaboration requires both horizontal and vertical communication mechanisms. According to Sıddeek & Sipahi²³ and Sari,²⁴ coordination and governance remain key challenges in disaster response systems, especially in developing contexts. Strengthening these governance and coordination mechanisms within ICS can enhance integration, minimize redundancy, and promote faster decision-making during emergencies.

Resource insufficiency

Although personnel and material resources eventually reached adequate levels, early shortages and logistical disorganization severely hindered response efforts. Tayfur et al.¹⁸ highlighted that not only resource procurement but also accurate logistical planning are vital for effective disaster management. Yılmaz et al.²⁵ and Yeşilyurt & Karşoğlu²⁶ similarly noted that despite the deployment of large numbers of health professionals, uneven resource distribution created imbalances across regions. Effective ICS implementation requires both adequate resources and coordinated logistics planning to prevent duplication and ensure equitable deployment.

Disaster triage

Findings revealed inconsistencies in the application of disaster triage. Many EMS personnel resorted to the “grab and go” method due to security issues and overcrowded conditions, particularly during the first days. Ripoll-Gallardo et al.²⁷ similarly observed that triage often fails when scene safety cannot be guaranteed. Düzova²⁸ and Lansiaux et al.²⁹ argue that while “grab and go” can reduce response times, it must be integrated into structured coordination and planning mechanisms. Failure to incorporate this approach into ICS procedures risks neglecting critically injured patients who require immediate care.

Patient transport process

Infrastructure damage and inadequate coordination hindered timely patient transfers. Participants reported blocked roads, collapsed bridges, and insufficient use of air ambulances, echoing the findings of Polat¹⁹ and Okur et al.³⁰ Adıyaman³¹ and Marangoz & İzci³² also highlighted that damaged infrastructure weakens disaster response efficiency. These conditions illustrate that physical vulnerabilities directly compromise the ICS’s operational effectiveness by disrupting command communication and delaying patient evacuation. Strengthening transport logistics and integrating flexible air evacuation strategies are therefore essential to ensure continuity of medical care in large-scale disasters.

Policy and practice implications

Overall, this study highlights the need to strengthen disaster preparedness and coordination mechanisms within Türkiye’s healthcare and emergency response systems. The findings indicate that ICS integration must be reinforced through realistic scenario-based training, resilient communication infrastructure, and cross-sector governance frameworks.

Key recommendations include:

Updating disaster response plans to ensure their operational feasibility under real conditions;

Integrating redundant communication systems, including secure digital platforms, into ICS communication protocols;

Enhancing law enforcement and EMS collaboration to maintain safety and control at disaster sites;

Implementing centralized logistics management to optimize resource allocation;

Incorporating structured triage and transport protocols, including the “grab and go” approach, into ICS operational guides.

By addressing these systemic weaknesses, disaster response capacity can be strengthened, and EMS personnel will be better equipped to adapt to complex and dynamic ICS environments in future large-scale emergencies.

Conclusion

This study highlights that fundamental deficiencies—particularly the absence of pre-defined intervention plans, communication breakdowns, limited scene security, and poor inter-agency coordination—significantly hindered the ability of EMS personnel to adapt to the ICS during the Kahramanmaraş Earthquakes. Early-stage shortages in logistics and resource management further disrupted the efficiency of response efforts, compelling teams to employ alternative approaches such as the “grab and go” method. These challenges underscore the need for robust preparedness frameworks that ensure operational continuity under chaotic disaster conditions. Strengthening planning, communication infrastructure, and coordination mechanisms is essential for building a more resilient ICS structure. Moreover, continuous training and simulation-based exercises aimed at enhancing EMS personnel’s familiarity with the ICS can foster adaptability, improve field-based decision-making, and ultimately increase the effectiveness of future disaster interventions.

Limitations

This study has several limitations that should be acknowledged. First, as a qualitative multiple case analysis, the findings are not intended to be statistically generalizable to all EMS personnel or disaster contexts. The use of purposive sampling may introduce selection bias; however, this approach is consistent with the exploratory and context-specific nature of qualitative research and is appropriate for capturing in-depth lived experiences.

Second, the data were based on self-reported accounts, which may have been influenced by recall bias or emotional responses due to the traumatic nature of the disaster. In addition, data collection was conducted approximately one year after the event, which may have further affected participants’ recollections. Nevertheless, the consistency of

themes across participants and the inclusion of EMS professionals from multiple provinces support the internal validity of the findings for the cases examined. Recall-related limitations have also been widely acknowledged in qualitative studies examining disaster response and traumatic occupational experiences. Previous qualitative research has demonstrated that delayed data collection following large-scale emergencies may influence participants' recollections, emotional framing, and narrative emphasis; however, such retrospective accounts remain valuable for capturing meaning-making processes and lived experiences in disaster contexts.^{33–35} Similar limitations related to recall bias have been reported in qualitative studies published in applied occupational health journals, including *Work*, particularly in research involving emergency responders and disaster-exposed professionals.

The results should therefore be interpreted in terms of their transferability to similar disaster response contexts rather than statistical generalization. Future research employing mixed-methods or longitudinal designs, as well as the integration of objective data sources, may further strengthen understanding of ICS adaptation across different disaster types and settings.

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Ethical considerations

This study was conducted in accordance with the Declaration of Helsinki and approved by the Ege University Medical Research Ethics Committee (Approval No: 25.01.2024).

Informed consent

In accordance with ethical principles, informed consent was obtained from all participants.

Credit author statement

HKG, AE: Conceptualization, Methodology. SD, KOB.: Data curation, Writing- Original draft preparation. HKG, KOB, TÇ: Visualization, Investigation. SD, AE: Supervision.: HKG: Writing- Reviewing and Editing.

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Declaration of conflicting interests

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Reporting guidelines

This study was conducted and reported in accordance with the COREQ checklist to ensure the transparency and rigor of the qualitative research process.

Data availability statement

The qualitative interview data supporting the findings of this study are available from the corresponding author upon reasonable request.

Supplemental material

Supplemental material for this article is available online.

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