



Original paper

## Sharing the Responsibility: Ministry of National Education's Disaster Preparedness and Response to Kahramanmaraş Earthquake

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**Abstract** Disaster-resilient communities develop effective preparedness, response, recovery, and mitigation strategies. Following the experience of earthquakes on February 6, the Turkish community has been questioning its resilience. This paper examined the Ministry of National Education's five-year preparedness strategies before the earthquake and its response to the February 6 earthquakes in Turkiye. The findings revealed that the Ministry made efforts to raise awareness among the community by developing training programs and securing schools by strengthening or rebuilding facilities. The ministry's disaster response actions were classified into five categories: education, first aid and healthcare, food and water management, search and rescue, and shelter management. Our analysis suggested that the Ministry put crucial effort into disaster education, but more was needed to reach the entire school community. Furthermore, the Ministry responded promptly to the categories of food and water management, search and rescue, and shelter management from the first day, but not in its primary responsibility of education category.

**Keywords:** Disaster management, disaster preparedness, disaster response, Kahramanmaraş Earthquakes, disaster education, educational management.

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## 1. INTRODUCTION

The Disaster Management Cycle first appeared in the early 1970s and was created to serve as an illustration of the continual process by which governments, corporations, and civil society prepare for and lessen the effects of catastrophes, respond during and immediately after a disaster, and take action to recover (Baird et al., 1975). The Disaster Management Cycle has seen significant alteration over the following 50 years as various governments and organizations have adjusted it to match their unique needs, such as the University of Bradford Disaster Research Unit, FEMA (Federal Emergency Management Agency of the United States of America), UNDRRO (United Nations Disaster Relief Organisation), Asian Development Bank, Foundation of Development Cooperation Cycle, and North Carolina State University Department of Civil Engineering (Coetzee, 2010). The most typical four-phase disaster management cycle can be encapsulated as disaster preparation, response, recovery, and mitigation (Erdelj et al., 2017).

Disaster response actions refer to the coordinated efforts taken by individuals, organizations, and governments to mitigate the impact of disasters and provide relief to those affected by them. These actions are crucial in minimizing the loss of life and property and providing medical aid, food, shelter, and other necessities to those impacted by disasters. The East Anatolian fault ruptured on February 6, 2023, causing two earthquakes in eastern Türkiye with a magnitude of 7.8 at 4:17 a.m., and a magnitude of 7.5 on the Richter Scale at 1:24 p.m. (European-Mediterranean Seismological Centre, 2023). An estimated 16 million people were impacted by the earthquake, which devastated mainly ten provinces. Nine hours later, a second 7.6-magnitude earthquake occurred (Mavouli et al., 2023). The extent of the devastation was not anticipated. As of March 27, 2023, one month after the disaster, more than 50,000 individuals have died, and 3.3 million have been displaced (UNDP, 2023a). Among those rescued from the wreckage, deaths continued due to some complications related to the effects of the earthquake. Unfortunately, as of the date this article was written (January 2024), the region has still needed humanitarian aid. The survivors and others who were not directly affected by the earthquake feel anger and sadness together, and people have been questioning public officials responsible for disaster management (BBC, 2023).

Our motivation for preparing this paper is to draw a picture of Türkiye's disaster management in relation to the current disaster. Disaster management is a complex and challenging task that requires the collective effort of all stakeholders. Collaboration among stakeholders can enhance their capacity to manage disasters, minimize the impact of disasters on communities, and promote community resilience. By sharing responsibility, accountability is ensured, community engagement is enhanced, and resource allocation is optimized. When compared to other ministries, the Ministry of National Education (MoNE) annually holds the largest share of the central government budget. With a population of over 1 million teachers and 19 million students, it is a significant entity directly impacting a large segment of the population. The inclusion of this structure in disaster management processes provides a crucial human resource for main responsible institutions like the Ministry of Interior Crisis and Disaster and Emergency Management Presidency and Turkish Red Crescent, offering them faster and more effective access to local communities. Due to its structure, we chose to focus our research on the pre- and post-disaster activities of the MoNE.

More specifically, in this study, we will discuss the efforts of the MoNE for disaster preparation before the Kahramanmaraş Earthquakes and its disaster response starting on February 6, 2023. To reach this purpose, the following research questions guided the study:

1. What has the Ministry of National Education done before the February 6 Earthquakes for disaster preparation of the school community?
2. What has the Ministry of National Education done in the disaster response phase after the February 6 Earthquakes for the recovery of society?

## 2. Sharing The Responsibility

Birkland (2005) defined policy as a governmental statement outlining intentions through various means such as laws, regulations, rulings, decisions, or orders, either individually or in combination. The primary goals of government policies predominantly revolve around efficiency, equity, or security (Pearson, Gotsch, & Bahri, 2004). Historically, policy classifications categorized policies into topical domains like education, health, and transportation. In contemporary times, the taxonomy of policies has evolved into three overarching categories: distributive, redistributive, and regulatory policies (Lowi, 1964). Subsequent refinements by Ripley and Franklin (1991) further distinguished regulatory policy into protective and competitive regulatory components. Within this framework, disaster management policies, designed to shield individuals from disasters or provide aid to those affected, typically align with the categories of distributive policy and protective regulation. The essence of public policy lies in its formulation, representing a deliberate effort to intervene in public life's intricacies (Samutra et al., 2022). Within the realm of disaster management, the intricate interplay of policies, stakeholders, and resources necessitates a nuanced understanding of governance structures. The efficacy of disaster management policies hinges on collaborative efforts among government agencies, non-governmental organizations, and local communities (Chen et al., 2013). This collaboration is particularly vital in the education sector, ensuring the integration of disaster resilience into the very fabric of the educational system.

During a disaster triggered by nature-based hazards, people could experience their own anguish as well as observe the suffering of others. Loss of possessions, school interruption, and property displacement make recovery more difficult (Fussell & Lowe, 2014; Vasterling, 2008). Disaster management involves the coordinated effort of various actors to mitigate, prepare for, respond to, and recover from disasters. These actors can include government agencies, non-governmental organizations, community groups, and individual citizens. Effective disaster management requires a collaborative approach that involves sharing resources, expertise, and responsibilities. Collaboration can enhance the capacity of stakeholders to manage disasters, minimize the impact of disasters on communities, and promote community resilience.

Modern disaster and emergency management policies generally follow collaborative approaches integrating both governmental and non-governmental capacities (Kapucu et al., 2010). Many countries have specific governmental ministries or agencies dedicated to disaster management or emergency response such as ministries of home affairs. Commonly, these entities are responsible for coordinating disaster preparedness, response, recovery, and mitigation efforts. Although the main role has been devoted to these ministries and agencies, ministries of education have also assumed pivotal roles, particularly within the pre-disaster phase. A comprehensive examination of effective disaster education strategies across 30 countries conducted by UNICEF underscores the leadership role played by the Ministries of Education (Selby & Kagawa, 2012). Noteworthy examples include Australia, the UK, and Japan, where departments of education motivate schools to prepare emergency management plans (Mutch, 2014). In certain countries, the education sector not only shares responsibilities

in disaster management but is also entrusted with post-disaster mitigation duties. As an example, Japan leverages schools as community shelters during the post-disaster phase (Kawasaki et al., 2020). Schools can significantly contribute to this procedure by offering a stable and familiar setting, particularly for children and adolescents (Lazarus, Jimerson, & Brock, 2003).

### **3. Disaster Management in Turkiye**

A review of the research reveals that tragic events led to the development of Turkiye's disaster and crisis management system. The Marmara Earthquake in 1999 marked a turning point in Turkish crisis management since it exposed the shortcomings and ineffectiveness of earlier disaster preparedness measures. More than 15,000 people were killed, over 250,000 were left homeless, 214,000 residential and 30,000 commercial buildings were damaged, and it cost the Turkish economy more than US\$16 billion in total (Steinberg et al., 2004). Around two hours after the earthquake, at 05:30 a.m., representatives of the General Directorate of the Civil Defence, a central government agency, arrived in the region. Yet, there was a lot of ambiguity on how the rescue efforts would be organized in the absence of adequate communication infrastructure and radio dispatches on trucks. Government officials were unable to send the appropriate kind of relief to the appropriate areas due to a lack of accurate information (Gulkan, 2002). When additional rescue teams arrived, they were unsure of how to proceed, where to begin, and how to contact other rescue teams and government representatives. According to Corbacioglu and Kapucu (2006), the communication channels' perceived openness was low, which led to poor coordination between first responders. For instance, the majority of the approximately 2,500 foreign voluntary and non-governmental organizations that responded to the earthquake without providing effective relief have already left (JICA, 2004). Similar information flow issues prevented prompt, well-informed response, particularly during the first three days, between medical emergency centers, rescue teams, police, and volunteers (Corbacioglu & Kapucu, 2006). Also, after five days, the Turkish Red Crescent, known as Kizilay, arrived in the region. Hence, neighbors, relatives, people, and other voluntary efforts primarily provided the initial relief and rescue efforts (Jalali, 2002). Scholars reflected on the lessons of the 1999 earthquake in Turkiye, writing on the post-earthquake response. Following the disaster, Daley et al. (2001) looked at how the displaced population's needs were assessed, focusing on concerns with food, shelter, medical treatment, water and sanitation, and access to information. Jalali (2002) examined how NGOs and the private sector assist survivors and the effects of their involvement on state-civil society ties in Turkiye. By examining the frequency of post-traumatic stress disorder and comorbid depression in the years following the accident and the significance of continued mental health support for survivors, Salcioglu, Basoglu, and Livanou (2007) addressed the psychosocial needs.

Regarding disaster response and damage prevention, Turkiye has complied with the Disaster Emergency Response Services Regulation since 2013. As a result, the Ministry of Interior Crisis and Disaster and Emergency Management Presidency (AFAD) of the Republic of Turkiye takes action to prevent disasters (Sahin, 2019). This idea explains how Turkiye's emergency management center functions as a single-source service. In Turkiye, the organization of disaster response efforts has historically been governed by diverse regulations. However, a significant milestone was reached in 2014 with the introduction of the Turkiye Disaster Response Plan (TAMP) by the AFAD. TAMP serves the pivotal purpose of

delineating the roles and responsibilities of service groups and coordination units involved in responding to disasters and emergencies. It seeks to establish fundamental principles for response planning encompassing the pre-, during, and post-disaster phases. The ambit of TAMP extends to ministries, institutions, organizations, non-governmental entities, and individual entities engaged in disaster and emergency response across all types and magnitudes (AFAD, 2013). According to TAMP, the roles of the National Disaster Intervention Organization are distributed among ministries as follows: the Ministry of Transport and Infrastructure is responsible for communication, transportation infrastructure, and logistics; the Ministry of Environment and Urbanization is tasked with disaster infrastructure, damage assessment, debris removal, identification, and burial matters; the Ministry of Interior handles security, traffic, evacuation, and settlement planning; the Ministry of Health oversees health-related issues; the Ministry of Energy and Natural Resources is responsible for energy matters; the Turkish Red Crescent is involved in nutrition issues; the Ministry of Agriculture and Forestry takes charge of agriculture, forestry, food, and water concerns; the Ministry of Treasury and Finance is responsible for disaster damage assessment; and the Ministry of Family and Social Services is accountable for psychosocial support, in-kind donations, and warehouse management. Whereas AFAD is responsible for search and rescue, shelter, international support and cooperation, information management assessment and monitoring, financial and resource management, as well as national and international cash donations (AFAD, 2013).

Geographically, TAMP encompasses the entirety of Türkiye, assigning responsibility to all legal and natural entities within the nation and assuming the obligation to define the fundamental principles of response activities (Sahin, 2020). While TAMP provides a systematic framework for responding to disasters in Türkiye, it lacks punitive measures for instances where actors within the disaster management network fail to fulfill their designated responsibilities. Evaluations of response organizations reveal significant challenges in the execution of responsibilities and the establishment of trust between institutions (Durmuş & Eksi, 2023). To address these issues, it is recommended to elucidate the job descriptions of institutions involved in TAMP at both the national and local levels. This involves a clearer definition of coordination mechanisms between institutions and an enhancement of interaction among stakeholders engaged in information and planning services (Durmuş & Eksi, 2023).

The new approach to crisis management calls for flexibility in both linear and non-linear management. Because they allow governments to coordinate both local and national public organizations while taking into account non-profit organizations' participation, horizontal networks are gaining more attention. The Turkish Crisis Management System's centralized form allows the government greater control over resource allocation and coordination. Making decisions about disaster management at the national level is generally criticized in the literature. Particularly because not all provinces have the same degree of regular organization may result in a greater disconnect between decision-makers and the implementation area which could result in the emergence of unsuitable procedures in the disaster area, a slow response, and unreasonable local responses to the decisions made (Henderson, 2004). Yet, relying solely on local authorities to make emergency management decisions quickly might lead to misreading the big picture. Although there is a national crisis management strategy, it does not cover all circumstances and threats; as a result, the local initiative is given more importance. The effectiveness of local governments might be enhanced by better resource management and judgment about a crisis management system. As a result of the formal government structure that comes from the existing crisis management strategy in Türkiye's linear approach, non-profit organizations are not given much consideration. Non-profit organizations may assist with

one of the crucial responsibilities during an emergency, despite research and rescue teams being still hard to come by and ineffective (JICA, 2004). Plans will be more effective if local governments have more authority over crisis management. Local volunteers, in particular, are crucial during catastrophes and require regular communication with government officials for planning and training purposes (Unlu, Kapucu, & Sahin, 2010).

Regarding response, literature has highlighted the effectiveness of Turkiye's search and rescue operations in the past. For example, Erkan et al. (2015) claimed that Turkiye's search and rescue teams were able to respond quickly and effectively to the 2011 Van earthquake, rescuing more than 17,000 people. Similarly, Turkdogan et al. (2021) reported that Turkiye's emergency medical services were able to provide essential medical care to earthquake survivors in the 2019 Elazig earthquake, with a 100% survival rate among patients treated in the first 24 hours. Despite these successes, some researchers have also identified challenges and areas for improvement in Turkiye's disaster management system. Caymaz et al. (2013) noted that there was a need to improve coordination between different agencies involved in disaster response, as well as to increase public awareness and participation in disaster management. Similarly, Platt and Drinkwater (2016) summarized Turkiye's disaster management system as primarily focused on response and recovery, with less emphasis on preparedness and risk reduction measures. The present paper will continue with the methods employed to examine the preparation and response actions of the MoNE.

## **4. Methods**

### **4.1 Design**

The study was designed as a qualitative case study from the phenomenological perspective. To produce a certain understanding of the defined phenomena, the document analysis method is generally applicable in providing rich data sets (Yin, 1994). The Disaster Responses phenomenon was aimed to elicit from the case of Turkiye's Kahramanmaraş Earthquakes. Therefore, the research was carried out using a document analysis method. Qualitative document analysis is a systematic and rigorous procedure for analyzing and interpreting documents (Bowen, 2009). As in other research methods, document analysis aims also to catch out the meaning, generate understanding, and produce empirical knowledge (Strauss & Cobin, 1998).

### **4.2 Research Context**

Turkiye is located in Anatolia, serving as a bridge between Asia and Europe. The country comprises 81 provinces and seven regions, with a population of 85,279,553 (Turkish Statistical Institute, 2023). Education is centrally managed by MoNE, which is responsible for critical issues such as curricula and teacher appointments. Currently, there are 70,383 public schools with a total of 19,155,571 students and 1,139,673 teachers managed by MoNE (MoNE, 2022b).

### 4.3 Data Collection and Analysis

The document analysis takes place by examining the documents to reach the data for the research objectives (Owen, 2014). Prior (2008) claims that since documents are created in social contexts and are always to be viewed as collective products, they must be viewed as situated products as opposed to being fixed and stable objects in the world. To answer the first research question, “What has the Ministry of National Education done before the February 6 Earthquakes for disaster preparation of the school community?” the literature was reviewed as well as documents (reports, policy papers, cooperation protocols, news, and announcements) published by MoNE were analyzed. Since both researchers work in MoNE, information notices describing the contributions to disaster prevention and management in the context of education were sent to them by each General Directorate. Data is limited to activities carried out in the last five years (2018-2023). Searching the official website of MoNE ([www.meb.gov.tr](http://www.meb.gov.tr)) with the keyword “earthquake [deprem in Turkish]” between 2018-2023, 157 news items were found, and 136 of them are from the current year of 2023. Looking chronologically, 2 of the news are from 2019, 12 of them were published in 2020, 2 of the news were found in 2021, and 5 were announced in 2022. All the texts obtained from the website have been turned into a single document. Then the researchers read the whole document, and the data set was purified from the texts other than the actions regarding the Ministry's preparatory behaviors. Thus, the projects, activities, and implementations carried out by MoNE in 2018-2023 were composed of the sample of the study. All the data gathered from the documents in this phase were presented in a table.

To answer the second research question, “What has the Ministry of National Education done in the disaster response phase after the February 6 Earthquakes for the recovery of society?” the official website and social media accounts (Instagram and Twitter) of MoNE were analyzed. The conventional content analysis method was employed to determine the codes and categories. Conventional content analysis is generally used with a study design whose aim is to describe a phenomenon, in this case, the disaster response of MoNE. Conventional content analysis is an inductive method, generally preferred to build new findings on the existing theory or literature on a phenomenon (Mayring, 2019). Rather than using preconceived categories, researchers prefer to derive codes by reading the data repeatedly (Miles & Huberman, 1994). After deriving the codes, the bonds between the codes are tied, and the code classifications lead to category generation (Patton, 2002).

In this study, firstly, the social media accounts and website of MoNE were reviewed day by day for a month after the earthquakes hit. 317 posts were found on the official social media accounts of MoNE (@tcmeb on Twitter and Instagram) between February 6 and March 6, 2023. The posts were gathered in a database, translated into English, and presented in a table (See Appendix 1). Then the researchers repeatedly read all the texts in the table to reach immersion and get the meaning of the whole (Tesch, 2013). The unrelated text on the disaster response actions was excluded. The text was coded line by line, and finally, the related codes were combined, and the data were presented in categories. The monthly variation of the posts over time is shown in Figure 1.

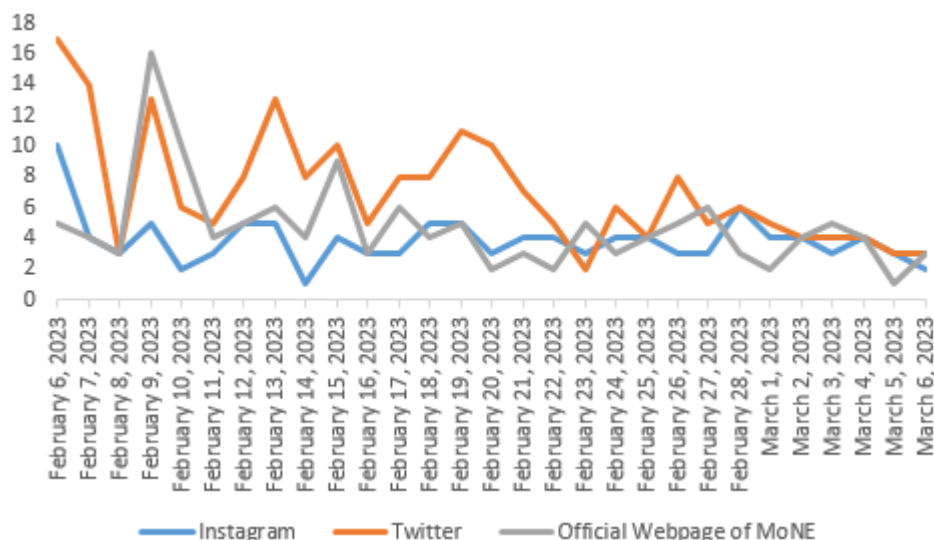


Figure 1. The number of posts on the official social media accounts of MoNE.

#### 4.4 Reliability and Validity

To ensure the trustworthiness of research findings, some measures were taken. Firstly, the interrater reliability method was preferred to prevent bias from the analyst. To ensure consistency and reliability of the coding and categorizing process, the analysis of each text was verified by a second researcher. To reach a robust interpretative analysis and conclusions, the inconsistencies between the coders were discussed by two researchers, and shared judgments were reached. To assure the impartiality and dependability of the findings, the dataset with the categories determined by the researchers was presented in the appendix of the paper. In this way, an opportunity is offered for other researchers and readers to analyze the same data under the same conditions (Altheide, 1996). As suggested (Morse et al., 2002), in this study, we established methodological consistency and created a dynamic interaction between data collecting and analysis, and theoretical thinking to validate both the reliability and validity of the data. An analysis is regarded as dependable if another researcher arrives at the same overall conclusion under these conditions. Moreover, to prevent translation misleadings, the English version of the dataset was checked by both researchers and discussed to eliminate incompatibilities. To ensure representativeness, the dataset was composed not only of the official website of MoNE but also of the social media accounts. Finally, researchers included all kinds of social media accounts and also checked the private account of the minister so as not to skip any action related to the disaster response of MoNE.

### 5. Findings

#### 5.1 MoNE’s Disaster Preparation

Disaster preparation covers a set of steps to prevent natural hazards from turning into disasters. It is not a stage that is solely the responsibility of individuals; on the contrary, it emphasizes the multi-sectoral and multi-layered preparation of society (Olu et al., 2016). The preparation



actions should be undertaken in advance by governments, organizations, communities, and individuals to reduce the loss or injuries by creating and implementing the early warning system, designing emergency drills, and training for search and rescue (EC, 2023). Thus, in terms of duties and responsibilities, MoNE is one of the primary and natural members of the disaster management system. To answer the first research question, “What has the Ministry of National Education done before the February 6 Earthquakes for disaster preparation of the school community?”, the projects, activities, or implementations carried out by different general directorates of MoNE between 2018-2023 were summarized in Table 1.

According to the table, MoNE's disaster preparedness actions between 2018-2023 are heavily weighted toward awareness-raising training activities. These training activities are mainly for 4th-grade students in primary schools and high school students in boarding schools, which are designed as projects and therefore do not cover the entire students in the national system. In contrast to the planned training activities for students, the training activities for teachers covered the entire teachers working for the Ministry. It can be concluded that the Directorate General of Support Services has made some preparations in the field of disaster response, such as the MoNE AKUB [*Search and Rescue Unit*], and that the Directorate General of Construction and Real Estate has carried out physical work on the security of educational buildings in the last five years; however, there is insufficient information from the documents to make a judgment about the extent of this in terms of earthquake preparedness in general.

Table 1. The Disaster Preparation Actions of MoNE between 2018-2023

Name of a Project/ Activity/ Implementation	Year	Directorate	Target Group	Outcomes
“For an Earthquake-Ready Turkiye, Our Priority is Trust, Our Responsibility is Assurance” Project	2018-2020	Basic Education	4th grade students in 10 provinces	Awareness-raising activities were carried out for 60,000 students (NDII, 2014; MoNE, 2021c).
“National Disaster Risk Management” Project	2019-2024	Construction and Real Estate	Strengthening 300 and rebuilding 50 schools in high-risk earthquake regions	Reducing the risk of 350 vulnerable schools, and 280,000 students and education personnel having access to earthquake-resistant education facilities (MoNE, 2019b).
Education Infrastructure for Resilience	2017-2022	Construction and Real Estate	To reach 62 schools, 1602 classrooms, and 48,060 students	55 school facilities were built, and 1474 additional classrooms were built (WB, 2023).
“Education for All in Times of Crisis III” Projects	2019-current	Construction and Real Estate	School facilities of Syrian and Turkish children at the age of 3-17 (EU, 2020)	Could not reach the outcomes of the project.
“Disaster and First Aid Training in Boarding-Schools”	2020-2021	Secondary Education	Training all boarding high school students	To minimize disaster risks, students and teachers from 10 boarding schools were trained (MoNE, 2020).
Updating the basic education and training programs according to the disaster management approach	2023	Board of Education	K-8 students and teachers	The disaster education-related objectives of primary school social sciences and life sciences curricula were revised (MoNE, 2023a).
Search and Rescue Trainings	2019-2021	Support Services	All personnel of MoNE	108,000 people attended education (MoNE, 2022a).
The Project of Increasing the Resilience of Schools Against Earthquakes with Organizational Learning Approach	2022-2023	Strategy Development	Elementary school students, teachers, and school administrators in Istanbul	Needs assessment report on disaster preparedness of Istanbul teachers and students was published. An experimental disaster resilience training program was implemented in 3 schools (STRC, 2021).
School-Based Disaster Education	2019-2022	Teacher Training and Development	Teachers and students	600,000 teachers participated online, and 135,000 teachers received face-to-face disaster education training program. Four teachers’ books and two students’ books were prepared (MoNE, 2019a).
Disaster Awareness Education	2018-2022	Lifelong Learning	Individuals over the age of 13	14,732 trainees, 5,869 men, and 8,863 women, attended the training throughout Turkiye (MoNE, 2021a).

## 5.2 MoNE’s Disaster Response

Disaster response is the phase where important needs such as search and rescue, water and food management, temporary shelter, first aid, and medical response are met immediately after a catastrophic event. In this phase, the foremost purpose is to ensure that the maximum number of people survive with the best possible outcomes (O’Neill, 2005). The codes and categories that emerged from the analysis of the posts on the official website and social media accounts of MoNE are presented in Table 2. According to the findings, the disaster response actions of MoNE were analyzed under five categories, and the monthly frequency of each category in a month was determined in days. Not surprisingly, MoNE mostly shared posts in relation to the *Education* category for 21 days in a month. The second most observed category was *Food and Water Management*. *Shelter Management*, *First Aid and Health Care*, and *Search and Rescue* categories follow them with an observation frequency of 10, 8, and 4 days relatively.

Table 2. Categories and Codes of Disaster Response Actions of MoNE

Response Category	Codes	<i>f</i> (days)
Education	School closures, school opening, establishing education environment (tents, containers, prefabricated buildings, hospital classroom, martyrdom schools, DYK [Support and Training Courses] centers), education supplies (stationery, books), ministerial decisions (examinations, students’ transfers/registrations, and private schools), establishing TV sets	21
First Aid and Health Care	Psychosocial support/activities, psychosocial support environments (psychosocial support tents, village life centers, early childhood education tents), Psychosocial Support Action Plan, toys for children, painting container classrooms	8
Food and Water Management	Food (hot meals, loaves of bread, stored food), mobile kitchens	15
Search and Rescue	MEB AKUB rescue team, search and rescue efforts	4
Shelter Management	Shelter, accommodation, tents, containers, teachers' lodges, practice hotels, indoor sports halls, generators, heaters, lights, stoves, sleeping bags, clothes (scarves, berets, tracksuits), blankets	10

**Education.** The first category of “Education” is related to actions of the basic missions of MoNE. The social media accounts and website of MoNE mentioned educational decisions and actions in 20 days in a month. These response actions mostly include ( $n=15$ ) bureaucratic decisions on school openings, closures, and transferring the registration of students affected by the earthquake to other provinces:

“It has been decided not to seek attendance in the spring term for students in 11 provinces.” (Feb, 9)

“The omitting of the spring-semester objectives in high and university entrance examinations was decided for this year.” (Feb, 10)

“School closures in 11 provinces have been extended until March 1; education is planned to start according to district and school-based decisions.” (Feb, 12)

Furthermore, students' attendance problems ( $n=1$ ), their accommodation to boarding schools ( $n=1$ ), and their registration to private schools ( $n=1$ ) were also observed in the first days of the disaster response stage. Some of the posts coded in this category are exemplified below:

"It has been decided not to seek attendance in the spring term for students in 11 provinces." (Feb, 9)

"Capacity was created for 25,133 students in private schools; until this date, 828 students affected by the earthquake have benefited." (Feb, 14)

"Middle and high school students will be able to be placed directly in "free boarding" schools in the provinces where they will continue their education." (Feb, 17)

While these actions were mostly observed in the very first days of the disaster, measures taken and preparation actions for the school openings in the region ( $n=8$ ) started on February 21. Furthermore, MoNE decided to open DYK courses to help students' exam preparations. For this purpose, as of February 27, MoNE established 510 DYK centers in the region.

"Education sets consisting of 7,500,000 textbooks, 5,500,000 auxiliary resources, and 130,000 stationery packs prepared." (Feb, 23)

"Formal education started in Şanlıurfa, Diyarbakır, and Kilis. In other provinces in the region, education continues at 1,476 points." (March, 3)

**First Aid and Health Care.** The psychological support efforts of MoNE were coded under the second category of "First Aid and Health Care." The social media accounts and website of MoNE announced psychosocial support efforts of 2,000 teachers working actively for the children in the tents on February, 10 for the first time after the earthquakes hit the region. After this date, the psychosocial support efforts of teachers were observed in the media for three days (Feb, 10, 12, and 13). Moreover, MoNE's media mentioned vocational and technical school teachers' and students' psychosocial support efforts in two days:

"In another Public Education Center in Sakarya, handmade toys consisting of various animal figures were prepared for the children affected by earthquakes." (Feb, 24)

"Students and teachers of the Istanbul Technical Institute designed and produced pillows with a fairy tale print on one side." (Feb, 28)

"Students of a fine arts high school in Istanbul are preparing paintings to color the container classrooms." (March, 1)

6 days after the earthquakes, MoNE published the "Post-Earthquake Psychosocial Support Action Plan" and carried out an online teacher training program including the Post Disaster Mental Health and Loss and Grief Process of Children and Adolescents Seminars:

"After the earthquake disaster, the Ministry prepared and implemented the "Psychosocial Support Action Plan" for approximately 1.2 million teachers in order to carry out education and training activities in a healthier way." (Feb, 26)

Finally, MoNE announced the psychosocial first aid effort for the adults by establishing village life centers where various social, artistic, and vocational training activities are carried out for adults on February 26. However, no clear information was shared about whether the centers opened in every tent city in 11 provinces.

“Village life centers were established in tent cities where parents could attend various courses.”  
(Feb, 26)

**Food and Water Management.** The second most observed category of the study consisted of only the food theme, and the water theme was not observed in the first month after the disaster. Hot meals, loaves of bread, stored food, and mobile kitchen codes were categorized under the “Food and Water Management” title. According to the data, it could be clearly stated that MoNE made an intervention in food and water management from the second day of the earthquake. While the media shared how many people the Ministry provided food service to every day until February 18, it continued to share this information at a few days intervals after this date:

“Hot meals were provided to 372,000 people and accommodation service was provided to 251,000 people.” (Feb, 7)

“The vocational high schools produced 700,000 loaves of bread, prepared 300,000 stored food, and served hot meals for 500,000 people.” (Feb, 8)

“Until this date, in total, hot meals for 28,000,000 people, 26,000,000 bread, and 1,500,000 food packages were distributed.” (Feb, 26)

Although it is not MoNE's duty to set up a kitchen after a disaster, it was reported in the media on February 9 that a mobile kitchen was established.

“Ministry, in addition to the production capacity of 700,000 loaves of bread, 400,000 stored food, and 800,000 hot meals, decided to establish 60 mobile kitchens.” (Feb, 9)

“Ministry increased the number of mobile kitchens from 60 to 97.” (Feb, 25)

At this point, MoNE enabled vocational and technical high schools to produce mobile kitchens, thereby gaining a different perspective towards these high schools:

“The mobile kitchen with a daily capacity of 10,000 bread was produced in vocational high schools.” (March, 2)

**Search and Rescue.** The least mentioned category in the media was related to the search and rescue effort of MoNE. Although the “Search and Rescue” category was coded in only four days, the magnitude of the search and rescue efforts of MoNE could be understood from the increasing number of volunteer teachers from the first day of the disaster:

“The MoNE Search and Rescue Unit (MEB AKUB), consisting of 2,500 teachers, participated in the rescue efforts.” (Feb, 6)

“The number of personnel in the MEB AKUB team increased to 5,000.” (Feb, 12)

“MEB AKUB rescue team of 4,526 people and 35,000 volunteer teachers continued to work in the field.” (Feb, 25)

**Shelter Management.** The places where the survivors will stay (teacher's lodge, student dormitory, sports hall, tent, container) and some needs in the accommodation (heating tools, generators, sleeping bags, goods, clothes, etc.) were coded under this category. MoNE's efforts to create accommodation space are exemplified below:

“All teachers' lodges, practice hotels, indoor sports halls, and schools in the region were transformed into shelters.” (Feb, 6)

“The accommodation was provided for 450,000 people.” (Feb, 10)

“1,200 containers with solar panels have started to serve.” (Feb, 25)

Some efforts to meet the basic needs of accommodation such as heating, lighting, power supply, and clothing are reported below:

“375 trailer trucks and 121 trucks, 195 generators, 19,604 heaters, and 4,795 lights were transported to the region.” (Feb, 9)

“159 vocational high schools produced 10,000 stoves for the region.” (Feb, 11)

“Public education centers and vocational and technical high schools produced 60,000 sleeping bags.” (Feb, 13)

“Tents were produced in vocational and technical high schools.” (Feb, 18)

“Until this date, 500 scarves, 500 berets, 100 sets of tracksuits, and 100 blankets have been produced at the Public Education Center in Tokat.” (Feb, 24)

“1,000 tents and 76,000 sleeping bags were produced.” (Feb, 25)

## 6. Discussion

Turkiye, like many other countries, has faced numerous disasters in recent years, including earthquakes, floods, and wildfires. The country has implemented various disaster management policies and programs aimed at minimizing the impact of these disasters and providing assistance to affected communities. Although Turkiye has developed a strong legal framework for disaster management, including the Disaster and Emergency Management Presidency established in 2009, the latest experience showed that the services were not prepared enough, early warning systems did not work, and shelters and warehouses were not built emergently. The Kahramanmaraş earthquakes, taking their place in Turkish history as one of the most dramatic events, not only resulted in numerous casualties, injuries, and permanent disabilities in 11 provinces with 15 million population but also inflicted damage equivalent to 9% of Turkiye's GDP (UNDP, 2023a). As one of the most important stakeholders, in this paper, we aimed to understand MoNE's role in the preparation and response stages of the disaster management cycle.

In the first section of the analyses, MoNE's preparation interventions were examined. The pedagogical space for disaster preparedness is broad and includes school-based initiatives, public awareness campaigns, family and community learning, and adult education (Preston, 2012). The School-Based Disaster Education Project was carried out under the auspices of the Japan International Cooperation Agency and MoNE. By using a disaster training approach with 567 trainer teachers, the model quickly reached 135.375 teachers in 67 provinces in Turkiye. The implementation of an at-scale cascade teacher training approach for teacher professional development (Ozmen & Ince, 2017; Gokmenoglu, Sonmez, & Yavuz, 2021; Gokmenoglu et al., 2021). Regardless of the preparedness of teachers, therefore children, and their parents, earthquakes can be differentiated from other disasters triggered by natural hazards. Our research indicated that MoNE invested significant time and effort in raising awareness among students and teachers about disaster education. However, the pieces of the puzzle do not seem to fit together in providing comprehensive disaster education for all grades of students, teachers,

and parents. The findings also suggested that MoNE has made efforts to strengthen or rebuild schools against earthquakes, which is a time-consuming and costly task but crucial for saving lives (Taranath, 2004). Nevertheless, we were unable to obtain information about the initial assessment of schools' structural needs and how much progress has been made toward meeting those needs. By the way, MoNE initiated post-earthquake controls the day after the earthquake, covering all ten provinces. The damage detection focused on assessing the current condition of schools and other structures associated with the MoNE. The report indicated that 83 structures suffered significant damage, while 24 buildings were destroyed (MoNE, 2023b). The main reasons for collapsing buildings were found to be “poor quality of materials, inadequate details of load-bearing members, design of the load-bearing system that does not comply with the codes, effect of non-structural elements, *etc.*” (Ozturk et al., 2023, p.13).

In the second phase of our analyses, we aimed to examine MoNE's response to disaster after the Kahramanmaraş earthquakes. Disaster response involves the immediate actions taken during and immediately after a disaster to provide medical care, search and rescue operations, and other emergency services (Patterson et al., 2010). Similarly, according to our data, MoNE's response to disaster can be also classified into five categories: Education, first aid and health care, food and water management, search and rescue, and shelter management. The importance of disaster response actions cannot be overstated. Disasters can strike unexpectedly and cause immense damage, leaving people without basic necessities and unable to cope. In this disaster, people from 10 provinces were highly affected, and the state failed to meet basic needs. In addition to the collapse of buildings in more than one province at the same time, weather conditions were also challenging. Winter storms had already affected the area with snowfall and freezing temperatures when the earthquakes occurred, making the challenges of search and rescue operations more difficult (Erdik et al., 2023). In these conditions, we understood from the social media and website of MoNE, that it took immediate action to support search and rescue in the region with its AKUB team trained before the earthquakes happened. The MoNE teachers and other personnel worked in the region not only for search and rescue work but also for other tasks to mitigate the disaster harms. EARTH, which stands for Education and Research for Teachers on Hazardous Environment, is a teacher group in Japan that focuses on disaster preparedness and mitigation, founded in 2000. EARTH's efforts have contributed to enhancing Japan's disaster preparedness and mitigation capabilities, and serve as a valuable model for other countries facing similar challenges (Dogan, 2021; Kawasaki et al., 2020). Although AKUB does not work in exactly the same way as EARTH, it can still be recognized as an exemplary model that presents teachers' efforts before and after disasters to the world.

While MoNE was not primarily responsible for managing shelter, food, water, and medical care after earthquakes, it played a significant role in the response phase. Our data showed that the Ministry took the lead in managing shelters on the first day and managing food and water supplies on the second day. This situation can be understood within the framework of MoNE's innovative approach to vocational and technical education since 2018. Under this approach, the Ministry aimed to enhance the reputation and popularity of vocational-technical high schools by promoting their contribution to the community and production (MoNE, 2021b). Findings indicated that after the earthquake, vocational and technical high schools, as well as public education centers, played a crucial role in supporting the affected people. They contributed to various aspects of relief efforts, including producing tents, heaters, mobile kitchens, and food, as well as sewing and distributing sleeping bags, blankets, and clothes. Without disaster response actions, the impact of a disaster can be much greater, resulting in more significant loss of life and property damage. Effective disaster response actions can save lives, minimize damage, and help affected individuals and communities recover more quickly

(Helsloot & Ruitenbergh, 2004). As a result, MoNE has taken initiatives to ensure that schools serve as community centers and respond effectively to emergencies, such as earthquakes.

Although nature-based disasters can only last a short while, survivors may have to deal with the consequences for months or even years. In order to meet the diverse needs of children, families, and communities in the wake of a nature-based catastrophe, cooperation between the school crisis response team and a variety of community, state, and federal organizations and agencies is essential. At this point, schools are crucial institutions more than ever because students may reach their parents and the community through educational activities (Lazarus et al., 2003). MoNE put tremendous effort into psychological first aid to help students and teachers. For this purpose, according to our data, MoNE reported that psychological support teams were sent to the region on the fourth day of the earthquake. As of March 23, the school enrollment of 252,829 students from 10 provinces has been transferred to other provinces (MoNE, 2023c). The Ministry has also prepared "Post-Earthquake Psychosocial Support" teacher training and guides, as almost every teacher, may have students in their classroom who have been directly or indirectly affected by the earthquake.

Disasters can be traumatic for youths and children, undermining their sense of security and normalcy. Coping difficulties include disaster-related problems, displacement, family role in trauma, emotional responses, and coping mechanisms (Catani et al., 2008). Children do not forget the memory of disasters and may face post-traumatic stress disorder (Bahrack et al., 1998; Ronan & Towers, 2014). Symptoms vary by age group, including preschoolers' thumb-sucking and disturbed sleep, elementary school children's irritability and avoidance of school, and adolescents' disturbed sleep and lack of focus (Ohmi et al., 2002; Stafford et al., 2019). Disasters can harm children's physical and mental health, causing psychological harm, migration, neglect, and abuse. Under these circumstances, it can be said that the continuity of education is essential to maintain the well-being of students. Our findings indicated that under the education category, the MoNE mostly focused on transferring students between schools and opening DYK centers, which provide academic support for the university and high school entrance exams. Given the potential effects of a large-scale traumatic disaster on young people, it may have been more beneficial to waive entrance exams for high schools and universities in the affected region. This would have allowed students to avoid the added pressure of rigorous exams and facilitate their enrollment in institutions that could support their recovery.

## **7. Conclusion**

People's resilience and capacity to tolerate and recover from shocks, such as the recent earthquake in Türkiye, have decreased as a result of frequent climate-related disasters in recent years. These disasters' domino consequences gave the globe the much-needed wake-up call it required to develop stronger disaster resilience measures (UNDP, 2023b). Disaster response actions are critical in ensuring the safety and well-being of those affected by disasters. Through preparedness, response, recovery, and mitigation efforts, communities can minimize the impact of disasters and work to rebuild and recover after a crisis. Sharing responsibility promotes accountability among stakeholders. In disaster management, it is essential to have clear lines of responsibility and accountability to ensure that response efforts are effective and efficient. When responsibility is shared, each stakeholder is accountable for their role in the response effort, and the risk of individual stakeholders shirking their responsibilities is reduced. While the Ministry is an exemplary case for sharing responsibilities in areas such as food, water,



shelter management, first aid, and medical care, it is important to question its effectiveness and promptness in fulfilling its ultimate responsibility of education management.

In fact, the MoNE was responsible for the physical preparedness of school buildings, the training of school stakeholders for disaster preparedness, and the continuity of education after disasters. Under the Türkiye Disaster Intervention Plan, the MoNE does not officially hold a role within the National Disaster Intervention Organization Chart. In other words, it was not responsible for the production of tents, meals, blankets, clothing, or serving medical care as post-disaster responses. The answers to the second research question indicated that the MoNE has undertaken significant efforts regarding these responsibilities, which were not part of TAMP. One possible reason behind this initiative could be the candidacy of the Minister of National Education as a parliamentary candidate during that period. The earthquake occurred on February 6, 2023, just preceding the General Election on May 28, 2023, in Türkiye. During this period, the Minister, as a parliamentary candidate, took on active roles outside the traditional scope of the ministry to gain public support. Actions, such as distributing essential items, were prioritized for their emotional impact, aligning with societal sentiments before the elections. This pragmatic political strategy influenced the perceived sharing of responsibility, emphasizing immediate, tangible support over more long-term educational measures. From a more humanistic view, another possible reason could be the perceived lack of effectiveness of the institutions responsible for these tasks in the aftermath of earthquakes, ongoing discussions and criticisms in the public domain still surround this issue (Fisher et al., 2023; Shah, 2023), led the MoNE to take action.

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