






Education in Disaster Situations: The Impact of The Kahramanmaraş Earthquake on Teachers' Experiences

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Abstract

This study examines how the earthquake that occurred on February 6, 2023, in Kahramanmaraş, Turkey, has affected educational activities in the region. The research utilized questionnaires to survey teachers and gather information about the main problems they experienced after the earthquake and their solution suggestions. The findings provide valuable insights for educators and policymakers to tackle the challenges teachers and students face after a natural disaster. The study employed a basic qualitative research design within qualitative research methods. The study group comprised 42 volunteer teachers from eleven different Turkish provinces at various education levels who experienced the February 6, 2023, earthquake centered in Kahramanmaraş and participated in educational activities in the same area following the earthquake. The group of research participants was selected through easily accessible case sampling, one of the types of purposeful sampling. The data collected underwent content analysis. As per the study results, teachers detected issues that have arisen after the earthquake in the realms of educational infrastructure, psychosocial well-being, security, communication, and other factors. They then devised individual and collaborative solutions to address these challenges. Additionally, the study discussed the proposed solutions of teachers for addressing the psychosocial issues that students face in the aftermath of an earthquake. It provides crucial insights for comprehending the problems in post-earthquake education and extending support to students. Teachers' recommendations for enhancing earthquake education and awareness can significantly aid future preparedness and crisis management.

Keywords

Earthquake, education, disaster situations, teacher perspectives.

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INTRODUCTION

People think with concepts and express their thoughts with concepts. Disaster, one of these concepts, is defined as any destruction that deeply affects humanity (Özey, 2011, pp. 1). Disasters leave unforgettable traces because they change normal living conditions. In this respect, all kinds of disasters experienced in the past constitute the memory of people and societies regarding geography. In this context, the vital memories of teachers who experienced the earthquake whose epicenter was Kahramanmaraş on February 6, 2023, and who continued their educational activities in their regions after this earthquake are seen as an essential source of knowledge in preventing the damages of disasters that may occur in the future.

Most disasters are of natural origin, and there is no intervention of humans in any way (Özey, 2011, pp. 2). On the other hand, natural events cyclically affect the people in the geography where they occur. People become aware of natural events through the knowledge they acquire through experience and education (Shaw et al., 2004). However, any action they take without considering their knowledge of natural phenomena such as earthquakes, volcanic eruptions, storms, heat, etc., without basing natural phenomena and ways of protection from them on scientific data, results in damage and loss.

As Turkey is in a highly seismic region, it is a country with a high probability of facing earthquake-related disasters at any time (Değirmenci et al., 2019). Earthquakes are sudden oscillations and vibrations in the earth's crust that can cause significant changes in the earth. The extent of damage caused by earthquakes on the earth is directly proportional to the geological structure of the land, the resistance of buildings, the level of development of countries, and the earthquake awareness of individuals and society (Sözcü, 2019, pp. 1-8). Earthquakes cannot be prevented, but the consequences of earthquakes can be minimized with disaster awareness. Individuals can gain disaster awareness through a lifelong disaster education process. Disaster education is essential for individuals to know their geography, how to act in the face of possible disasters, to raise disaster awareness, and for this awareness to be sustainable. The most crucial feature of disaster education is that it can make the individual and, thus, the society conscious and resistant to disasters. In this context, disaster education can be defined as the process that allows individuals and society to act consciously against natural events. Disaster education aims to raise awareness of individuals about the risks that may arise before, during, and after disasters within the scope of disaster preparedness and to minimize disaster risks as much as possible.

Disaster training is generally given in schools, and the subject and material are human beings. It is only possible for teachers to provide an effective disaster education and for students to receive a good disaster education with a safe learning environment. Therefore, it is essential to ensure the continuity of post-disaster education. Because post-disaster education often provides psychological support for students' mental health, coping, and happiness (Lai et al., 2019; Masten et al., 2015; Masten & Narayan, 2012; Robinson et al., 2014). This function of education can become a symbol of the post-disaster recovery of society (Pacheco et al., 2022). However, it will contribute significantly to survival and return to normalcy after a significant trauma (Masten & Obradovic, 2008). The presence of students in safe learning environments and the provision of all kinds of support by teachers are two of the most important issues students need. The Ministry of National Education, the expert institution in education, develops curricula considering society's needs the individual, and nature. Therefore,

providing education after an earthquake is also among the duties of this institution. Teachers who fulfill this school duty prepare their students for daily life and the future. The strengths and weaknesses of teachers and curricula in the face of disasters can be better seen through post-earthquake education activities. However, it is argued that the curriculum should be organized around topics related to the concept of disaster, helping students to see the world as more than a set of experiences (Young vd., 2014, pp. 94), but this should be experience-based. If we accept this curricular approach, the fact that the knowledge to be taught about disasters is relevant to students' lives and includes scientific theoretical concepts will provide a strong rationale for the inclusion of disaster in the curriculum (Wrigley, 2018, pp. 7). The urgency and importance of disasters and their social demands are essential in showing how the learning objectives related to disasters should be in Turkey. For this reason, teachers' rich educational experiences related to disasters may contain both the rationale for developing programs and clues in creating individual and social disaster awareness that is more resilient against earthquakes. At the same time, this situation may reveal post-earthquake education-teaching problems and may contain solution suggestions.

Teachers receiving earthquake-disaster training during their normal education processes and acquiring experienced scientific knowledge about disasters may help them make effective decisions in post-disaster education activities. In addition, knowing teachers' earthquake and post-earthquake education experiences contributes to disaster-education culture and awareness. It is assumed that teachers' pre- and post-earthquake education experiences will include knowledge, skills, and values related to before, during, and after disasters, provide in-depth examples of experiences for precautions to be taken before disasters, and constitute a rich data source in minimizing the damages of disasters.

Earthquakes are natural events that affect large areas, and earthquakes affect children the most (Dyregrov et al., 2018; Norris et al., 2002; Peek, 2008). Children may face significant problems both physically and emotionally after earthquakes. These problems include post-traumatic stress disorder, fear, anxiety, sadness, helplessness, panic, anxiety, shock, confusion, and feeling empty (Houston, 2012). In the face of these and similar problems, post-earthquake education can play an essential role in helping children (students) return to their everyday lives and cope with post-traumatic stress (Johnston et al., 2011). In other words, education can greatly support students in returning to their routine daily lives and emotional normalization. It can also provide an essential link between children, families, and society in disaster preparedness (Dufty, 2009; Finnis et al., 2004; Ronan et al., 2008).

When the literature on disasters is examined, it is seen that many different studies have been conducted. Sözcü (2019) stated that Turkey is located on the Alpine-Himalayan earthquake belt, Sever (2019) stated that earthquakes deeply affect society in terms of social, economic, and psychological aspects, Karagel, D. (2019) noted that the training for prediction and early warning of natural disasters to understand what will happen is evaluated within the scope of disaster risk method, Budak (2019) stated that disaster cultures and disaster awareness of societies can be improved through disaster education, Karagel, H. (2019) indicated that it is essential to form teams that can cope with disaster in post-disaster crises, Kuzey and Göçgen (2021) stated that adults know the disasters they have experienced more than the disasters that may occur in the geography they live in. Değirmenci et al. (2019) stated that social studies textbooks include earthquake disasters more than the types of disasters frequently seen in the world and Turkey.

In the foreign literature, Pescaroli and Alexander (2018) provide a framework for understanding disasters regarding complex and successive events, interacting and interconnected risks. De Ruiter et al. (2019) addressed the impacts of two or more disasters occurring simultaneously or sequentially on society. Zscheischler et al. (2018) propose a more generalized definition of multiple natural disasters that increase societal or environmental risk. Aghakouchak et al. (2018) state that natural disasters can be of the same or different hazard categories and occur within or across a region or country, but their risks are the same. Cutter (2018) defines natural disasters as extreme events that lead to physical, social, or economic disruption and substantially impact society over time. However, Gill and Malamud (2014) argue that the scope of natural disasters depends on temporal and spatial boundaries. However, no specific temporal or spatial parameter is defined in the literature. Mcaneney et al. (2015) define disasters as physical events that cause damage. Mutch (2014) concluded that schools can be the 'glue' that holds society together. Another study stated that schools were the center of teacher and peer support after the Christchurch earthquake to enable students to cope with problems and provide a stable environment (Mooney et al., 2021; Mutch, 2015). They state that these damages express the susceptibility of the elements at risk with their social, economic, environmental, and infrastructural components to experience loss due to a particular hazard intensity.

More studies on post-earthquake education should be conducted based on the experiences of teachers who have experienced the earthquake. The assumption that the data obtained from teachers who have experienced earthquakes in different geographies on earthquake and education may contain clues in solving post-earthquake education problems makes this research important. In addition, knowing how the earthquake disaster shaped teachers' post-earthquake education awareness and behaviors can guide possible post-earthquake education preparations.

Purpose of the Study

This research aims to reveal the difficulties faced by teachers who have experienced the earthquake themselves and continue to work in the earthquake zone in their post-earthquake education, the problems experienced by students, and what should be done in educational environments to be minimally affected by the earthquake. In line with this purpose, the primary concern of the research can be expressed as "What are the main problems faced by teachers continuing education after the earthquake, and what are the solutions to these problems?". Within the scope of this problem, answers to the following research questions were sought.

- 1- What are the problems the teachers face in their post-earthquake education, and what are their suggestions for solutions to these problems?
- 2- According to the teachers, what psychological problems are faced by the students after the earthquake, and what training should be given first?
- 3- According to the teachers, what is the relationship between the teaching programs of their courses and the preparations to be made against earthquakes?
- 4- What are the knowledge, skills, and training teachers have regarding earthquake preparedness? How are these trainings used in earthquakes?

METHOD

This study used the "basic qualitative research method" from qualitative research methods. The "Basic Qualitative Research Method" was preferred because it allows teachers to focus on constructing post-earthquake education according to their experiences (Merriam, 2018). In this study, this method was chosen to determine how teachers interpreted their post-earthquake education lives, how they constructed their post-earthquake education processes, what problems they encountered in post-earthquake education processes and how they solved these problems, and what post-earthquake education added to their experiences. Ethics Committee Approval was obtained with the Ethics Committee Decision of Bayburt University Ethics Committee dated 10.10.2023 and numbered 339.

Participants

The research study group comprises 42 volunteer teachers from eleven provinces working at different educational levels who experienced the February 6, 2023, Kahramanmaraş-based earthquake and participated in educational activities in the same region after the earthquake. The study group was formed from volunteer teachers to avoid taking the opinions of individuals who have experienced the earthquake process by force if they do not want to express their opinions. To examine the post-earthquake education experiences of these teachers in more detail, the study group was determined according to easily accessible case sampling from purposive sampling methods. Purposive sampling methods allow for a detailed study of situations that are thought to have rich information. Convenience sampling, which is one of the purposive sampling methods, was determined as the sampling method of the study because it allows the researcher to select a situation that is close and easy to access, economical and time-saving (Yıldırım & Şimşek, 2008). Descriptive information about the participants is given in Table 1 below.

Table 1

Descriptive information about the participants

Participant's Province	Area	Gender	<i>f</i>
Kahramanmaraş	Turkish	Female	2
	Social Sciences	Male	3
	Mathematics	Male	2
Elazığ	Primary	Male	3
	Primary	Female	1
	Religious Culture and Ethics Knowledge	Male	2
	Primary	Male	7
	Primary	Female	5
	Pre-school	Female	1
	History	Male	1
Hatay	English	Female	2
	Social Sciences	Male	2
	Physical Education	Male	1
	Turkish Language and Literature	Male	1
	Pre-school	Female	1
	Turkish	Male	1

	Pre-school	Female	1
Kilis	Primary	Female	1
	Science	Male	1
Osmaniye	Religious Culture and Ethics Knowledge	Male	2
	Philosophy	Male	1
Malatya	Vocational Courses	Male	1

When Table 1 is examined, it is seen that the participants consisted of female (f=14) and male (f=26) teachers, including kindergarten (f=3), primary school (f=17), secondary school (f=18), high school (f=4). However, it is understood that the participants are concentrated in primary and secondary schools and are from all grade levels. Finally, when Table 1 is analyzed, it is seen that the highest number of participants is from Hatay (f=25), and the lowest number is from Malatya (f=1).

Data Collection Tool

The study used a semi-structured interview with open-ended questions to collect data. Before creating the questionnaire questions, the relevant literature was examined, and a pool of questions was created in line with the purpose of the study. The pool of questions was sent to five teachers working in the earthquake zone, and their opinions were sought on whether these questions were in a way to cover their experiences or whether there were any deficiencies. The question pool was reorganized in line with the feedback from the teachers. Then, field experts were consulted to determine whether the questions were suitable for data collection in line with the purpose of the study. Two faculty members who are experts in qualitative research were consulted to get their opinions on the research questions. Then, the research questions were reorganized, and this time, the questions were presented to two faculty members who have academic studies on natural disasters, such as earthquakes, with qualitative research methods in the field of social studies education and who have taught the “Disaster Education” course at the same time. The questions were organized in line with their opinions. The questionnaire was finalized because of the feedback received. The semi-structured interview form was sent electronically (via Google Form) to volunteer teachers who had experienced the earthquake, and teachers (from now on referred to as participants) were asked to express their knowledge and experiences regarding the educational processes they experienced after the earthquake. The number of Google Forms the participants could send for their answers was limited to one. The findings obtained from the semi-structured interview form sent by the participants constitute the primary data source of the study.

Data Analysis

The data of the study were analyzed by content analysis method. Content analysis is a method used to explain the explicit content of written or oral information or messages in an objective, measurable, and verifiable way (Fiske, 1996; Metin & Ünal, 2022). Bernans-Berelson (1952) defines content analysis as making objective, systematic, numerical descriptions of the communication content of written or oral information or messages (Bilgin, 2006). Krippendoff (1986) defines content analysis as a technique for obtaining reproducible and valuable inferences from the data in the content of written or oral information and messages (cited in Aziz, 2015). Content analysis is a research data analysis technique in which valid interpretations from the data emerge from a series of processes. These interpretations

are a technique that provides information about the sender of the information or message, the information and message itself, and the receiver of the information and message (Metin & Ünal, 2022).

The two authors independently analyzed ten randomly selected answer sheets submitted by the teachers participating in the study, and the codes and categories generated were compared. It was observed that the codes and categories obtained were broadly similar. This practice is based on the agreement of two or more coders on the codes used for the same passage in the exact text; that is, it shows whether different coders code a passage with the same or similar name (Creswell, 2017). The reliability formula expressed by Miles & Huberman (1994) ($\text{Reliability} = \frac{\text{Agreement}}{\text{Agreement} + \text{Disagreement}}$) was used in the study, and the agreement between the coders was found to be 86%. Then, two different study authors analyzed the remaining questionnaire forms and completed the data analysis.

The forms received from the participants were numbered starting from the first form. Forms that did not contain an answer were excluded from the evaluation. Participants' responses to each sub-problem were evaluated under their categories. When describing the participants, the T code was used for the teacher, and the number was used for the number of teachers. For example, (T25) indicates the 25th teacher.

Validity and Reliability of the Study

All research is concerned with producing valid and reliable information within ethical principles (Merriam, 2018). There are several measures taken for both reliability and validity in qualitative research (Yıldırım & Şimşek, 2008). In this study, the expert review was used for validity, consistency review was used for reliability, and confirmation review was used to confirm the results obtained from the research by comparing them with raw data. Within the scope of the expert review, an expert academician who knows qualitative research and research was consulted, and his/her suggestions were taken. Within the scope of the consistency review, the same questions were asked to all participants in the study, teachers were given a flexible period to answer the questions, the data obtained were analyzed by a person who was an expert in the research method, and these analyses were compared with the analyses made by the researchers. Kappa statistic (Cohen, 1960) was used to determine the degree of agreement of the analyses. The level of agreement in the analyses was found to be 0.80, and it can be said that this value is essential in terms of the power of agreement (Landis & Koch, 1977). The more experience the researchers have with the participants in the participants' settings, the more accurate or valid the findings will be (Creswell, 2017). In this sense, the fact that one of the authors of this study has been in the research environment for a long time is another measure to increase validity.

Ethical Principles

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FINDINGS

The findings obtained from the research are presented in the tables below according to the order of the questions in the semi-structured interview form. The findings regarding the answers to the research's first question are given in Table 2 below.

Table 2*Findings on the main problems experienced by teachers regarding post-earthquake education*

Themes	Codes	<i>f</i>
Issues related to psychosocial well-being and feelings of safety	Lack of motivation	3
	Student absenteeism and attention deficit	2
	Children's adaptation problems after a break in education	2
	Lack of concentration and anxiety	1
	Anxiety in students	1
	Adaptation of students	1
	Fear of entering physical space	1
	Psychological states of students, parents, and teachers affected by the earthquake	1
	Motivation, the problem of feeling safe	1
	Psychological	1
	Psychological distress	1
	Fear in students and us	1
	Fear of entering the building	1
	Weariness, demoralization, demotivation fear	1
Anxiety at school, fear of an earthquake	1	
Problems related to the continuity of education and training	Students' attendance problem	3
	Students learning losses	3
	Children's adaptation problems after a break in education	2
	Some of the students are homeless and cannot come to school	2
	Low student enrollment and attendance	1
	Plan program and training material and resource needs	1
	Dual education and student absenteeism	1
	Children not starting education from the 2nd semester until now	1
	Student absenteeism and attention deficit	1
	Students have regressed a lot	1
Relocation of teachers and students, lack of attendance, inability to stay on task	1	
continuous student transfers	1	
Problems related to educational infrastructure and social	School and housing	3
	Training environment and lack of adequate trainers	2
	Lack of equipment	2
	Physical structure inadequacies, finding a place, location	2

	Safety and accommodation problems for both students and us	1
Management and logistics issues	Lack of coordination and transportation problems	3
	Late school planning	1
	Transportation difficulties to container city schools	1
	Problems in meeting the food and beverage needs of the staff	1
Problems with communication and participation	Not reaching students	1
	Ignoring parents' suggestions for solutions	1
	Problems arising from language problems of foreign students	1
Problems related to human resources in education	Uncertainty over the fate of surplus teachers	2
	Training environment and lack of sufficient trainers	1

When Table 2 is analyzed, it is understood that the participants mainly emphasized; "Lack of motivation" (f=3) in the theme of "Issues related to psychosocial well-being and feelings of safety (f=19)", "Students' attendance problem (f=3) in the theme of "Problems related to the continuity of education and training (f=18)", "School and housing (f=3) in the theme of "Problems related to educational infrastructure and social (f=10)", "Lack of coordination and transportation problems (f=3) in the theme of "Management and logistics issues (f=6)", "Not reaching students (f=) in the theme of "Problems with communication and participation (f=3)" and, "Uncertainty over the fate of surplus teachers (f=2) in the theme of "Problems related to human resources in education (f=3)". Also, the teachers who participated in the study mentioned location problems, unsafe educational environments, lack of equipment, housing, and physical structure inadequacies regarding the problems they experienced regarding educational infrastructure and social facilities during the educational processes. People need the space requirements that ensure life safety and comfort most in their daily lives after an earthquake. The opinions of some of the teachers participating in the study on this question are as follows.

"...The fact that education has been suspended for a long time has led to a loss of motivation. Therefore, there is a need for support to overcome the trauma experienced." (T13)

"...Students have attendance problems, both students and we have problems with security and housing." (T26)

"...The psychological states of students, parents, and teachers affected by the earthquake and physical structure inadequacies." (T27)

The findings regarding the teachers' answers to the second question of the study are given in Table 3 below.

Table 3

Findings related to teachers' solutions to the problems they encountered in post-earthquake education processes

Themes	Categories	Codes	<i>f</i>
Individual solutions	Psychosocial support and crisis management	Explaining that earthquake is a reality of our lives	2
		Getting support from the guidance service in schools	2
		Support children and make efforts to help them overcome trauma	1
		Psychosocial support, remedial training, improvement of school management	1
		Creating environments where children will be safe	1
		Not talking about earthquake-related issues	1
		Contacting parents	1
		Stress management	1
		Psychosocial support	1
		Continue to work with patience	1
	Tools, equipment, and collaborative solutions	Using everyday materials with fellow teacher	1
		Solving problems in our ways and taking risks	1
		Protecting the belongings of the school after the earthquake and providing the missing items from the schools to be demolished	1
		Informing and Providing information to parents and responding to their questions the staff during the process and keeping them informed of developments	1
Crisis management in the process of teaching courses in distance and face-to-face education	Teaching with more activities and games	4	
	To conduct specific lessons in the garden, to work on the safety of the physical space, to raise awareness about what to do in the face of natural disasters	2	
	Providing morale and motivation	2	
	Conducting camps to train the subjects	1	
	First, preparing an educational environment (we started education in a tent), then reaching out to students	1	

		Sending homework worksheets via WhatsApp to students who cannot come to school	1
		More physical activity	1
Collaborative solutions	Risk mitigation activities in cooperation with public institutions	Minimization of structural risks	1
	Risk reduction activities in cooperation with non-governmental organizations	Request psycho-support	1
	Solution provided by the Ministry	Working with civil society organizations	1
		Liaison and cooperation with private and voluntary organizations, especially collaboration with volunteer educators from outside the city	1
		National Education to deploy more staff to make things work	1

When Table 3 is analyzed, it is understood that the participants mainly emphasized; "Explaining that earthquake is a reality of our lives (f=2)" in the theme of " Individual solutions (f=29)", "Minimization of structural risks (f=1) in the theme of "Collaborative solutions (f=18)". Also, the solutions developed by teachers for the problems they face in educational processes are categorized under two headings: individual and collaborative solutions. In this context, teachers strive to solve educational problems, develop different solution methods, and have an entrepreneurial spirit. The opinion of one of the teachers participating in the study on this question is as follows.

"... We suggested that earthquake is a fact of life and that we should always be prepared for it if we live in this geography. In addition, it was constantly emphasized that this is an opportunity for us to understand the value of what we have." (T14)

Another crisis solution method developed by teachers as an individual solution is psychosocial support and crisis management. Under this heading, it was determined that the teachers addressed the trauma that occurred to students in the post-earthquake education processes with these methods such as patience and continuous work, awareness of the reality of the earthquake and preparedness, cooperation with the school guidance service, caring and supporting students, empathic communication and providing trust, emphasizing that the earthquake is a natural reality, communication with parents, stress management, motivation, and guidance. The opinion of one of the teachers participating in the study regarding this question is as follows.

"...Instead of lecturing to children, I prepare them psychologically for education." (T22)

Within the scope of individual solutions, it is seen that teachers solve the teaching process of the lessons with distance and face-to-face education. Under this heading, it was determined that teachers realized safe places, preparation of the educational environment, reaching students, psychological preparation, one-to-one communication and activities, awareness raising activities, morale and motivation, fun and active participation, communication and homework, and economic activities. The opinion of one of the teachers participating in the study regarding this question is as follows.

"...Mostly by doing one-to-one interviews with students or by allocating more time for activities or games during the lesson to ensure their interest in the lesson." (T24)

It is seen that teachers develop individual solution methods as well as solution methods by cooperating with institutions and organizations that are experts in their fields. In this context, within the scope of risk reduction studies in cooperation with public institutions and organizations, they applied different methods to sustain the education process, such as minimizing structural risks, requesting psychosocial support, and reducing risk factors. The opinion of one of the teachers participating in the study regarding this question is as follows.

"...We tried to solve problems by contacting and cooperating with private and voluntary organizations, especially volunteer educators from out of town." (T13)

The findings regarding the teachers' answers to the third question of the study are given in Table 4 below.

Table 4

Results related to the problems that teachers encountered and could not find solutions to in post-earthquake education processes

Themes	Categories	Sub-categories	Codes	<i>f</i>
Whether there are problems encountered after the earthquake that cannot be solved	There are	Problems related to ensuring continuity of education and student attendance	Some parents arbitrarily do not send their students to school	3
			Continuing education in containers or tent cities that students are not used to	1
			Inadequacy of the Directorate of National Education in the process of leaving and starting	1
			Lack of expert volunteer trainers	1
			Some students do not attend school	1
			Parental relations and behavioral disorders of children	1
			Educational losses of students and the fact that these losses cannot be recovered	1
Students are distracted from lessons	1			

	Difficulty in overcoming the fear of earthquakes	5
Psychological and emotional problems	Failure to resolve spiritual problems	1
	Psychological support students need	1
	Failure to overcome the adaptation problem during the orientation week	1
	Shelter, dust, clean drinking water	1
Infrastructure problems	Shortage of space, reliable environment	1
	Students with housing problems due to damaged houses	1
	Infrastructure problems with electricity, water, natural gas, internet, etc.	1
	Problems related to housing, nutrition, and socialization	1
	Location, lack of transportation	1
Coping with loss and emotional attachment problems	Lack of communication with students who have lost their relatives due to lack of training on how to approach them	1
	Failure to counsel the bereaved	1
Problems related to safety and sanitation	Theft, looting	1
	Safety and health	1
There is not		5

When Table 4 is analyzed, it is understood that the participants mainly emphasized; "Difficulty in overcoming the fear of earthquakes (f=5)" in the theme of "Whether there are problems encountered after the earthquake that cannot be solved (f=33)". Also, it is seen that teachers sometimes solve the problems that arise in the educational processes by themselves and sometimes with the help of the institutions, organizations, and non-governmental organizations they cooperate with. However, it is also seen that they need help to solve some problems. Some teachers stated they were inadequate in ensuring continuity of education and student attendance, solving psychological and emotional problems, eliminating infrastructure problems, coping with losses, and improving emotional support,

safety, and health conditions. The opinions of some of the teachers participating in the study on this question are as follows.

"...Psychologically, I think it is difficult to live with the fear of earthquake, and we cannot find a complete solution to this issue." (T42)

"...The fact that students continue their education in container cities or tent cities outside of the school setting they are used to decreases children's motivation." (T14)

Within the scope of coping with loss (grieving) and emotional attachment problems, teachers stated that they experienced problems such as emotional difficulties, lack of communication, lack of suggestions, and lack of training. However, they could not find solutions to these problems. The opinion of one of the teachers participating in the study regarding this question is as follows.

"...Since I lacked training in approaching students who lost someone from their family or loved ones, there could be a lack of communication with them." (T28)

The findings regarding the teachers' answers to the fourth question of the research are given in Table 5 below.

Table 5

Findings on the social problems observed by the teachers after the earthquake and the solutions to these problems

Themes	Categories	Sub-categories	Codes	<i>f</i>
			Theft and looting	4
		Problems related to security and social order	Shopping and looting of homes and businesses	2
			People withhold what does not belong to them	1
			Looting of damaged schools	1
Whether there are social problems and suggestions for solutions	Social problems and suggestions for solutions		Knowledge of morality and spirituality first	4
			Lessons on personality, morality, and honesty should be given	2
			Explaining that stealing is bad behavior	2
		Spirituality and values education	Students can be enabled to empathize	1
			Practices for values education should be increased	1
			To teach students that they should get as much help as they need and share the rest with others	1

	Finding solutions by ensuring justice in the classroom	1
	Emphasize the importance of doing the right known behaviors in all situations	1
	National consciousness should be educated	1
	Raising public awareness	1
Not experienced		14

When Table 5 is analyzed, it is understood that the participants mainly emphasized; "Theft and looting (f=4)" in the theme of "Whether there are social problems and suggestions for solutions (f=37)". In addition, according to Table 5, it is seen that there are participants who are "not experienced (f=14)". Also, teachers were asked this question to determine whether social problems were experienced after the earthquake and, if so, what measures were taken to address these problems. The reasons that disrupt social security and order generally include stress and chaos caused by emergencies, inability to meet basic needs, lack of social solidarity and cooperation, safety, and legal inadequacies. The opinions of some of the teachers participating in the study on this question are as follows.

"...I think that such problems can be solved by making moral values one of the main goals of education." (T7)

"...It should be explained that theft is a bad behavior and that it has much worse consequences when it is done to people who are victimized." (T17)

The findings regarding the teachers' answers to the fifth question of the research are given in Table 6 below.

Table 6

Psychosocial problems experienced by students after the earthquake and ways to support them in coping with these problems

Themes	Codes	f
	Fear, anxiety, loss	5
	Psychological problems such as fear of earthquakes and inability to enter the building	5
	Not wanting to be separated from their parents	2
	Their inability to overcome the fear of earthquakes	2
	Being frightened by remembering the occurrence of the earthquake	1
Problems experienced by students	Withdrawal, reduced sociability	1
	Fear of losing relatives	1
	Problems in course engagement	1
	Lack of security and physical needs	1

	What he experienced during the earthquake and the grief of his lost relatives	1
	Panic attacks and reacting to the slightest movement	1
	Anxiety disorder	1
	The occurrence of panic attacks in students	1
	Nail biting, playing with hair, spending time in thoughtfulness	1
	Constantly making speeches about earthquake	1
Solutions to the problems experienced by students	Referral to a guidance counselor or guidance service	5
	Doing some work together with the guidance service	2
	Continuing education with love	1
	Referral to various psychosocial service providers	1
	Trying to support through interviews	1
	By supporting religious beliefs and each other	1
	Providing group guidance	1
	Working in partnership with the guidance service and trying to overcome the problem with games and activities	1
	Explaining that an earthquake is a natural event	1
	Cooperation with the guidance service, school administration, and parents	1
	Treating traumas with compassion	1
	- Acting together, identifying, and overcoming fear	1
	Spend more time with them	1

When Table 6 is analyzed, it is understood that the participants mainly emphasized; "Fear, anxiety, loss (f=5)" in the theme of "Problems experienced by students (f=25)" and "Referral to a guidance counselor or guidance service (f=5) in the theme of "Solutions to the problems experienced by students (f=18)". Within the scope of the problems experienced by students in post-earthquake education processes, teachers stated that they observed post-earthquake trauma and anxiety, safety and basic needs, lack of earthquake awareness and knowledge, and physical and emotional disorders. The opinions of some of the teachers participating in the study regarding this question are as follows.

"...The biggest problem of our students was fear, and we worked with our guidance service."(T6)

"...the ongoing grief of the people they lived and lost at the time of the earthquake." (T29)

"...Behaviors such as panic attacks and reacting at the slightest movement emerged." (T33)

The findings regarding the teachers' answers to the sixth question of the research are given in Table 7 below.

Table 7

Results on which subject students should be taught primarily after the earthquake and whether this situation is included in the curriculum of the courses taught by the teacher

Themes	Categories	Codes	<i>f</i>
Subject and content of the training to be provided	Psychological support training	Giving guidance on issues such as overcoming and coping with fear	3
		Providing psychological support to cope with stress and other problems after the earthquake	2
		To get used to the earthquake	2
		Social support groups related to acceptance should come to school and increase social activities	2
		Teaching how to live with earthquake	1
		Civil defense and panic attack training	1
	Preparedness training and disaster awareness	Training should be given on what to do before, during, and after an earthquake and first aid	6
		What is an earthquake and what to do when an earthquake strikes, disaster awareness	5
		Starting to provide first aid training at an early age	2
		In-service training and seminar presentations informing students about natural disasters can be organized	1
		Natural disaster psychology should be taught	1
		Disaster management	1
		Students should be informed about earthquake	1
		Education should be given on unity, solidarity, love and respect	1
Values education and social consciousness	Knowledge of morality and spirituality first	2	
	Training on cleanliness and safety should be provided on this issue	1	
Other issues	time management and activities that increase students' interest in lessons	1	
	Common sense, cooperation, and fairness	1	
	Social activities should be included	1	

When Table 7 is analyzed, it is understood that the participants mainly emphasized; "Training should be given on what to do before, during and after an earthquake and first aid (f=6)" in the theme of

"Subject and content of the training to be provided (f=35)". Teachers and students have experienced a massive earthquake. In the aftermath of this earthquake, teachers' views were sought on what kind of education should be given to return students to usual living standards. It is seen that the teachers gave important and rich information about the subject and content of the education. Some teachers emphasized that instruction should be given on adapting to the new life after the earthquake. They underlined the importance of having an educational approach to raise students' awareness about coping with post-earthquake problems and living a life accustomed to earthquakes. The opinions of some of the teachers participating in the study on this question are as follows.

"...It would be good if information about what an earthquake is and what to do during an earthquake is given; it would be good if guidance is given on issues such as overcoming fear and coping with it." (T6)

"...Education should be given on unity, solidarity, love, and respect. Unfortunately, it is not enough." (T11)

"...Education should be given about natural disasters; we should not forget that this reality is always present in our lives." (T14)

The codes of the findings, which include the answers to the question of what subjects the teachers primarily taught the students after the earthquake and whether this was included in the curriculum of the courses they taught, were created and presented in Table 8.

Table 8

Findings regarding the place of earthquake results in the education and curriculum

Themes	Categories	Sub-categories	Codes	f
Contents and topics related to earthquake education in the curriculum	Adaptation to new life after the earthquake		Partially	1
			This training was given for a while,	2
	Psychological support training	Whether it is in the curriculum or not	It is in the life science curriculum	1
			It is not part of the training program.	1
	Preparedness training and disaster awareness		It is in the program	5
			Not in my curriculum	4
		Unfortunately, not enough	1	

Values education and social consciousness	Included in our curriculum	2
	Not in any course	1

When Table 8 is analyzed, it is understood that the participants mainly emphasized; "It is in the program (f=5)" in the theme of "Contents and topics related to earthquake education in the curriculum (f=18)". The findings regarding the teachers' answers to the seventh question of the research are given in Table 9 below.

Table 9

Findings on whether there are earthquake-related outcomes in the curricula of the courses and the adequacy of these outcomes in raising earthquake awareness in students

Themes	Categories	Sub-categories	Codes	f
Whether there is an outcome in the curriculum	There is	Achievement proficiency of the outcome	Not enough	16
			Not earning	2
	I find it sufficient for its level		1	
	Not enough		2	
	Partially		Adequate	2
	No outcome			11

When Table 9 is analyzed, it is understood that the participants mainly emphasized; "Not enough f=16" in the theme of "Whether there is an outcome in the curriculum (f=34)". Teachers generally stated that the achievements in their curricula needed to be sufficient despite the earthquake disaster. The opinions of some of the teachers participating in the study on this question are as follows;

"...There is not enough information in the curricula of the courses, this information is not enough for earthquake awareness, disaster situations should be added to the curriculum." (T15)

"...There is not enough information about them in the textbooks. It should definitely be included in the textbooks." (T18)

"...The things to be done during an earthquake were not in my curriculum, but I repeated these topics many times and tried to raise awareness by explaining what to do." (T30)

The findings regarding the teachers' answers to the eighth question of the research are given in Table 10 below.

Table 10*Findings on whether training was received before the earthquake and whether this training was useful*

Themes	Categories	Codes	<i>f</i>	
Whether there is training on earthquake	I received training	Whether the training is proper or not	It did not work (10)	10
			Helpful	5
			I do not know if it works or not.	1
			It did not do us much good	1
			I did not need to use the training received	1
			I acted outside of education.	1
			I did not even think to apply it out of panic.	1
	I do not have any training.			18

When Table 10 is analyzed, it is understood that the participants mainly emphasized; "I do not have any training (f=18)" in the theme of "Whether there is training on earthquakes (f=38)". When we look at the duration of teachers' education, we see they have twelve years of primary and secondary education and four years of undergraduate education. Their total education period covers a long period of twenty years. When it is assumed that they have postgraduate education on top of these educations, it is seen that they have gone through a more extended period of purposeful education. Most teachers did not receive any training directly related to disasters during these long education periods, and the training they received could have been more helpful. The opinions of some of the teachers participating in the study on this question are as follows.

"...There is no training, even if you get it, it is futile, no one can do anything at that moment." (T22)

"...There is education, but everything was turned upside down when I was experiencing that moment. Because when a severe earthquake occurs every 20 years on average in this country, the measures taken are forgotten." (T29)

"...I do not have any training." (T17)

"...I have no training." (T38)

The findings regarding the teachers' answers to the ninth question of the research are given in Table 11 below.

Table 11*Findings related to suggestions or thoughts that teachers would like to add*

Themes	Categories	Codes	<i>f</i>
Not express suggestions or opinions.			8
Suggestions	Earthquake education and awareness	We need to be better prepared for disasters.	3
		Psychological support should be provided to students and the public.	2
		Training on earthquake	2
		Disaster education courses should be opened in schools,	1
	Social-psychological support	Earthquake-related topics should be thoughtfully included in the curriculum.	1
	Public duty	Educators should be provided with material and moral support,	2
		Average education must be restored, and basic needs must be met.	2
		Building inspections should be increased.	1
		Identify good managers and educators. Use their experience and expertise.	1
		There should be a coordination plan for training in any adverse situation.	1
		The housing problem must be addressed.	1
		Practical work should be done.	1
	Other suggestions and thoughts	Focus on life after the earthquake.	1
The sense of solidarity should be kept alive; first aid and rescue training should be given to people of a particular age group.		1	

Students should be directed to more social activities.	1
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When Table 11 is analyzed, it is understood that the participants mainly emphasized; "Not express suggestions or opinions (f=8)" in the theme of " Suggestions (f=29)". When the teachers' opinions regarding the ninth question were analyzed, it was determined that they made suggestions regarding the post-earthquake education and improvement process. Under earthquake education and awareness, teachers state that education should be provided to raise awareness of individuals and societies against earthquake disasters and ensure their preparedness. They believe that one of the best methods to realize this is the course curricula since compulsory education is twelve years. The opinions of some of the teachers participating in the study on this question are as follows.

"...Our country is an earthquake zone, so I think it is essential to educate our people before the earthquake." (T5)

"...We should try to be prepared for an earthquake or any natural disaster at any time; more drills and practices can be arranged to be more effective by involving technology." (T22)

"...In our country, which is facing the reality of earthquake, earthquake-related topics should be included in the curriculum very seriously." (T29)

CONCLUSION, DISCUSSION AND SUGGESTION

This study was conducted to try to reveal how the earthquakes that occurred in Turkey on February 6, 2023, centered in Kahramanmaraş, affected education and training activities, the problems that emerged in education and training after the earthquake, and the solution suggestions based on the experiences of teachers who experienced the earthquake. In the study, teachers were first asked what the main problems they experienced related to the earthquake were. Teachers expressed these problems under different headings: problems related to educational infrastructure and social facilities, problems related to psychosocial well-being and feeling safe, management and logistics problems, problems arising from communication and participation, problems related to human resources in education, and problems associated with the continuity of education and training. It was revealed that teachers produced individual and collaborative solutions to the problems mentioned in the first question. On the other hand, it was revealed that teachers had problems that emerged after the earthquake and could not find solutions. Some of these problems were problems related to ensuring continuity of education and student attendance, psychological and emotional problems, infrastructure problems, coping with losses and emotional attachment problems, and problems related to safety and health conditions. It was also revealed that teachers encountered social problems after the earthquake, including problems related to security and social order, as well as problems related to spirituality and values education. Another result was that teachers tried to find solutions for the psychosocial problems that students experienced after the earthquake. Teachers stated that the training given primarily to students after the earthquake should be an adaptation to the new life, psychological support training, preparation training, disaster awareness, values education and social awareness, and other issues. Some of the teachers stated that there are earthquake-related outcomes

in the curricula of the courses and that these outcomes are sufficient for students to gain earthquake awareness.

In contrast, others stated that there are no outcomes or that even if there are, these outcomes are insufficient to gain earthquake awareness. While most of the teachers participating in the study stated that they received earthquake training before the earthquake, a few indicated that they did not. In addition, most of those who received earthquake training noted that the training they received was useless. Finally, it was revealed that teachers had suggestions and expectations regarding earthquake education and awareness development, social and psychological support, and public duty.

According to the findings related to the main problems experienced by teachers regarding post-earthquake education, when people feel that their life safety is in danger, their anxiety increases, and they seek to get rid of this situation as soon as possible. It is stated that irregular and unplanned construction significantly affects this situation. This understanding of construction does not construct students as a part of common areas and space in the education process, which constitutes the social dimension of the earthquake (Akpolat et al., 2021).

Teachers reported psychological distress, fear and uneasiness, motivation, absenteeism, demoralization, and anxiety disorders such as anxiety and fear of entering the physical space regarding the problems they experienced regarding psychosocial well-being and feeling safe during the education process. After the earthquake, students may experience psychological reactions such as these. Some of these are strong mental and emotional states such as confusion, fear, grief, anger, guilt, sleep, and focus. Nakajima (2012) states that what happened during the earthquake can be constantly visualized in students' minds and can reduce efficiency in education, which can be said to be compatible with the result of this study. In addition, this study coincides with the result obtained in a study conducted by Arslan (2023) on earthquakes, in which students' motivation to come to school decreased, fear and anxiety increased in students, and teachers were seriously affected by the earthquake.

Lack of coordination, disruptions related to urban transportation, problems in school planning, container city schools, and insufficient personnel were listed among the problems experienced by teachers regarding management and logistics in educational processes. The existence of such problems negatively affects equality in education and access to equal opportunities and suggests that school and transportation planning was not done before and after the earthquake because planning requires the most rational use of limited resources (Adıgüzel, 2007; Güçlüol, 1991).

Teachers expressed the problems arising from communication and participation in educational processes as needing help to reach students, not considering the solutions proposed by parents and language problems of international students. Based on these findings, teachers emphasize making education more inclusive and effective.

Teachers stated the problems they experienced in the rational use of human resources in educational processes as the uncertainty of the assignment of surplus teachers, students' absenteeism, safe educational environment, and educators. This situation shows that the idea that the coordination of human resources includes the actions taken to combine material and human resources in the organization, to reconcile knowledge and skills, and to achieve organizational goals in this way (Adıgüzel, 2007; Bursalıoğlu, 2021) was not realized after this earthquake.

Teachers expressed the problems they experienced regarding the continuity of education during the education processes, such as the inability to ensure student continuity, constant student transfers, teacher-student relocations, the decline in students' academic development, the inadequacy of educational materials and accommodation facilities, and loss of motivation. This situation suggests that the post-earthquake education crisis could have been managed better. The results of this study support each other with the results of the study conducted by Arslan (2023) that student absenteeism problems increased significantly in schools after the earthquake, students moved to other cities, students in the school transferred, and many new students came to the school by transfer. In addition, the result of this study coincides with the result of Baytiyeh (2018) that the psychological distress after Typhoon Haiyan affected the academic learning of a quarter of the students and decreased their academic performance.

According to the findings regarding the solutions to the problems faced by the teachers in the post-earthquake education processes, it is essential for the continuity and efficiency of education that teachers seek solutions to the problems they face. Teachers' use or development of these methods was interpreted as rapid decision-making in the face of problems that arise in education and training processes, undertaking the risks that may occur, and teachers' dedication to their students. Under the heading of solutions for equipment and cooperation among the individual crisis resolution methods, they developed crisis resolution methods such as using together due to lack of materials, taking responsibility and risk themselves within the scope of do-it-yourself, protecting and providing school materials, informing parents and staff. Teachers have used the educational game method to solve the problems caused by earthquakes in education. However, they still need to include tools such as television, video, overhead projector, slide machine, computer, newspapers, magazines, and photographs within the scope of teaching materials. In the study conducted by Arslan (2023), the results of this study are in line with the results of this study that studies were carried out on students who lacked materials, and studies were carried out to arrange transportation services for students who stayed in tents or other places due to the earthquake.

In this context, teachers developed various solution methods to ensure psychosocial recovery. It is seen that they do not have a standardized method to cope with the trauma experienced by themselves, their students, and their parents, but teachers resort to various methods based on their own and other units' expertise. The fact that teachers solve problems by using many different methods is essential in terms of showing their competence. The result of this study is in line with Arslan's (2023) finding that school principals stated that psychosocial studies were carried out in schools regarding the problems at school. In the study conducted by Sözen (2019), it is seen that the result of this study is compatible with the result of the study that the earthquake awareness of undergraduate students is at an adequate level. Baytiyeh (2018) emphasizes that safe, educational environments are essential in coping with emotional and social problems after disasters. Using these crisis methods developed by teachers, the dangers and risks of possible earthquakes on education can be determined, and the risks of likely earthquakes on education can be reduced. After each earthquake in our country, a great awareness is created in the public, but this awareness is forgotten over time. In addition, during this awareness process, efforts to reduce the damage of earthquakes and pre-earthquake preparation processes are focused more. However, post-earthquake education and training activities are not given the same level of sensitivity. As a result, there are significant problems in continuing educational activities in the regions where earthquake disasters occur.

In this context, teachers enrich the lesson by focusing on their students. This result overlaps with the result of Arslan (2023), conducted after the earthquake, in which extracurricular social activities were emphasized and distance education infrastructure was strengthened. In addition, this result is similar to the result of Baytiyeh (2018), in which online education was switched to ensure continuity in education with the closure of schools after the earthquake. As a result of the earthquake centered in Kahramanmaraş, the Council of Higher Education (CoHE) saw online learning as a solution to ensure academic continuity with alternative teaching access tools in the spring academic semester of 2022-2023 (Telli-Yamanoto & Altun, 2023).

Within the scope of cooperation with non-governmental organizations to reduce the risks of the earthquake on education, teachers stated that they contacted volunteer organizations and developed solutions by ensuring social participation in educational processes. This situation is essential because it has diversity, innovation, resources, support, cooperation, and solidarity.

The Ministry of National Education needs to assign more personnel to carry out educational work, enabling teachers to analyze the problems they face in the educational process more deeply and develop better solutions. MoNE's improvement of educational services, sensitivity to student needs, and expansion of educational services contributed to the sustainability of post-earthquake education.

In post-earthquake psychological assistance, teachers should create an environment where students can express their experiences and feelings without being influenced. This research created such an environment. In our country, improvements were provided with psychosocial support practices for disaster victims in the earthquake that occurred in Van province in 2011 (Açıklalın, 2018).

According to the findings regarding the problems teachers encountered and could not find solutions to in post-earthquake education processes, Earthquakes cause undesirable situations, such as people losing everything they own or being deprived of average living standards. Within the scope of the problems related to ensuring continuity of education and student attendance, teachers also stated that they could not cope with problems such as school attendance, lack of volunteer educators, senior management's inability to manage the problems they can solve, adverse climatic conditions, negative behaviors of parents and loss of time. In this sense, ensuring total cooperation and coordination between individuals, society, and the state is essential to overcome these problems.

Within the scope of psychological and emotional problems, teachers stated that they could not find solutions to problems such as spiritual problems, fear of earthquakes at school, adaptation to the new normal, and trauma. Fear is considered a serious problem in post-earthquake education processes, and solving these problems is essential for students to continue their educational lives. In their study, Şeker and Akman (2014) stated that most of the participants expressed the earthquake event they experienced as physical, psychosocial, and economic trauma. It is seen that this result is compatible with the result of this study.

These problems show the magnitude of the emotional trauma experienced by individuals. This is supported by the fact that students associate natural disasters with the word death the most (Sucu, 2021).

The inability of some teachers to solve some problems in post-earthquake education-teaching processes may be related to the finding that pre-service primary school teachers have a high level of misperception of disaster education and disaster awareness, a medium level of perception of post-disaster awareness and a low level of post-earthquake knowledge (Tekin & Dikmenli, 2021). In this

context, the finding of Mızraklı (2018) that "for disaster training to be successful, training should be given by experts and experienced people using appropriate techniques" is considered necessary. In Öztürk's (2013) study with classroom teachers, the fact that teachers did not prepare for the earthquakes that may occur later depending on the time that passed after the earthquake can be counted among the reasons why their problems were not solved.

Within the scope of infrastructure problems, teachers emphasized that they could not solve issues such as shelter, school, access to essential services (such as electricity and water), nutrition and socialization, loss and trauma, and lack of communication. These problems experienced after the earthquake are problems that need to be solved urgently and require the support of society as a whole. In addition, in-service training can be provided for educators to be more educated about emotional support. The fact that the students of the First and Emergency Aid Program stated that the most important factor that negatively affects their willingness to work after a disaster is "lack of personal life safety" supports the above result (Şeker, 2019).

Teachers stated that they could not find solutions to theft, looting, and health problems within the scope of the issues related to safety and health conditions. Rebuilding social peace and trust after the earthquake through social solidarity and cooperation can play an essential role in solving these problems.

Findings on the social problems observed by teachers after the earthquake and solutions to these problems: Since teachers have experienced the moment of the earthquake and the aftermath of the earthquake, it is assumed that they are better able to observe which of these reasons or reasons other than these reasons are factors in the disruption of social order. In this context, their responses help take necessary precautions against risks that affect post-earthquake education processes.

Teachers stated that they witnessed theft and looting incidents within the scope of problems related to social security and order. These theft and looting incidents experienced after the earthquake express a social concern. Environments without security of life and property create social chaos and appear as the most critical factors that disrupt public order.

Teachers recommend spirituality and value education in the face of events that disrupt social order. Under this heading, they suggest rules and principles that keep the society together, such as moral values education, sharing necessities and benevolence, national consciousness education, empathy development, religion and ethical values, social justice, and responsibility. In this context, spirituality and values education are necessary for forming a more just and honest society.

The psychosocial problems experienced by students after the earthquake and the ways to support them to cope with these problems; Tanhan and Mukba (2015) reported that students frequently remembered the moment of the earthquake, Mohadjer et al. (2010), university students who participated in the study conducted by Demir-Yıldız and Demir-Öztürk (2023) associated the concept of earthquake with negative metaphors such as death, destruction, fear, loss, abandonment, and the metaphors produced by the students in the study conducted by Kaya (2010) with secondary school students reminded them of the bad experiences they had. This result shows that students need psychological support, scientific knowledge, and trust after the earthquake.

Teachers developed some solution suggestions for the problems experienced by students in post-earthquake education processes. Within the scope of solution suggestions, psychosocial support,

knowledge and trust building, cooperation and coordination, group therapy and motivational studies, religious support, and values education such as solidarity and compassion. Teachers suggested various approaches to support students' mental and emotional recovery after the earthquake and emphasized the importance of guidance services. It is also essential that games are among the teachers' solution suggestions. Because the ideas that "children grow up with games, learn with games and prepare for social reality with games" are common. Playing games with their peers allows children to express their feelings and thoughts and allows them to spend time away from their anxieties. Teachers' presentation of the psychosocial support mechanism as a solution suggestion was valuable because it expresses the services provided to students individually, socially, and publicly (Aral, 2023). In Demir-Yıldız and Demir-Öztürk's (2023) study, it can be said that there is a remarkable similarity between their suggestions to educators, such as allowing students to talk, giving information about negative situations that express reality, providing emotional support, continuing the routine, and teaching earthquake-related concepts.

According to the findings on which subjects students should be trained primarily after the earthquake and whether this situation is included in the curriculum of the courses taught by the teachers, acclimatization processes can help students make more conscious preparations against earthquake risk. It is stated that primary and secondary education curriculum programs in Turkey are insufficient according to the curriculum developed by the United Nations International Strategy for Disaster Reduction (UNISDR) (İnal et al., 2018). Mohadjer et al. (2010) reported in their study that as a result of the implementation of the "Earthquake Science and Hazards Program," middle school students became literate in earthquake hazards, Winarni et al. (2018) reported in their study that one of the most important ways to reduce earthquake disasters is earthquake education at an early age, Ong et al. (2021) stated that focusing on education about what societies should do about earthquake preparedness increases people's awareness, and Mızrak (2018) stated that it is of great importance for children to receive education about disasters for the future of societies.

Some teachers stated that psychological support training should be given to students after the earthquake. Teachers emphasized that students should be trained to overcome their fears, accept living with earthquakes, cope with stress, and support social activities. They expressed the importance of education for students to be prepared for the aftermath of the earthquake and to ensure their psychological recovery.

Some teachers suggested earthquake preparedness training and first aid training within the scope of disaster awareness to reduce the risks of post-earthquake hazards. In this context, they stated that disaster awareness, earthquake knowledge and preparation, first aid training, earthquake drills, and disaster psychology should be included. Teachers recommend education that will enable students to be prepared for earthquakes. In Çavuş and Balçın's (2020) study, teachers' ideas about preparedness education support each other with the view that middle school students more frequently included the things to be done after an earthquake after the Earthquake Education Center visit.

Some teachers mentioned the need to primarily include values education and activities that develop social awareness against the dangers and risks experienced after the earthquake. In this context, they emphasized values of education, spirituality, knowledge, cleanliness and safety, social unity, and solidarity. Teachers believed that human values and life skills should be taught in addition to academic knowledge.

Therefore, it was interpreted that teachers expressed curriculum suggestions to overcome this deficiency. According to the findings on whether training was received before the earthquake and whether it was helpful, It is clear that there will be specific problems in teaching in a field where teachers still need to be trained. Knowledge, skills, and values not obtained from experts or those with experience in this field will always need to be completed. Teachers stated that the training they received was useless, that the training they received and the reality were very different, that they could not control their emotions, and that their training was ineffective. However, five teachers stated that they saw the benefits of the training they received. This situation coincides with the findings of Gezer and Şahin (2022) that the number of pre-service teachers who received training or courses on natural disasters is relatively low. The results of Çoban et al. (2017) showed that individuals who have had various earthquake experiences do not have sufficient knowledge about before, during, and after a possible earthquake, and they do not receive training on earthquakes. Their earthquake experiences are lost over time. Teachers generally stated that they did not receive enough education about earthquakes at the undergraduate level but improved themselves during their teaching (Öcal, 2005).

According to the findings on whether there are earthquake-related outcomes in the curricula of the courses and the adequacy of these outcomes in raising earthquake awareness in students, it can be considered a deficiency in creating individuals and societies resistant to disasters. Therefore, it was interpreted that teachers expressed curriculum suggestions to overcome this deficiency. Ursavaş (2016) stated in his study that curriculum programs have essential tasks and place in bringing natural disaster awareness to society. It can be said that similar findings were obtained from the study.

According to the findings regarding the suggestions or thoughts that teachers would like to add, education is mentioned in most of the studies on disasters. In this context, this suggestion is noteworthy when education is considered to be the process of creating desired behavior change (Ertürk, 2016). In Demirci and Yıldırım's (2015) study, the belief that earthquake knowledge can provide lifelong benefits to students can only be possible with the conscious and purposeful planning and maintenance of earthquake education and training activities supports the above results of the study. Based on the results of this research, the following recommendations can be made. Considering the challenges emerging post-earthquake, it is imperative to implement immediate measures for their resolution. Anticipating potential social issues following an earthquake and proactively addressing them is crucial. Expressly, tackling psychosocial challenges confronting students necessitates the deployment of field experts in earthquake-prone areas for extended durations. Enhancing awareness among all stakeholders regarding the sensitivity of grief is paramount. To cope with students' problems, teachers can receive in-service training to refine their emotional support and communication skills. A comprehensive review of curricula content related to natural disasters, particularly earthquakes, should be undertaken. Practical disaster education training should be extended to all public employees, focusing on teachers and the general populace. Post-earthquake unity can be instilled in students across all educational levels, alleviating the suffering of affected individuals. The study collected data from teachers in six different provinces using a semi-structured interview form, suggesting the potential for more extensive research with diverse data collection tools. Limiting the study to teachers' opinions prompts the need for similar research involving other education stakeholders.

Furthermore, future studies can expand the sample group, incorporating qualitative and quantitative data. The current study predominantly features male teachers from primary and secondary schools; thus, future research should ensure a balanced representation of gender and educational levels for a comprehensive understanding. Given the elapsed time since the earthquake, approximately ten months, future investigations can explore ongoing educational efforts and needs at this juncture.

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The first author contributed to the concept/design, data collection, writing, technical support / material support sections of the manuscript. The second author contributed to the writing, technical support / material support, critical review of content, literature review. The third author contributed to the data collection, data analysis / interpretation, writing, technical support / material support, critical review of content. The fourth author contributed to the conception / design, data collection, data analysis / interpretation, writing, technical support / material support, critical review of content.

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