

## Investigating The Effects of Disaster Training and Experience on The Disaster Preparedness Status of Health Technician Candidates

Sevil Özcan<sup>1</sup>, Perihan Ögdüm<sup>2</sup>

### Abstract

This study aimed to determine whether previous disaster training and/or disaster experience has an impact on disaster preparedness status. This is a cross-sectional study that was conducted on 623 students studying in eight different programs at the Vocational School of Health Services in the 2023-2024 academic calendar. In the study, a questionnaire form consisting of 34 questions and two parts (Personal Information Form and Disaster Preparedness Status Scale) developed by the researchers in line with the literature was used. As a result of the analysis of the obtained data, the reliability coefficient of the survey was found to be  $\alpha=0.91$ , and the average Disaster Preparedness Status score was 3.36. A statistically significant relationship was found between the mean Disaster Preparedness Status score of the participants and their age, field of study, perceived income status, having lost a relative as a result of a disaster, having received disaster training, having a disaster plan and having a disaster bag ( $p<.05$ ). There was also a statistically significant difference between students from the 11 provinces where the 6 February 2023 earthquake occurred (earthquake victims,  $n=91$ ) and students from other provinces (non-earthquake victims,  $n=532$ ) ( $p<.05$ ). A strong correlation ( $p<.01$ ) was found between disaster preparedness and receiving training, having a disaster plan, and having a disaster bag; a moderate correlation ( $p<.05$ ) was found with earthquake victimization and losing a loved one in a disaster.

**Keywords:** Disaster Education, Disaster Preparedness, Disaster Victim, Earthquake Victims, Health Education, Health Technician

### 1. INTRODUCTION

Although the term disaster is defined in different ways depending on factors such as the situation, cause or the magnitude of the damage caused, it basically refers to events that negatively affect society. Accordingly, the broadest definition of disaster can be made as follows: The disasters are defined as a series of destructive events, whether natural, technological, or human-made, that cause physical, economic, social, and environmental losses in human life, negatively impact the flow of life, and occur suddenly or gradually, and which the community living in the affected area cannot cope with using its own resources (URL 1). Disasters pose a great danger to people who do not have the ability to fight and defend themselves. Since people are one of the masses affected by disasters, the sociological aspect of disasters is also important. In addition, the extent to which people are affected and harmed by disasters varies according to the society's preparedness and knowledge about disasters and emergencies (Şahin et al., 2018). Turkey is one of the countries where natural disasters and emergencies occur frequently due to its sociological as well as

<sup>1</sup>Assistant Professor, Aydın Adnan Menderes Uni., Aydın Vocational School of Health Services, Medical Services and Technics Depart., Aydın. Corresponding author e-mail: sozcan@adu.edu.tr ORCID No: 0000-0001-6352-0255

<sup>2</sup> Lecturer, Aydın Adnan Menderes Uni., Aydın Vocational School of Health Services, Medical Services and Technics Depart, Aydın. e-mail: pogdum@adu.edu.tr ORCID No: 0000-0002-5729-9256

*To cite this article*

Özcan, S., Ögdüm, P. (2025). Investigating The Effects of Disaster Training and Experience on The Disaster Preparedness Status of Health Technician Candidates. *Journal of Disaster and Risk*, 8(3), 845-856.

geological, geomorphological, meteorological, and climatological structure (Günşen and Çolak, 2024). The most recent earthquake on February 6, 2023, which destroyed a significant part of the country and caused many casualties, is one of them. In addition, we are often confronted with man-made disasters such as mining disasters, industrial explosions, cyanide gold and precious stone exploration. These and similar disasters and emergencies threaten the lives of humans and other living creatures as well as nature. If we look at the socio-economic reality in which we live, we see that our residential areas are under the threat of both natural and man-made disasters (Yıldız et al., 2024). Therefore, it is very important to be prepared for all possible disasters in order to minimize the damage. Preparedness is a set of measures that individuals and societies take against disasters in order to minimize the impact of disasters. The readiness of society and individuals against disasters is also very important in minimizing the loss that may occur after disasters (Ağahan and Demirbilek, 2023). An important factor in preparedness is the level of knowledge, and as it is known, the most important factor in increasing the level of knowledge of individuals is education. Since the importance of this is known, in our country disaster and emergency trainings and activities are regularly carried out at every level of education, from primary school to higher education. However, these are not true disaster training programs but rather legally required disaster/emergency drills that are repeated at certain intervals. In addition, disaster-related education is included in the curriculum as elective courses at universities and at the middle school level under the Ministry of National Education.

Disasters are defined as either natural or human-induced events that can be gradual or sudden in nature. These events have the potential to cause significant damage, including loss of life and property, as well as deterioration of living conditions (Fuhrmann et al., 2008). A growing body of research has highlighted a global increase in the number of individuals affected by disasters (Codeanu et al., 2014; Tsai et al., 2020). These events, whether occurring or anticipated to occur on a global scale, are of particular concern as they pose a threat to all facets of human life. While measures can be taken to mitigate the impact of human-induced disasters through appropriate interventions, the same cannot be said for natural disasters, which remain a constant and unpredictable challenge. This underscores the pervasive and unrelenting challenge faced by humanity in the face of disasters, irrespective of their etiology or manifestation (Sever and Değirmenci, 2019; Avcı, 2023).

In light of these considerations, it is imperative to emphasize the significance of imparting disaster education to individuals from an early age (Tuncer et al., 2021). Indeed, the provision of disaster education and disaster awareness through educational institutions is indispensable for ensuring the resilience of individuals in the face of disasters (Değirmenci et al., 2019).

It is imperative that the students of the Vocational School of Health Services (VSHS), which is responsible for training the workforce that will assume active responsibility in the health sector, are cognisant of society's preparedness for disasters and emergencies. An examination of the Ministry of the Interior's Disaster Response Plan for Turkey, Incident Type: Disaster Working Groups, reveals the involvement of healthcare teams in every incident (URL 2; Şafak, 2023). It is widely acknowledged that healthcare personnel (doctors, pharmacists, health technicians, etc.) operating at various levels are involved in every stage of disasters and emergencies, ranging from the rescue of individuals to their treatment and even rehabilitation. This necessitates not only providing assistance to disaster victims but also being present in the disaster-related environment. Consequently, healthcare technicians must be adequately prepared for potential disasters.

### 1.1. Objective

This study was conducted to determine of health technician students of the preparedness for disasters and emergencies and the factors influencing it. To this end, answers were sought to the following questions;

1. Are university students trained in various health-related programs prepared to cope with disasters?
2. Does the disaster preparedness status (DPS) of these students vary by socio-demographic characteristics?
3. Does being an earthquake victim affect the student's DPS?
4. Are these students' DPSs related to factors such as receiving disaster training, losing a loved one in a disaster, and having a disaster plan?

## 2. METHOD

### 2.1. Research Design

This study is a cross-sectional study conducted with a descriptive design of quantitative research method to describe a situation and was conducted face-to-face with volunteer students.

### 2.2. Population and Sample/ Study Group/Participants

The population of the study consisted of students (n=1713) enrolled at Aydın Adnan Menderes University, Aydın Health Services Vocational School, during the spring semester of the 2023-2024 academic calendar. The sample group included 623 students over the age of 18 who volunteered to participate to the survey. The sample size was calculated using the Cochran formula, taking into account a 95% confidence level and a  $\pm 5\%$  sampling error margin (Cochran, 1977). The 2023-2024 academic year enrollment of Aydın Adnan Menderes University, Aydın Vocational School of Health Services was 1,713 students, and based on the calculation made on this population size, the minimum sample size that could represent the population was calculated as n= 314. No sample selection was made in the study, and the sample consisted of health technician students from eight different programmes who were at the school at the time the study was conducted and agreed to participate in the study. At the beginning of the survey, an information text was provided regarding the confidentiality of the data and the voluntary nature of participation. In addition, a verbal explanation on this issue was provided prior to the application by researchers.

### 2.3. Data Collection Tools

This study, conducted using a quantitative research method, employed a two-part survey consisting of 34 questions.

1. The first part, consisting of 14 questions, included items related to the participants' socio-demographic characteristics (age, gender, grade, program, province of residence, and number of floors in their building) (Chegini et al., 2022). It also included items related to disaster preparedness, such as whether they had experienced a disaster and whether they had a disaster kit and a disaster plan.
2. The second part used the 20-item, 5-point Likert-type "Disaster Preparedness Status Scale" (DPS), based on the "Disaster Risk Perception and Preparedness Scale" developed by Özdemir (2018).
3. The reliability of the scale used was determined to be Cronbach's alpha = 0.91. The lowest score on the 5-point Likert scale is 20 and the highest is 100. Total scores were converted to a 5-point scale to obtain average DPS scores, and statistical analyses were performed on these scores (Table 5).

### 2.4. Data Collection

The survey application was conducted in a classroom environment by researchers working in conjunction with faculty members and voluntarily. After verbal information, volunteer students

were given a questionnaire and asked to answer all questions in accordance with the instructions. An item was added to the disaster preparedness scale to measure the severity of participants' responses (item 14). 715 students participated in the survey; however, those who did not answer all items, those whose answers to the control question contradicted each other, and those who gave uniform answers were excluded, and n=623 participants were included in the analyses. The data obtained were analyzed using SPSS, and the survey's reliability coefficient was found to be  $\alpha=.91$ , and the average AHOD score was found to be 3.36.

## 2.5. Data Analysis

Frequency, percentage, mean, homogeneity, skewness/kurtosis and Cronbach's alpha reliability coefficients of the data were calculated in the SPSS 15.0 program. T-test, ANOVA and Pearson correlation tests were performed to determine whether there was a relationship between disaster preparedness status (DPS) and socio-demographic characteristics.

Some of the data has been rearranged as follows:

While coding the responses to the open-ended question "Which city were you living in before coming to Aydın?", those who stated that they came from the 11 provinces affected by the earthquake of February 6, 2023 (01-Adana, 02-Adıyaman, 21-Diyarbakır, 23-Elazığ, 27-Gaziantep, 31-Hatay, 44-Malatya, 46-Kahramanmaraş, 63- Şanlıurfa, 79-Kilis, and 80-Osmaniye) were entered into SPSS as "1- Earthquake victim" and those from other provinces as "2- Non-earthquake victim" and analyses were conducted on these values.

The 5-point Likert DPS scale was converted into a 5-stage success score within certain score ranges as shown in Table 1, since student averages take very different values from 1 to 5. Statistical comparisons were made after the data belonging to the mean scores of the 20-question DPS scale were transformed into a five-stage adequacy score (Table 1).

Table 1. Students' DPS score averages and the criteria for converting them to 5-point success points

DPS score	Distribution of the scores				
Average scores	1.00 - 1.59	1.60 - 2.59	2.60 - 3.59	3.60 - 4.59	4.60- 5.00
Adjusted scores*	1	2	3	4	5
Adequacy of scores	Very insufficient	Insufficient	Moderate	Sufficient	Very sufficient

\*Statistical comparisons were made on these scores.

## 2.6. Ethical Dimension

Permission was obtained from ADÜ Educational Research Ethics Board with the decision number 2024/5 -VII.

## 3. FINDINGS

When the data of the questionnaire study were analyzed, the reliability coefficient Cronbach alpha  $\alpha= 0.91$ , which was found to be quite high. The results of the socio-demographic characteristics of the participants are presented in Table 2.

Accordingly, the majority of respondents (n=609, 97.8%) are young people aged 18-24 years and 70.5% (n=439) of respondents are female. Similarly, 98.2% (n=612) were single and more than half lived in metropolitans (n=214, 34.3%) or cities (n=128, 20.5%) (Table 2).

Table 2. Frequency table regarding the socio-demographic characteristics of the participants

Questions	Alternatives	N (%)
1. Age	18-24	609 (97.8)
	25-31	5 (0.8)
	32-38	7 (1.1)
	39 and bigger	2 (0.3)
2. Gender	Female	439 (70.5)
	Male	184 (29.5)
3. Marital Status	Single	612 (98.2)
	Married	8 (1.3)
	Divorce	3 (0.5)
6. Place of Residence	Metropolitan	214 (34.3)
	City	128 (20.5)
	District	187 (31.1)
	Town	11 (1.8)
	Village	83 (13.3)
8. Income Status	Income is more than the outgoing	133 (21.4)
	Income is less than the outgoing	217 (34.8)
	Income equal to outgoing	273 (43.8)
14. How many floors is the building you live in?	One level	104 (16.7)
	Bi-level	128 (20.5)
	Three levels	111 (17.8)
	Four levels	95 (15.2)
	Five levels	89 (14.3)
	Six or more levels	96 (15.4)
Total		623 (100)

Frequencies and percentages of participants' grade levels and programs of study are shown in Table 3.

Table 3. Distribution of participants by program and grade level

Question 4- Program of Studies	N (%)
Anesthesia (AN)	74 (11.9)
Environmental Health (EH)	75 (12.0)
Dialysis (DY)	53 (8.5)
Physical Therapy and Rehabilitation (PTR)	99 (15.9)
First and Emergency Aid (FEA)	35 (5.6)
Medical Laboratory (ML)	35 (5.6)
Medical Documentation and Secretariat (MDS)	209 (33.5)
Medical Imaging Techniques (MIT)	43 (6.9)
Question 5- Grade Level	N (%)
1 <sup>th</sup> Grade	415 (66.6)
2 <sup>nd</sup> Grade	208 (33.4)

Table 4 presents the results of the participants' responses to questions about whether or not they had ever experienced a disaster, and whether or not they were prepared and trained.

In accordance with the responses provided to the seventh question, 91 students (14.6%) who participated in the survey study came from provinces affected by the February 6, 2023, earthquake and were personally affected by the disaster (Table 4).

We asked them "have you ever any disaster experiences before?" in the ninth question. Nearly half of them (43.5%, n=271) answered yes. In the second phase of ninth question asked that "Which disaster have you experienced?". When classified of the responses to this question the majority of participants n=256 (94.4%) answered were earthquake. The other answers were fire (n=7; 2.6%), flood (n=5; 1.8%), and n=1 (0.4%) person each wrote that Soma mine accident, Coronavirus pandemic (SARS-CoV-2) and tornado too. Furthermore, 58 respondents (9.3%) indicated that they had lost a person someone close due to the disaster (Table 4).

Table 4. Distribution of participants' responses to disaster/emergency experience and preparedness statements

No	Questions	Yes N (%)	No N (%)
7	Earthquake victim (Who lived in 11 provinces in the earthquake zone on 6 February 2023.)	91 (14.6)	532 (85.4)
9	Have you experienced a disaster before?	271 (43.5)	352 (56.5)
10	Have you lost someone close to you as a result of a disaster?	58 (9.3)	565 (90.7)
11	Have you had disaster training before?	286 (45.9)	337 (54.1)
12	Do you have a personal or family disaster plan?	150 (24.1)	473 (75.9)
13	Do you have a disaster emergency bag?	159 (25.5)	464 (74.5)

An examination of the answers' other questions (11, 12 and 13) in this section determined that nearly half of the participants (n=286, 45.9%) reported having undergone disaster training, n=150 of them (24.1%) had a disaster plan, and n=159 (25.5%) of them had an emergency bag (Table 4).

The distribution of the adjusted mean scores obtained by the participants is presented in Figure 1, and Table 5 presents the results of the descriptive analysis of the DPS scale data in the second section, which aims to determine the students' preparedness towards disasters. The mean of the DPS score for the participants was found to be  $\bar{x} = 3.36$ , which is slightly above the average. The data do not exhibit kurtosis or skewness, indicating a normal distribution.

Table 5. Descriptive analysis results of DPS Scale results

	N	Min.	Max.	Mean	Std. Devi.	Skewness	Kurtosis
DPS total	623	27.00	100.00	67.98	±14.69	.28 ±.09	-.09 ±.19
DPS mean	623	1.35	5.00	3.39	±.73		
DPS corrected mean	623	1	5	3.33	±.81	.24 ±.09	.04 ±.19

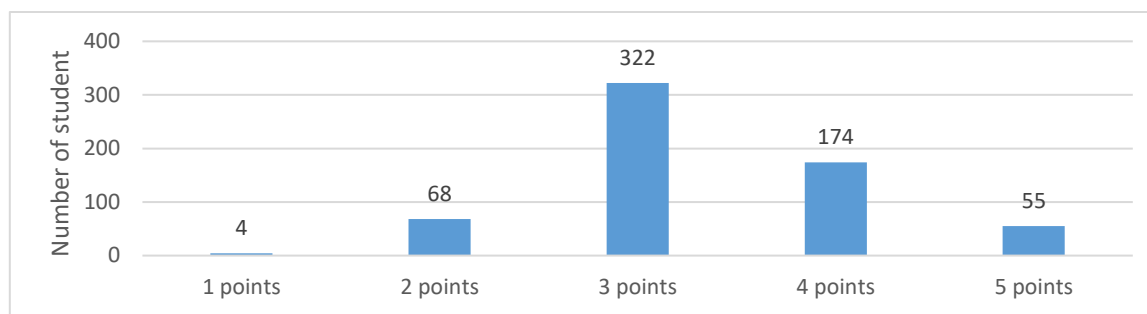


Figure 1. Distribution of the mean DPS scores of the participants.

Regarding the data in Figure 1 in terms of preparedness for disasters, 0.6% (n=4) of the participants were very inadequate, 10.9% (n=68) were inadequate, 51.7% (n=322) were moderately adequate, 27.9% (n=174) were adequate, and 8.8% (n=55) were highly adequate.

Statistical comparisons were made using the data on the 20-question DPS score averages and five-stage corrected proficiency scores (Table 1).

The results of the t-test and ANOVA conducted to determine the relationship between the DPS score and socio-demographic characteristics are presented in Tables 6 and 7. The results show that there is no statistically significant difference in DPS scores based on gender and responses to question 9 regarding previous disaster experience ( $p > .05$ ) (Table 6). Similarly, the difference in participants' DPS scores according to the number of floors in the building they lived in and the settlement they lived in the longest was not statistically significant ( $p > .05$ ) (Table 7).

Table 6. T-test table for the relationship between DPS score and socio-demographic characteristics

Variable	Group	N	$\bar{X}$	Std. Devi.	t-test		
					t	df	Sig.
2. Gender	Female	439	3.32	.79	-.60	621	.55
	Male	184	3.36	.85			
5. Grade	1 <sup>st</sup>	415	3.38	.85	2.25	621	.02*
	2 <sup>nd</sup>	208	3.23	.72			
9. Did experienced a disaster?	Yes	271	3.36	.83	.75	621	.45
	No	352	3.31	.80			
10. Lost someone close?	Yes	58	3.58	.97	2.50	621	.01**
	No	565	3.30	.79			
11. Has disaster training?	Yes	286	3.49	.80	4.59	621	.00**
	No	337	3.19	.78			
12. Has a disaster plan?	Yes	150	3.90	.79	10.82	621	.00**
	No	473	3.15	.73			
13. Has got a disaster bag?	Yes	159	3.85	.73	10.00	621	.00**
	No	464	3.16	.76			
7. Earthquake victims?	Yes	91	3.52	.90	2.33	621	.02*
	No	532	3.30	.79			

\* $p < .05$ ; \*\* $p < .01$ ; N=number;  $\bar{X}$ =mean; t=t-test; df=degrees of freedom; F=frequency

It was found that participants' DPS scores differed statistically significantly according to socio-demographic variables such as class level, age, marital status, the health program they studied,

Investigating The Effects of Disaster Training and Experience on The Disaster Preparedness Status of Health Technician Candidates

perceived income status, and responses to questions related to the disaster (Tables 6 and 7). As to statistical tests were done, it was found that the DPS score of first-grade students higher than the second-grade ( $t_{0.05; 621}=2,25$ ). In addition, the DPS scores of students who have lost someone close to them depend on a disaster higher than those who have not lost ( $t_{0.05;621}=2,50$ ) (Table 6). At the same time, a statistically significant difference was observed in students' DPS scores based on the factors of having had disaster training ( $t_{0.05;621}=4.59$ ), having a disaster or emergency plan ( $t=10.82$ ), and having a disaster or emergency bag ( $t=10.00$ ) (Table 6).

Table 7. ANOVA analysis results of participants' DPS scores and independent variables

Variable	N	$\bar{X}$	Std. Devi		Sum of Sq.	df	Mean of Sq.	F	Sig.
<b>Age</b>									
18-24	609	3.33	.81	Intergroup	8.31	3	2.77	4.29	.00**
25-31	5	3.00	.71	Intragroup	400.25	619	.65		32-38 >
32-38	7	4.28	.49	Total	408.56	622			Others
39+	2	2.50	.71						
<b>Marital Status</b>									
Married	8	3.75	.31	Intergroup	6.80	2	3.40	5.25	.00**
Single	612	3.32	.03	Intragroup	401.75	620	.65		D > S
Divorced	3	4.66	.33	Total	408.56	622			
<b>Training Programs They are Enrolled in</b>									
AN	74	3.49	.92	Intergroup	2.09	7	3.00	4.75	.00**
EH	75	3.35	.89	Intragroup	387.60	615	.63		PTR < AN,
DY	53	3.62	.84	Total	408.56	622			DY, MIT
PTR	99	3.00	.64						
FEA	35	3.46	.82						
ML	35	3.37	.91						
MDS	209	3.28	.73						
MIT	43	3.58	.82						
<b>The settlement where they lived longest</b>									
Metropol	214	3.32	.86	Intergroup	.27	4	.07	.10	.98
City	128	3.31	.80	Intragroup	408.29	618			p>.05
District	187	3.36	.76	Total	408.56	622			
Town	11	3.36	.67						
Willage	83	3.32	.83						
<b>Perceived Income Status</b>									
I. I > 0	133	3.47	.87	Intergroup	5.22	2	2.61	4.01	.02*
II. I = 0	217	3.23	.84	Intragroup	403.33	620	.65		I > III
III. I < 0	273	3.35	.74	Total	408.56	622			
<b>The number of floors in the building they live in</b>									
Single	104	3.42	.87	Intergroup	3.13	5	.63	.95	.45
Two	128	3.32	.80	Intragroup	405.43	617	.66		p>.05
Three	111	3.39	.74	Total	408.56	622			
Four	95	3.36	.77						
Five	89	3.21	.79						
Six or more	96	3.26	.88						

\* $p < .05$ ; \*\* $p < .01$ ; N=number;  $\bar{X}$ =mean; df=degrees of freedom; F=frequency

DPS scores of the earthquake victim students who came from provinces affected by the disaster on February 6, 2023 were carried out to be statistically higher than the other group (non-earthquake victims) ( $t=2,33$ ) ( $p<,05$ ) (Table 6).

When the age variable was evaluated, the DPS scores of individuals in the 32-38 age group were significantly higher than other groups ( $f=4.283$ ;  $p<.01$ ). For the marital status variable, the DPS score of participants who are separated from their spouse is statistically significantly higher than those who are single ( $f=5.249$ ;  $p<.01$ ). As a result of the comparisons made based on the training programs, it was found that the DPS score of the students enrolled in the PTR program was significantly lower than the other programs, especially the AN, DY and MIT programs ( $f=4.752$ ;  $p<.01$ ). When the DPS scores of the participants were evaluated according to their perceived income status, it was found that the scores of individuals whose income was more than their expenses were higher than those whose income was less than their expenses ( $f=4,012$ ;  $p<,05$ ) (Table 7).

In addition, the Pearson correlation test was used to determine whether there was a correlation between the health technician candidates' disaster preparedness scores and their responses to the disaster and emergency self-assessment questions in the survey, and the results of the analysis are shown in Table 8. Looking at Table 8, the correlation values are negative, suggesting an inverse relationship between these variables. However, as the DPS score increases from 1 to 5, the positive yes response is coded as 1 and the negative no response is coded as 2 in other variables, so the correlation values are negative. According to these results, a positive correlation was found between the DPS scores of the participants and the yes answers to the questions about being a victim of the 6 February earthquake, having lost a relative as a result of the disaster, having received disaster training, having a disaster preparedness plan, and having a disaster kit (Table 8).

Table 8. Pearson correlation analysis results between participants' DPS scores and some sociodemographic characteristics

N=623		DPS score	1	2	3	4
DPS score	r	1				
	p					
1. Having experienced a disaster	r	-.093*	1			
	p	.02				
2. Lost someone close due to a disaster	r	.100*	.462**	1		
	p	.01	.00			
3. Having disaster training before	r	-.181**	-.098*	.073	1	
	p	.00	.01	.06		
4. Having a disaster/emergency plan	r	-.398**	.065	.117**	.250**	1
	p	.00	.10	.00	.00	
5. Having a disaster/emergency bag	r	-.372**	.081*	.053	.177**	.471**
	p	.00	.04	.18	.00	.00

\* $p<.05$ ; \*\* $p<.01$ ; r=correlation coefficient

#### 4. DISCUSSION

As a result of this study conducted to determine the disaster preparedness of health technician islands and the factors that may affect this, DPS scores are  $X=3.36$  out of 5 and are slightly above average. When similar studies conducted with different sample groups and scales are examined, Alfuqaha et al. (2024) reported that the disaster preparedness of Jordanian nurses is at a moderate level, similar to ours. Ağahan and Demirbilek (2023) investigated the preparedness of

teachers, and Özdemir (2018) investigated the preparedness of individuals living in Kocaeli province for disasters and reported that their mean scores were high. Ataman Bor (2024) investigated the disaster preparedness beliefs of individuals who experienced disasters in Hakkari province and reported that the belief status of those who were prepared was higher than others, and the belief levels of individuals were above average. Similarly, Ertuğrul and Ünal (2020) found that the participants' disaster preparedness belief scores were above average in their study with a sample group similar to our study.

It was found that in disaster preparedness status of health technician candidates, having received disaster training is an important factor in this study. Similar results have been reported in studies conducted on these subjects by different researchers (Ağahan and Demirbilek, 2023; Şekerci et al., 2023; Alfuqaha et al., 2024; Amberson et al., 2020; Erkin et al., 2023; Şen and Ersoy, 2017). Similarly, it was reported that courses and training on disasters were needed to increase the preparedness of healthcare workers and students in disaster management (Al-Ali and Ibaid, 2015; Liou et al., 2020).

Another question addressed in this study was whether there was a difference in disaster preparedness between students affected by the earthquake that occurred on February 6, 2023, and other students. Our statistical evaluations concluded that having previously experienced a disaster is another effective factor in increasing disaster awareness. A study conducted with elementary school students also reported that one of the factors affecting disaster preparedness is having previously experienced a disaster and/or seeing people or places that have experienced natural disasters in the media (Uzunyol, 2013). A study conducted with primary healthcare workers in Jordan reported that participants' perceptions of disaster preparedness, knowledge, and skills differed significantly based on gender, specialty, and disaster exposure (Al-Ali and Ibaid, 2015). On the other hand, Aras et al., (2021) reported in their study with health sciences faculty students that their earthquake experience did not affect their disaster awareness.

Another notable finding of our study was that when it comes to disasters, the first thing that comes to mind is earthquakes. 43.5% of participants answered yes to the question "Have you ever experienced a disaster?"; 94.4% of them answered earthquakes to the open-ended question "What disaster have you experienced?". In a similar study conducted with university students, it was reported that 53.4% of the students had experienced a disaster, and 89.4% reported earthquake as the type of disaster they had experienced; these results are parallel to our findings (Şekerci et al., 2023). This is an indication that when disaster is mentioned in our society, earthquake is the first thing that comes to mind. As is known, it was striking that the students in our sample group did not consider it a disaster, even though they had recently experienced a global disaster such as COVID-19. This may stem from people feeling helpless in situations like earthquakes, which carry a high risk of sudden loss of life, property, and livelihoods. Conversely, epidemics like Covid-19, despite their longer-lasting negative effects, may not be perceived or remembered as disasters because people feel safe when they take precautions.

## 5. CONCLUSION AND SUGGESTION

When the findings obtained as a result of the analyses were evaluated, it was concluded that having received disaster training was an effective factor in individuals' preparedness for disasters. In addition, having previously experienced a disaster or losing a loved one due to a disaster is also an effective factor in being prepared for disasters.

In light of these findings, we believe that planning more comprehensive disaster training will contribute to raising public awareness about disasters and ensuring preparedness for them.

Furthermore, conducting studies with different sample groups and broad participation will contribute to revealing different aspects of the issue.

### Limitation

The sample group of this study is limited only to health services vocational school students.

### REFERENCES

Ağahan, M., Demirbilek, Ö. (2023). Öğretmenlerin afet hazırbulunuşluklarının farklı değişkenler açısından incelenmesi. *Kahramanmaraş Sütçü İmam Üniversitesi Sosyal Bilimler Dergisi*, 20 (3), 735-744.

Al-Ali, N. M., Ibaid, A. A. (2015). Health-care providers' perception of knowledge, skills and preparedness for disaster management in primary health-care centres in Jordan/Perception des prestataires de soins de sante en matiere de connaissances, de competences et d'etat de preparation a la gestion des catastrophes dans des centres de soins de sante primaires en Jordanie. *Eastern Mediterranean health journal*, 21(10), 713.

Alfuqaha, A. N., Alosta, M. R., Khalifeh, A. H., Oweidat, I. A. (2024). Jordanian nurses' perceptions of disaster preparedness and core competencies. *Disaster Medicine and Public Health Preparedness*, 18, e 96. doi <https://doi.org/10.1017/dmp.2024.81>

Amberson, T., Wells, C., Gossman, S. (2020). Increasing disaster preparedness in emergency nurses: a quality improvement initiative. *Journal of Emergency Nursing*, 46 (5), 654-665.

Aras, M., Mumcu, A., Karabey, T. (2021). Sağlık Bilimleri Fakültesi Öğrencilerinin Afet Bilinç Düzeylerinin Belirlenmesi. *TOĞÜ Sağlık Bilimleri Dergisi*, 1(2):40-9. [https://dergipark.org.tr/tr/pub/togusagbilderg/issue/65913/1028837#article\\_cite](https://dergipark.org.tr/tr/pub/togusagbilderg/issue/65913/1028837#article_cite)

Ataman Bor, N. (2024). Determination of General Disaster Preparedness Belief Status of Individuals Living in Hakkari. *Resilience*, 8 (1), 45-55. <https://doi.org/10.32569/resilience.1314976>

Avcı, G. (2023). Afet eğitiminde afetlere hazırlık: üniversite öğrencileriyle tehlike avı. *Afet ve Risk Dergisi*, 6 (1), 84-100. <https://doi.org/10.35341/afet.1149239>

Cochran, W. G. (1977). Sampling techniques (3rd ed.). New York: John Wiley & Sons.

Codeanu, T. A., Celenza, A., Jacobs, I. (2014). Does disaster education of teenagers translate into better survival knowledge, knowledge of skills, and adaptive behavioral change? A systematic literature review. *Prehospital and Disaster Medicine*, 29 (6), 629-642. <https://doi.org/10.1017/S1049023X14001083>

Chegini, Z., Arab-Zozani, M., Kakemam, E., Lotfi, M., Nobakht, A., Aziz Karkan, H. (2022). Disaster preparedness and core competencies among emergency nurses: A cross-sectional study. *Nursing open*, 9(2), 1294-1302. DOI: <https://doi.org/10.1002/nop2.1172>

Değirmenci, Y., Kuzey, M., Yetişensoy, O. (2019). Sosyal bilgiler ders kitaplarında afet bilinci ve eğitimi. *E-Kafkas Eğitim Araştırmaları Dergisi*, 6 (2), 33-46.

Erkin, Ö., Aslan, G., Öztürk, M., Çam, B., & Ödek, Ş. (2023). Nurses' general disaster preparedness status and affecting factors. *Forbes J Med*. 4 (3), 305-14. DOI: <https://doi.org/10.4274/forbes.galenos.2023.32659>

Ertuğrul, B., Ünal. S. D. (2020). Determination of General Disaster Preparedness Beliefs of Students Studying at a Foundation University Health Services Vocational School. *Journal of Disaster and Risk*, 3(1), 31 - 45. DOI: <https://doi.org/10.35341/afet.653911>

Fuhrmann, S., Stone, L. D., Casey, M. C., Curtis, M. D., Doyle, A. L., Earle, B. D.,... & Schermerhorn, S. M. (2008). Teaching disaster preparedness in geographic education. *Journal of Geography*, 107(3), 112-120. <https://doi.org/10.1080/00221340802458482>

Günşen, G., Çolak, F. G. (2024). Afet bilincine yönelik hazırlanan stem projelerinin okul öncesi öğretmen adaylarının afet bilinci algı düzeylerine ve stem öz-yeterlikleri üzerine olan etkisinin incelenmesi. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, (59), 276-300. <https://doi.org/10.53444/deubefd.1362916>

Liou, S., Hsiu-Chen, L., Chun-Chih Lin, Tsai, H., & Ching-Yu, C. (2020). An exploration of motivation for disaster engagement and its related factors among undergraduate nursing students in taiwan. *International Journal of Environmental Research and Public Health*, 17(10), 3542. DOI: <https://doi.org/10.3390/ijerph17103542>

Özdemir, A. (2018). Toplumun afet risk algısı ve afete hazırlıklı olma durumu: Kocaeli ili örneği. Unpublished master's thesis, Gümüşhane üniversitesi, Sosyal Bilimler Enstitüsü, Gümüşhane. <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>

Sever, R., Değirmenci, Y. (2019). Temel kavramlar. R. Sever (Ed.), *Afetler ve afet yönetimi* (pp. 2-11). Ankara: Pegem Akademi.

Şafak, E. (2023). Uluslararası hukukta afet durumunda uygulanacak hukuk kuralları ile ilgili standartları belirleme çalışmaları bağlamında "Uluslararası afet hukuku projesi". *Ankara Barosu Dergisi*, 81 (Özel Sayı), 73-98. doi: <https://doi.org/10.30915/abd.1380913>

Şahin, Y., Lamba, M., Öztop, S. (2018). Üniversite öğrencilerinin afet bilinci ve afete hazırlık düzeylerinin belirlenmesi. *Medeniyet Araştırmaları Dergisi*, 3 (6), 149-159.

Şekerci, Y. G., Ayvazoğlu, G. Çekiç, M. (2023). Üniversite öğrencilerinin temel afet bilinci ve farkındalık düzeylerinin saptanması. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 12 (1), 74 – 81.

Şen, G., Ersoy, G. 2(017). Hastane afet ekibinin afete hazırlık konusundaki bilgi düzeylerinin değerlendirilmesi. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 6 (4), 122-130.

Tsai, M. H., Chang, Y. L., Shiau, J. S., Wang, S. M. (2020). Exploring the effects of a serious game-based learning package for disaster prevention education: The case of battle of flooding protection. *International Journal of Disaster Risk Reduction*, 43, [101393]. <https://doi.org/10.1016/j.ijdrr.2019.101393>

Tuncer, N., Sözen, Ş., Sakar, Ş. (2021). Okul öncesi eğitimde deprem farkındalığı: "deprem benden küçüksün" projesi, Tokat ili örneği. *Uluslararası Eğitim Spektrumu Dergisi*, 3 (1), 1-27.

URL 1. <https://www.afad.gov.tr/aciklamali-afet-yonetimi-terimleri-sozlugu> (Last access: 24.09.2025).

URL 2. <https://www.afad.gov.tr/turkiye-afet-mudahale-plani> (Last access:24.09.2025).

Uzunyol, B. (2013). *8. Sınıf öğrencilerinin doğal afetler hakkındaki bilgi düzeylerinin çeşitli değişkenlere göre incelenmesi*. Unpublished master's thesis, Niğde Üniversitesi Eğitim Bilimleri enstitüsü, Niğde. <https://tez.yok.gov.tr/UlusalTezMerkezi/tezSorguSonucYeni.jsp>

Yıldız, T., Özge, E. R., Metin, Ö. (2024). Sosyal bilgiler öğretmen adaylarının afet hazırbulunuşluk seviyelerinin incelenmesi. *International Journal of Geography and Geography Education*, (51), 48-67. <https://doi.org/10.32003/igge.1333070>