İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Dergisi
ISSN: 2147-7892, Cilt 13, Sayı 1 (2025) 48-61
doi: 10.33715/inonusaglik.1568010

Journal of Inonu University Health Services Vocational School
ISSN: 2147-7892, Volume 13, Issue 1 (2025) 48-61
doi: 10.33715/inonusaglik.1568010

Original Article / Araştırma Makalesi

ASSESSMENT OF STUDENTS' BELIEF IN DISASTER PREPAREDNESS

Öğrencilerin Afete Hazırlık İnancının Değerlendirilmesi

Taner AKARSU[1] *Zeynep Güldane ANDAÇ*[2]
[1,2]*Çankırı Karatekin University, Çerkeş Vocational School, Çankırı*

Geliş Tarihi / Received: *16.10.2024* ***Kabul Tarihi / Accepted:*** *14.01.2025*

ABSTRACT

The research was conducted with the objective of evaluating the disaster preparedness belief of students enrolled at the district centre, which is situated in an area characterised by a high risk of potential disasters. The descriptive study was conducted between 15 November 2023 and 15 February 2024 at the Vocational School in the Cerkes district of the Cankiri province. The study sample consisted of 195 students, 129 (66.2%) female and 66 (33.8%) male, who participated voluntarily. Data were collected via face-to-face interviews with the students. The data were collected using two instruments: a personal information form questionnaire and a "General Disaster Preparedness Belief Scale" (GDPBS). The statistical significance of the data was evaluated at the ($p < 0.05$) level. The descriptive variables of sociodemographic characteristics and disaster preparedness status were found to create a significant difference in the sub-dimension and total score of the GDPBS ($p < 0.05$). The mean total score of the GDPBS was 118.0 ± 11.6. It is hypothesised that determining the level of preparedness of students in the event of a potential disaster will facilitate the identification of issues that may arise in the disaster preparedness process, thereby enabling their resolution in a timely manner.

Keywords: Disaster, Disaster preparedness, Disaster preparedness belief, Students.

ÖZ

Araştırma olası afetler bakımından riskli bir konumda yer alan ilçe merkezindeki öğrenim gören öğrencilerin afete hazırlık inancını değerlendirmek amacıyla yapılmıştır. Tanımlayıcı türdeki çalışma 15 Kasım 2023–15 Şubat 2024 tarihleri arasında Çankırı ili Çerkeş ilçesinde bulunan Meslek Yüksekokulunda gerçekleştirilmiştir. Çalışmanın örneklemini gönüllü katılım sağlayan 129 (%66.2) kadın ve 66 (%33.8) erkek olmak üzere toplam 195 öğrenci oluşturmaktadır. Veriler öğrencilerle yüz yüze görüşme yöntemiyle toplanmıştır. Veriler, kişisel bilgi formu anketi ve genel afete hazırlık inanç ölçeği olmak üzere iki araç kullanılarak toplanmıştır. Verilerin istatistiksel anlamlılığı $p<0.05$ düzeyinde değerlendirilmiştir. Sosyodemografik özellikler ve afete hazırlık durumu tanımlayıcı değişkenlerinin, genel afete hazırlık inancı ölçeği alt boyutu ve toplam puanında anlamlı bir fark yarattığı bulunmuştur ($p<0.05$). Öğrencilerin genel afete hazırlık inancı ölçeği toplam puanının ortalaması 118.0 ± 11.6 olarak bulunmuştur. Olası bir afet durumuna karşı öğrencilerin hazır olma inancının değerlendirilmesi, afete hazırlık sürecinde ortaya çıkabilecek sorunların önceden belirlenerek çözümlenmesine olumlu katkı sağlayabilir.

Anahtar Kelimeler: Afet, Afete hazırlık, Afete hazırlık inancı, Öğrenci.

Taner AKARSU ✉, tanerakarsu66@hotmail.com
Çankırı Karatekin University, Çerkeş Vocational School, Çankırı

Bu makaleye atıf yapmak için (How to cite this article): Akarsu, T. ve Andaç, Z. G. (2025). Assessment Of Students' Belief in Disaster Preparedness. *İnönü Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu Dergisi*, 13(1), 48-61. doi: 10.33715/inonusaglik.1568010

INTRODUCTION

The advent of the twenty-first century has been marked by a notable increase in the frequency of extreme weather events, a consequence of climate change. This has resulted in a heightened impact of disasters and a concomitant rise in population density in vulnerable urban centres (Aldrich, Meyer & Page-Tan, 2018). The defining characteristics of natural disasters are their inherent unpredictability, the limited resources available in the affected areas, and the dynamic changes occurring in the environment (Madrigano, Chandra, Costigan & Acosta, 2017).

It is estimated that millions of people are affected by disasters each year, particularly those residing in low- and middle-income countries that lack the necessary infrastructure to protect themselves and respond effectively to such events. Disasters are traumatic events that can be collectively experienced and can be attributed to technological developments through natural pathways or human causes (McFarlane & Norris, 2006). The inherent unpredictability of disasters precludes the possibility of accurately predicting the extent of damage to people and property. It is possible for disasters to result in unintended losses to people and residential areas (Panwar and Sen, 2018). It is challenging to anticipate the extent of damage that may be caused by natural disasters (Madrigano et al., 2017). The occurrence of a disaster may result in the disruption of the normal processes and decision-making mechanisms that individuals employ in their daily lives. In the aftermath of a disaster, students are often overlooked as a vulnerable subgroup within society. The impact of disasters on students' mental and physical health is a significant concern. Additionally, campus life can also be negatively affected by disasters (Patel, Kermanshachi & Nipa, 2020). Disasters can result in various challenges for students in the registration process, relocation, and transition between programmes. Financial difficulties and psychological stress are two major issues that can arise in students due to disasters. While these negative effects of disasters disproportionately affect disadvantaged and vulnerable students, they also cause some problems in access to higher education (Wang, 2024). Despite an increase in awareness of disasters among some segments of society, there has been a paucity of investigation into the concepts of disaster preparedness and the response process in universities (Jaradat, Mziu &Ibrahim, 2015). With regard to education, it would appear that the desired level of awareness and prevention culture in relation to disasters has not yet been achieved in Turkey. It is recommended that the educational process for disaster preparedness should commence at the individual level and subsequently extend to the wider society. Turkey's geographical structure, topography and climate render it susceptible to a range of hazards and

threats that can cause disasters, particularly earthquakes (Afet ve Acil Durum Yönetimi Başkanlığı [AFAD], 2013).

The Cerkes District of Cankiri Province, the setting for the study, is situated within the North Anatolian Fault Zone (NAFZ), the most extensive tectonic line in Anatolia, which traverses the northern part of Turkey. Secondary fault systems develop and produce earthquakes in accordance with the main line of the NAFZ, which extends in an east-west direction across the Cankiri region. One such line is the Cerkes fault line. The district is situated on the KAFZ (Koçyiğit et al., 2001; Köle, 2016; Özçelik, 2022). It is clear that the most effective means of protecting individuals from the adverse effects of disasters is through the dissemination of knowledge and the provision of education. In a country such as Turkey, where the probability of exposure to disasters and the potential for hazards is high, it is of paramount importance to ascertain the level of disaster preparedness of individuals in advance (Bulat & Özbaşı, 2021).

The determination of the disaster preparedness level of students at universities is a valuable step in the prevention of potential future disasters. The objective of the research was to ascertain the degree of correlation between the variables pertaining to the sociodemographic and disaster preparedness status of the students enrolled at the Vocational School in Cankiri province, Cerkes district, which is situated in an area of heightened disaster risk, and the general disaster preparedness belief.

MATERIAL AND METHOD

The research population comprised 252 students enrolled in the vocational high school in Cankiri province, Cerkes district, who were participating in the home patient care and elderly care programmes. No sampling was employed in the study, and the research was conducted with the participation of 195 students who were present at the school on the dates of the research and who consented to take part.

The dependent variables of the study were GDPBS while the independent variables were sociodemographic characteristics and disaster preparedness status. This descriptive study was conducted at Cerkes Vocational School. The data were collected from students who had volunteered to participate in the study between 15 November 2023 and 15 February 2024. The personal information form and the GDPBS were employed as the instruments for data collection. The personal information form was devised by the researcher and comprises 11 questions in total. Seven of these pertain to the sociodemographic characteristics of the participants, while the remaining four are designed to ascertain the participants' disaster preparedness. The form was created by the researcher based on a review of the relevant

literature and includes questions on the participants' socio-demographic characteristics, health status and disaster preparedness-related characteristics.

General Disaster Preparedness Belief Scale

The scale was developed by Inal, Altintas & Dogan, (2018). The scale, which is based on the Health Belief Model, is designed to assess general belief regarding disaster preparedness. The scale comprises 31 items and six sub-dimensions, namely perceived susceptibility, perceived low barriers, perceived benefit, perceived severity, self-efficacy and cues to action. The scale employs a 5-point Likert-type scale. A minimum score of 31 points and a maximum score of 155 points can be obtained from the scale. An increase in the overall total score obtained from the scale indicates a high level of disaster preparedness, while a decrease in the score indicates a low level of disaster preparedness. It should be noted that the scale has no cut-off point. The Cronbach's alpha (α) value, which is the internal reliability coefficient of the Turkish validity and reliability scale, was determined to be 0.93. In the study, the Cronbach's alpha (α) value of the scale was found to be 0.81.

Statistical Analysis

Statistical analyses were performed with IBM® SPSS® 26 (SPSS Inc., Chicago, IL, USA) software. The conformity of the variables to normal distribution was analysed by analytical methods (Kolmogorov-Smirnov/Shapiro-Wilk tests). In the statistical evaluation of the research data, number and percentage values of descriptive information were calculated. Independent groups t test and Mann-Whitney U test were used to compare the characteristics of the participants and scale scores for normally distributed data. Statistical significance of the data was evaluated at $p<0.05$ level.

Strengths and Limitations

To the best of our knowledge, there is a paucity of studies on this subject. However, no study has evaluated the preparedness belief of students' in the district center, which is located in an area prone to disasters. The strength of our study is that it is the first to question the evaluation of students' preparedness beliefs in terms of disaster preparedness and reveal the importance of the subject. The present study is limited because it was conducted at a single centre and with only students from one programme. Furthermore, the number of volunteers who participated was relatively small. Additionally, since the study was limited to students in Turkey, the generalisability of the findings to different cultural contexts may be limited. Future

research should consider these limitations, which should aim to recruit larger and more diverse sample populations.

Ethics Committee Declaration

Helsinki Declaration of Human Rights was adhered to throughout the study. Permission was obtained from Cankiri Karatekin University Non-Interventional Ethics Committee for the study (Date: 10/11/2023 Decision No: 10). Written and verbal consents were obtained from the students who agreed to participate in the study by signing the "Informed Voluntary Consent Form". The questionnaires were administered to the participants by the responsible researcher. For the use of the scale, permission was obtained by e-mail from the researchers who developed the scale.

RESULTS

The distributions of the descriptive variables of the sociodemographic characteristics and disaster preparedness status of the students participating in the study are shown in Table 1. When the values related to the sociodemographic characteristics of the individuals were analysed, it was found that the mean age was 24.8±2.9 years and the median age was 25 years (min-max; 18-30). It was determined that 66.2% of the student individuals were female, 100% were single, 67.7% were studying in the department of home patient care, 84.1% did not use harmful habits (smoking/alcohol) and 95.4% did not have a chronic disease. When the characteristics of the descriptive variables of the students' disaster preparedness status were analysed, it was found that 60.5% of them had been exposed to a disaster event before, 66.7% did not have a disaster plan and 73.8% had not received any training on disasters before (Table 1).

Table 1. Distribution of Variables Related to Sociodemographic and Disaster Preparedness of Students

Sociodemographic Characteristics	**Groups**	**Frequency (n)**	**Percentage (%)**
Age groups	<25	96	49.2
	≥25	99	50.8
Gender	Female	129	66.2
	Male	66	33.8
Marital status	Single	195	100
Section	Elderly care	63	32.3
	Home patient care	132	67.7
Class	First	123	63.1
	Second	72	36.9
Use of harmful habits (smoking and alcohol)	Yes	31	15.9
	No	164	84.1
Having a chronic disease	Yes	9	4.6
	No	186	95.4

Disaster Preparedness Status			
Previous exposure to a disaster event	Yes	118	60.5
	No	77	39.5
Status of having a disaster plan	Yes	65	33.3
	No	130	66.7
Previous training on disasters	Yes	51	26.2
	No	144	73.8

It was found that there was a significant difference between the sociodemographic variables (gender, use of harmful habits and having a chronic disease) and the mean scores of the sub-dimensions of the scale ($p<0.05$).

The gender variable revealed that female exhibited statistically higher scores than male in the sub-dimensions of 'perceived susceptibility, perceived severity'($p=0.040$; $p=0.001$) (Table 2).

In the variable of harmful habit use, it was determined that those who did not engage in harmful habits exhibited statistically more significant scores than those who did in the 'perceived severity' sub-dimension of the scale ($p=0.020$) (Table 2).

A significant difference was identified between the variables defining the disaster preparedness status of the students (having a disaster plan, receiving previous training for disasters) and the sub-dimension mean scores of the scale ($p < 0.05$).

In the variable of having a disaster plan, it was determined that those who had a plan in the sub-dimension of 'perceived susceptibility' of the scale exhibited statistically more significant scores than those who did not have a plan ($p=0.027$) (Table 2).

The analysis revealed no statistically significant difference between the sociodemographic variables (age, programme, class) and disaster preparedness status (previous exposure to a disaster event) of the students and the mean scores of the sub-dimensions scores of the scale ($p>0.05$). Upon examination of the mean scores of the students from the GDPBS and its six sub-dimensions, it was found that the mean score of the perceived susceptibility sub-dimension was 24.8 ± 3.8. The mean score for the perceived severity sub-dimension was 11.8 ± 2.5. (Table 2).

Table 2. Comparison of GDPBS Subdimension Scores in Sociodemographic and Disaster Preparedness Variables

Variables		**Perceived Susceptibility**		**Perceived Severity**	
	Mean±SD	24.8±3.8		11.8±2.5	
	n	**Mean±SD**	**Statistics**	**Mean±SD**	**Statistics**
Age groups					
<25	96	24.77±3.70	t=0.043	11.83±2.60	t=-0.125
≥25	99	24.75±3.87	p=0.966	11.79±2.48	p=0.901
Gender					
Female	129	25.16±3.20	t=2.063	12.47±2.20	t=5.393
Male	66	23.98±4.63	**p=0.040**	10.53±2.67	**p=0.001**

Program					
Elderly care	62	24.19±3.78	t=-1.430	11.66±2.61	t=-0.559
Home patient care	133	25.02±3.76	p=0.154	11.88±2.50	p=0.577
Class					
First	123	24.83±3.88	t=0.339	11.85±2.59	t=0.253
Second	72	24.64±3.61	p=0.735	11.75±2.45	p=0.800
Use of harmful habits					
Yes	31	24.06±4.73	t=-1.116	10.84±3.27	t=-2.353
No	164	24.89±3.57	p=0.266	11.99±2.33	**p=0.020**
Having a chronic disease					
Yes	9	25.78±3.11	z=-0.726	12.33±4.03	z=-1.501
No	186	24.71±3.80	p=0.468	11.78±2.45	p=0.133
Previous exposure to a disaster event					
Yes	118	25.14±3.72	t=1.422	12.08±2.63	t=1.731
No	76	24.38±3.40	p=0.157	11.43±2.34	p=0.085
Status of having a disaster plan					
Yes	65	25.14±3.72	t=2.227	12.05±2.76	t=0.863
No	129	24.43±3.70	**p=0.027**	11.71±2.41	p=0.389
Previous training on disaster events					
Yes	51	24.75±3.70	t=-0.175	11.61±2.77	t=-0.632
No	139	24.85±3.60	p=0.862	11.87±2.44	p=0.528
Cronbach's Alpha Value		**0.763**		**0.703**	

The gender variable revealed that female exhibited statistically higher scores than male in the sub-dimensions of ‘perceived low barriers’ (p=0.001) (Table 3).

In the variable of having a chronic disease, it was determined that those who had a chronic disease exhibited a statistically more significant score in the 'perceived low barriers' sub-dimension of the scale than those who did not have a disease (p=0.013) (Table 3).

The mean score for the perceived benefit sub-dimension was 12.3 ± 2.2. The mean score for the perceived low barriers sub-dimension was 21.6 ± 3.7. (Table 3).

Table 3. Comparison of GDPBS Subdimension Scores in Sociodemographic and Disaster Preparedness Variables

Variables		**Perceived Benefit**		**Perceived Low Barriers**	
	Mean±SD	12.3±2.2		21.6±3.7	
	n	**Mean±SD**	**Statistics**	**Mean±SD**	**Statistics**
Age groups					
<25	96	12.42±1.94	t=0.462	21.66±3.99	t=-0.339
≥25	99	12.27±2.37	p=0.645	21.47±3.47	p=0.735
Gender					
Female	129	12.37±1.98	t=0.256	22.19±3.39	t=3.340
Male	66	12.29±2.51	p=0.798	20.35±4.06	**p=0.001**
Program					
Elderly care	62	12.35±2.05	t=0.049	21.66±3.20	t=0.248
Home patient care	133	12.34±2.22	p=0.961	21.52±3.95	p=0.804
Class					
First	123	12.46±2.07	t=0.939	21.75±3.78	t=-0.899
Second	72	12.15±2.32	p=0.349	21.25±3.63	p=0.370
Use of harmful habits					
Yes	31	12.52±1.94	t= 0.482	21.48±4.75	t=-0.130
No	164	12.31±2.21	p=0.631	21.58±3.52	p=0.896
Having a chronic disease					
Yes	9	12.33±2.34	z=-0.093	24.56±3.16	z=-2.351
No	186	12.34±2.16	p=0.926	21.42±3.70	**p=0.019**

Previous exposure to a disaster event					
Yes	118	12.43±2.25	t=0.692	21.47±3.64	t=-0.396
No	76	12.21±2.05	p=0.490	21.68±3.89	p=0.692
Status of having a disaster plan					
Yes	65	12.77±1.91	t=1.940	22.05±3.59	t=1.312
No	129	12.13±2.27	p=0.054	21.30±3.79	p=0.191
Previous training on disaster events					
Yes	51	12.39±2.16	t=0.232	21.43±3.86	t=-0.212
No	139	12.31±2.18	p=0.817	21.56±3.70	p=0.833
Cronbach's Alpha Value		**0.789**		**0.752**	

The gender variable revealed that female exhibited statistically higher scores than male in the sub-dimensions of ‘self-efficacy’ (p=0.001) (Table 4).

In the variable of harmful habit use, it was determined that those who did not engage in harmful habits exhibited statistically more significant scores than those who did in the ‘self-efficacy' sub-dimension of the scale (p=0.001) (Table 4).

In the variable of having a disaster plan, it was determined that those who had a plan in the sub-dimension of ‘cues to action and self-efficacy' of the scale exhibited statistically more significant scores than those who did not have a plan (p=0.007; p=0.001) (Table 4).

In the variable of previous disaster training, it was determined that those who had undergone training in the 'self-efficacy' sub-dimension of the scale exhibited statistically more significant scores than those who had not received such training (p=0.001) (Table 4).

The mean score for the cues to action sub-dimension was 18.4±3.0. The mean score for the self-efficacy sub-dimension was 29.9±4.7. (Table 4).

Table 4. Comparison of GDPBS Subdimension Scores in Sociodemographic and Disaster Preparedness Variables

Variables		**Cues to Action**		**Self-Efficacy**	
	Mean±SD	18.4±3.0		29.9±4.7	
	n	**Mean±SD**	**Statistics**	**Mean±SD**	**Statistics**
Age groups					
<25	96	18.69±2.91	t=1.284	29.84±4.70	t=-0.111
≥25	99	18.13±3.12	p=0.201	29.92±4.74	p=0.911
Gender					
Female	129	18.55±3.05	t=-0.936	31.10±4.53	t=-3.319
Male	66	18.12±2.98	p=0.351	29.41±4.72	**p=0.001**
Program					
Elderly care	62	18.06±2.96	t=-1.072	29.68±4.63	t=-0.413
Home patient care	133	18.56±3.05	p=0.285	29.98±4.76	p=0.680
Class					
First	123	18.41±3.03	t=0.008	30.07±4.81	t=0.708
Second	72	18.40±3.03	p=0.993	29.57±4.54	p=0.480
Use of harmful habits					
Yes	31	19.19±2.99	t=1.586	29.58±3.43	t=5.058
No	164	18.26±3.02	p=0.114	33.18±4.60	**p=0.001**
Having a chronic disease					
Yes	9	19.00±3.39	z=-0.848	32.11±5.57	z=-1.464
No	186	18.38±3.01	p=0.396	29.77±4.65	p=0.143
Previous exposure to a disaster event					

Yes	118	18.64±3.02	t=1.195	29.45±4.73	t=-1.557
No	76	18.11±3.01	p=0.234	30.53±4.66	p=0.121
Status of having a disaster plan					
Yes	65	19.25±2.84	t=2.722	31.48±4.80	t=3.456
No	129	18.02±3.03	**p=0.007**	29.06±4.48	**p=0.001**
Previous training on disaster events					
Yes	51	18.71±3.15	t=0.888	31.75±4.06	t=3.433
No	139	18.27±2.97	p=0.376	29.17±4.75	**p=0.001**
Cronbach's Alpha Value		**0.674**		**0.685**	

The analysis revealed no statistically significant difference between the sociodemographic variables (age, gender, programme, class, use of harmful habits and having a chronic disease) and the mean total scores of the scale (p>0.05) (Table 5).

The analysis revealed no statistically significant difference between the disaster preparedness status variables (previous exposure to a disaster event, receiving previous training for disasters) and the mean total scores of the scale (p>0.05) (Table 5).

A significant difference was identified between the variables defining the disaster preparedness status of the students (having a disaster plan), and total mean scores of the scale (p=0.001). The mean score for the GDPBS was 118.0±11.6. (Table 5).

Table 5. Comparison of GDPBS Total Scores in Sociodemographic and Disaster Preparedness Variables

Variables	**Mean±SD**	**Total Points** 118.0±11.6	
	n	**Mean±SD**	**Statistics**
Age groups			
<25	96	119.21±11.08	t=0.525
≥25	99	118.33±12.13	p=0.600
Gender			
Female	129	119.83±11.23	t=0.945
Male	66	116.68±12.12	p=0.346
Program			
Elderly care	62	117.61±11.90	t=0.945
Home patient care	133	119.30±11.46	p=0.346
Class			
First	123	119.35±12.00	t=0.920
Second	72	117.76±10.90	p=0.358
Use of harmful habits			
Yes	31	121.68±12.32	t=0.535
No	164	118.21±11.42	p=0.128
Having a chronic disease			
Yes	9	126.11±12.66	z=-1.788
No	186	118.41±11.47	p=0.074
Previous exposure to a disaster event			
Yes	118	119.19±11.79	t=0.460
No	76	118.34±11.24	p=0.617
Status of having a disaster plan			
Yes	65	123.23±10.79	t=3.872
No	129	116.66±11.34	**p=0.001**
Previous training on disaster events			
Yes	51	120.63±12.25	t=0.728
No	139	118.03±11.16	p=0.168

Cronbach's Alpha Value	**0.772**

Independent t test and Mann-Whitney U test were used and $p<0.05$ considered statistically significant.
Internal consistency analysis was determined by Cronbach's alpha value and was considered reliable above 0.60.

DISCUSSION

The frequency of disasters is on the rise globally. To mitigate the impact of such events, it is vital to assess the level of preparedness of individuals across all age groups in relation to disaster risk. Identifying the factors that influence the disaster preparedness attitudes of university students in the Cerkes district, which is situated in an area prone to potential disasters, can prove beneficial in reducing future challenges.

The present study sought to examine the relationship between sociodemographic characteristics and disaster preparedness status among students, as well as the correlation between these variables and scores on the GDPBS. The findings of the study indicated that certain variables were associated with variations in the scores obtained on the GDPBS.

Upon examination of the relationship between the gender variable and the GDPBS, it was determined that female students exhibited higher scale scores than male students. In a separate study examining disaster preparedness among university students, it was observed that female students exhibited higher levels of general disaster preparedness belief than their male counterparts (Ertuğrul & Ünal, 2020). In a similar study, it was posited that the female gender had a negligible impact on the disaster preparedness process (Li, Gillani, Mohamed Ibrahim, Omer & Fang, 2022). Mohamed, Abdel-Aziz & Elsehrawy (2023) conducted a study to determine the level of knowledge, attitudes and practices of nursing students in the disaster preparedness process. The findings indicated that female nursing students exhibited a more positive attitude towards disaster preparedness. In a further study conducted in Iran, it was stated that male were more interested in disaster preparedness behaviours than female (Najafi, Ardalan, Akbarisari, Noorbala & Jabbari, 2015). The findings obtained from our study are partially similar to the literature. The discrepancy may be explained by the sociodemographic characteristics of the study population and the level of susceptibility assumed by female students in family roles and social relations specific to their gender.

The findings indicated that the scale scores of those who did not engage in harmful habits were higher than those who did. A review of the literature revealed a paucity of studies examining the relationship between the use of harmful habits and the level of disaster preparedness. In a study, it was posited that disaster preparedness is associated with positive health behaviours, including avoidance of smoking, exercise and regular medical check-ups

(Pampel, 2012). Upon analysis of the sub-dimensions of the scale utilized in the present study, it became evident that personal self-skills, basic first aid practices, and individual-level competence in protective interventions were of particular significance in the context of potential disaster occurrence, perceived disaster risk, and the potential for disaster. The elevated mean score observed among students who did not engage in harmful habits may be indicative of their capacity to demonstrate the requisite knowledge, skills, and abilities in the event of a potential disaster.

The presence of a chronic disease resulted in a notable discrepancy in the scale scores. In a study conducted by Qin et al., (2022) to determine the disaster preparedness levels of individuals with and without chronic diseases, it was found that participants with chronic diseases demonstrated a higher level of preparedness for disasters. In another study, it was stated that individuals with chronic diseases have a low level of preparedness for emergencies (Wang, Liu, Du, Zhang & Yu, 2021). The study is partially similar to the existing literature on the subject. The reason why having a chronic disease affected the general disaster preparedness belief level sub-dimension scores can be expressed by the burden of the disease on individuals. Due to the burden of the disease, individual and economic problems may arise in the disaster preparedness phase in student individuals.

The implementation of a disaster plan resulted in a notable improvement in the scale scores. In a study conducted on ward nurses in Australia, it was reported that 87% of the nurses were aware of the location of the disaster plan, while 42% of them had not read the plan itself (Duong, 2009). In a study conducted by Hasan, Moriom, Shuprio, Younos & Chowdhury, (2022), the disaster preparedness of university students in Bangladesh was examined, and it was concluded that a comprehensive disaster plan is necessary for this demographic. A study conducted to evaluate the perception levels of university staff and students on disaster preparedness determined that university staff and students were not prepared for disasters at the desired level (Jaradat et al., 2015). The proportion of students who have a disaster plan is low. The lack of a disaster plan among the majority of students may have negatively affected the disaster preparedness process. The disaster preparedness belief level scores of students with a disaster plan were significantly higher. Our study shows similarities with the literature in general, which emphasises the importance of having a disaster plan.

The level of prior training in disaster events was found to have a significant impact on the scale score. In a study conducted by Walczyszyn, Patel, Oron & Mina (2016) with healthcare personnel, it was found that the majority of participants expressed willingness to receive disaster training in order to prepare for potential future risks. In a study conducted to evaluate

the perceptions and attitudes of emergency health services students regarding disaster preparedness, it was stated that students were inadequately prepared to respond to disaster events, which could potentially place them in a vulnerable position during such events (Alrazeeni, 2015). In another study, it was found that 97% of graduate students lacked the requisite preparedness for disasters. Furthermore, the study indicated that students were cognizant of the necessity for preparedness in the event of disasters (Fung, Loke & Lai, 2008). The relatively low proportion of individuals who had received prior training for disasters is a notable finding, highlighting the importance of disaster preparedness training. No significant differences were observed in the scale scores with regard to the sociodemographic variables of age, programme and class. In a study conducted by Li et al. (2022), it was determined that the age variable had a negligible impact on the disaster preparedness process. In another study, no significant relationship was found between students' age and disaster preparedness (Tkachuck, Schulenberg & Lair, 2018). Our study is similar to the existing literature in general. This similarity can be attributed to the fact that the majority of the students in our study were in the same age range. No significant difference was found between programme and class variables and scale scores. This can be attributed to the similarity of the sociodemographic characteristics of the students.

Despite the fact that over half of the individuals participating in the study had previously been exposed to a disaster event, this did not result in a notable difference in the scale scores. It was hypothesised that students with previous disaster experience would demonstrate positive behaviours in preparing for a potential disaster, given the experience gained. However, the findings of this study indicate an inverse relationship, suggesting that students did not gain any positive benefits from their previous disaster experiences.

CONCLUSIONS

The findings of the study indicated that the disaster preparedness belief levels of students enrolled in vocational high school were above the mid-range. It is evident that not all students are adequately prepared for disasters. It is therefore crucial to foster disaster awareness in universities, which represents a pivotal step in promoting disaster awareness and disaster consciousness at the societal level. Furthermore, it is essential to maintain the highest level of disaster preparedness. Disaster preparedness, disaster response and disaster management processes should be integrated into the curricula and syllabuses. Ensuring the extensive utilisation of training and application models aimed at enhancing disaster awareness across the country may positively contribute to the disaster preparedness process.

Funding

Our research has been entitled to be supported within the scope of the Scientific and Technical Research Council of Turkey (TUBITAK) 2023 1st term "2209-A" University Students Research Projects Support Programme.

Acknowledgements

We would like to thank TUBITAK for supporting the research. We would like to thank all students who participated in the study for their contributions.

REFERENCES

Afet ve Acil Durum Yönetimi Başkanlığı-AFAD (2013). Türkiye Afet Müdahale Planı (TAMP). Accessed on 02.09.2024 from https://www.afad.gov.tr/kurumlar/afad.gov.tr/2419/files/afet_mud_pl_resmig_20122013.pdf

Aldrich, D.P., Meyer, M.A. & Page-Tan, C. M. (2018). Social capital and natural hazards governance. *Oxford Research Encyclopedia of Natural Hazard Science,* 127-136. https://doi.org/10.1093/acrefore/9780199389407.013.254

Alrazeeni, D. (2015). Saudi EMS students' perception of and attitudes toward their preparedness for disaster management. *Journal of Education and Practice,* 6(35), 110-116.

Bulat, Ç. & Özbaşı, D. (2021). Üniversite personelinin afet yönetimi hakkında bilgi, tutum ve davranışlarının incelenmesi: Çanakkale Onsekiz Mart Üniversitesi örneği. *International Journal of Social and Educational Sciences,* 16(6), 66-82.

Duong, K. (2009). Disaster education and training of emergency nurses in South Australia. *Australasian Emergency Nursing Journal*, 12(3), 86-92. https://doi.org/10.1016/j.aenj.2009.05.001

Ertuğrul, B. & Ünal, S.D. (2020). Bir vakıf üniversitesi sağlık hizmetleri meslek yüksekokulunda öğrenim gören öğrencilerin genel afete hazırlıklı olma inanç durumlarının belirlenmesi. *Journal of Disaster and Risk,* 3(1), 31-45. https://doi.org/10.35341/afet.653911

Fung, O.W.M., Loke, A.Y. & Lai, C.K.Y. (2008). Disaster preparedness among Hong Kong nurses. *JAN Leading Global Nursing Research,* 62(6), 698-703. https://doi.org/10.1111/j.1365-2648.2008.04655.x

Hasan, K., Moriom, M., Shuprio, S.I.M., Younos, T.B. &Chowdhury, A. (2022). Exploring disaster preparedness of students at university in Bangladesh. *Natural Hazards,* 111, 817-849. https://doi.org/10.1007/s11069-021-05080-2

Inal, E., Altintas, K. H. & Dogan, N. (2018). The development of a general disaster preparedness belief scale using the health belief model as a theoretical framework. *International Journal of Assessment Tools in Education,* 5(1), 146-158. https://doi.org/10.21449/ijate.366825

Jaradat, A., Mziu, H. & Ibrahim, J. (2015). Disaster preparedness in universities. *International Journal of Computer Trends and Technology (IJCTT),* 19(1), 1-4. https://doi.org/10.14445/22312803/IJCTT-V19P101

Koçyiğit, A., Yılmaz, A., Adamia, S. & Kuloshvili, S. (2001). Neotectonics of East Anatolian Plateau (Turkey) and lesser Caucasus: Implication for transition from thrusting to strike-slip faulting. *Geodinamica Acta,* 14(1-3), 177–195. https://doi.org/10.1016/S0985-3111(00)01064-0.

Köle, M.M. (2016). Probability of earthquake occurrences to Cankiri province. *Cankiri Karatekin University Journal of Institute of Social Sciences,* 7(1), 455-470.

Li, S., Gillani, A.H., Mohamed Ibrahim, M.I., Omer, S. & Fang, Y. (2022). Should we focus more on teaching and training disaster management in health-care colleges? An insight into the students' knowledge, attitude, and readiness to practice. *J Pharm Bioallied Sci,* 14(3), 147-156. https://doi.org/10.4103/jpbs.jpbs_420_21.

Madrigano, J., Chandra, A., Costigan, T. & Acosta, J.D. (2017). Beyond disaster preparedness: Building a resilience-oriented workforce for the future. *International Journal of Environmental Research and Public Health,* 14(12),1563. https://doi.org/10.3390/ijerph14121563.

McFarlane, A. C. & Norris, F. H. (2006). Definitions and concepts in disaster research. Norris, F., Galea, S., Friedman, M., Watson, P (Ed). In *Methods for Disaster Mental Health Research* (pp. 3-19). New York, NY. The Guilford Press.

Mohamed, N.A., Abdel-Aziz, H.R. & Elsehrawy, M.G. (2023). Nursing students' knowledge, attitude, and practice regarding disaster preparedness: A cross-sectional study. *Risk Management and Healthcare Policy,* 16, 2427-2437. https://doi.org/10.2147/RMHP.S435131

Najafi, M., Ardalan, A., Akbarisari, A., Noorbala, A. A. & Jabbari, H. (2015). Demographic determinants of disaster preparedness behaviors amongst Tehran Inhabitants, Iran. *PLoS Currents,* 11(7), 1-13. https://doi.org/10.1371/currents.dis.976b0ab9c9d9941cbbae3775a6c5fbe6

Özçelik, F. (2022). 1 Şubat 1944 Bolu- Gerede Depremi'nin Çankırı Vilâyetine Etkileri. *Journal of History School (JOHS),* 15(60), 3068-3091. https://doi.org/10.29228/Joh.62199

Pampel, F.C. (2012). Disaster preparedness and health behaviors: an empirical study of similarities and differences. *International Journal of Mass Emergencies&Disasters,* 30(1), 61-81. https://doi.org/10.1177/028072701203000103

Panwar, V. & Sen, S. (2018). Economic impact of natural disasters: An empirical re-examination. *Margin:The Journal of Applied Economic Research,* 13 (1), 109–139. https://doi.org/10.1177/0973801018800087

Patel, R, K., Kermanshachi, S. & Nipa, T.J. (2020). Establishment of a framework to measure disaster preparedness: Development of strategies to enhance disaster preparedness activities. CCC 2020 *Proceedings of the Creative Construction e-Conference (2020),* 058, 76-84. https://doi.org/10.3311/CCC2020-051

Qin, Y.J., Liu, J.H., Xie, Y.J., Wang, S.L.., Liu, X.L., Loke, A.Y. & Mo, B.R. (2022). Disaster preparedness among populations in Shenzen, China, with and without chronic disease. *Disaster Med Public Health Prep,* 18(17), e82. https://doi.org/10.1017/dmp.2021.354.

Tkachuck, M. A., Schulenberg, S. E. & Lair, E. C. (2018). Natural disaster preparedness in college students: Implications for institutions of higher learning. *Journal of American College Health,* 66(4), 269-279. https://doi.org/10.1080/07448481.2018.1431897

Walczyszyn, M., Patel, S., Oron, M. & Mina, B. (2016). Perceptions of hospital medical personnel on disaster preparedness. *F1000 Research,* 5, 1938. https://doi.org/10.12688/f1000research.8738.1

Wang, H., Liu, Y., du, M., Zhang, P. &Yu, X. (2021). Preparedness for emergency events among patients with chronic diseases in China: A cross-sectional study. *Research Square,* 1, 1-27. https://doi.org/10.21203/rs.3.rs-855982/v1

Wang, J. (2024). Impact of natural disasters on student enrollment in higher education programs: A systematic review. *Heliyon,* 10(2024), e27705 https://doi.org/10.1016/j.heliyon.2024.e27705