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RESEARCH / ARAŞTIRMA

Evaluation of Disaster Response Self-Efficacy Levels of Nursing Students Studying in the Region During Kahramanmaraş Earthquakes: A Cross-Sectional Study

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ABSTRACT

Objective: Nurses have important roles in the care of people affected by disasters. Incorporating disaster management into nursing higher education enhances nurses' competencies in their professional careers. This study aims to evaluate the disaster response self-efficacy of nursing students studying in the region affected by the earthquakes that occurred on February 6, 2023.
Material and Methods: The research, designed as a descriptive and cross-sectional, was conducted with 838 nursing students between March and April 2023. The data were collected using a Personal Information Form and the Disaster Response Self-Efficacy Scale. The significance level of the study was found to be p<0.05.
Results: The average age of the students was 20.72±2.09, with 78.6% being female, 49% having experienced a loss among their family or friends, and 10.1% having received disaster-related training. The participants' total scale score average was 57.92±14.17. A statistically significant difference was found between gender, class levels, receiving disaster-related training, participating in search and rescue operations in the earthquake region, and the total scale score.
Conclusion: It was determined that the self-efficacy of student nurses in disaster response was at a moderate level.
Keywords: Disasters, earthquakes, nursing students, self psychology.

Kahramanmaraş Depremleri Sırasında Bölgede Eğitim Gören Hemşirelik Öğrencilerinin Afete Müdahale Öz-Yeterlilik Düzeylerinin Değerlendirilmesi: Kesitsel Bir Çalışma

ÖZET

Amaç: Afetlerden etkilenen kişilerin bakımında hemşirelerin önemli rolleri vardır. Hemşirelik yükseköğreniminde afet yönetimine yer verilmesi, hemşirelerin mesleki yaşantılarında niteliklerini arttırmaktadır. Bu araştırmada, 6 Şubat 2023 tarihinde meydana gelen depremlerde, bölgede eğitim gören hemşirelik öğrencilerinin afete müdahale öz yeterlilik durumlarının değerlendirilmesi amaçlanmaktadır.
Gereç ve Yöntem: Tanımlayıcı ve kesitsel tipte planlanan araştırma Mart-Nisan 2023 tarihleri arasında 838 hemşirelik öğrencisiyle yürütüldü. Veriler Kişisel Bilgi Formu ve Afete Müdahale Öz-yeterlilik Ölçeği ile toplandı. Araştırmanın anlamlılık düzeyi p<0,05 olarak uygun bulunmuştur.
Bulgular: Öğrencilerin yaş ortalamasının 20,72±2,09, %78,6'sı kadın, %49'nun ailesinde veya arkadaşlarından kayıp olduğu, %10,1'nin afetlerle ilgili eğitim aldığı belirlenmiştir. Katılımcıların ölçek toplam puan ortalaması 57,92±14,17'dir. Afetlere yönelik eğitim alan, deprem bölgesinde arama kurtarma çalışmalarına katılan, kadın ve 3. ile 4. sınıfta olan öğrencilerin Afete Müdahale Öz-yeterlilik Ölçeği toplam puan ve alt boyut puanlarının diğer gruplardaki öğrencilere göre anlamlı düzeyde daha yüksek olduğu bulunmuştur (p<0,05).
Cinsiyet, sınıf düzeyleri, afetlere yönelik eğitim alma ve deprem bölgesinde arama kurtarma çalışmalarına katılma durumları ile ölçek toplam puanı arasında istatistiksel olarak anlamlı fark olduğu bulunmuştur.
Sonuç: Öğrenci hemşirelerin afet müdahalesinde öz yeterlilik durumlarının orta seviyede olduğu saptanmıştır.
Anahtar Kelimeler: Afetler, depremler, hemşirelik öğrencileri, kendilik psikolojisi.

1. Introduction

Disasters not only cause direct economic losses but also present a significant public health issue, impacting the livelihoods, family lives, and mental well-being of victims (1, 2). Natural disasters such as earthquakes, floods, and hurricanes occur worldwide, while serious damages also arise from social disasters like fires, collapses, explosions, and infections (3). According to statistics from the Global Disaster Database, there were 1,002 disasters worldwide in 2022 alone, affecting approximately 2.6 billion people (1).

Due to the rising incidence of disasters worldwide, healthcare professionals must give greater attention to disaster response (4). Minimizing disaster damage depends on prompt intervention (3). Given their capacity and responsibility in providing healthcare services, healthcare professionals can effectively respond to disaster emergencies and play a crucial role in the recovery process (5).

Nurses are one of the largest healthcare groups directly providing care and intervention to address patient needs in rescue, first aid, and medical care during disasters (6). They have both ethical and legal responsibilities in disaster nursing, and the

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ability to respond immediately to various disaster situations is essential (3). Therefore, nurses must possess strong knowledge and competence to address individuals' healthcare needs during disaster response (5). Nurses and nursing students have a crucial role in responding dynamically to disasters in their communities (38). Despite the efforts to train healthcare providers, there is a gap between what nursing students are taught and what practitioners in disaster preparedness know (39).

According to the World Health Organization (WHO, 2008), nursing students, as the nurses of the future, should possess the appropriate knowledge and skills to respond to disasters (7). WHO has recommended the inclusion of disaster preparedness and emergency response topics in nursing curricula at all levels of nursing education (8). Nursing students from various countries, including Hong Kong (9), Indonesia (10), Japan (11), and Türkiye (2), have been involved in patient care during different disasters. The American Association of Colleges of Nursing (2020) has emphasized that nursing students are frontline responders in disaster management, intervention, and recovery efforts, playing a critical role in disasters (12). Kamanyire et al. (2021) noted in their study that nursing students with disaster experience are more likely to intervene during disasters and have greater confidence in their ability to respond (13). According to several studies in the literature, student nurses lack the knowledge and skills necessary to respond to disasters (2, 6). Disaster management education can enhance their knowledge, skills, and confidence (31, 28). Nurses must receive sufficient education, knowledge, and experience to effectively respond to disasters (33). One factor influencing nursing students' self-efficacy in disaster response is whether disasters are included in the educational curriculum. A study found that the disaster response self-efficacy of nursing students who completed the disaster nursing course significantly increased by the end of the training (34).

Studies conducted in the United States emphasize the distinct lack of curricula and content focused on disaster response, as well as the difficulty in finding experts sufficiently trained in disaster preparedness (35, 36). Universities in Ireland and Finland offer postgraduate certificate and diploma programs, as well as master's degree programs, using online disaster nursing learning platforms. The lack of integrated policies and strategies in disaster management related to nursing in Turkey causes ambiguity regarding the role of nurses in disaster management, often assigning them a more limited role than they should have in the disaster management process and team (37).

1. The literature review revealed a limited number of studies assessing the disaster response self-efficacy of nursing students (14, 15, 37). Additionally, no study was identified that evaluated the disaster response self-efficacy of nursing students studying in nursing departments located in the region affected by the Kahramanmaraş earthquakes, which occurred on February 6, 2023, causing significant destruction across 11 provinces in Turkey. Therefore, this study aims to assess the disaster response self-efficacy of nursing students who were studying in the region affected by these earthquakes. To achieve this objective, the following research questions were addressed:

2. Q1: What is the level of disaster response self-efficacy among nursing students in the earthquake-affected region?

3. Q2: Are there any relationships between certain demographic characteristics of students and their disaster preparedness self-efficacy levels?

2. Material and Method

2.1. Study Design and Participants

This descriptive and cross-sectional study was conducted between March and April 2023 to assess the disaster response self-efficacy of nursing students studying in nursing departments across 11 provinces in Turkey, which experienced significant destruction due to the earthquake on February 6, 2023. The project was approved by the Artvin Çoruh University Rectorate Ethics Committee (approval date: 22.03.2023, number: E.86280). The purpose of the research was communicated to the participants through a consent form, accessible via the Google Form link. The study population consisted of nursing students from the 11 provinces affected by the earthquakes on February 6. No specific sampling method was determined, and the aim was to reach the entire population. However, due to the earthquake's impact and communication disruptions, data were obtained through social media from students studying in the provinces where the researchers were based (Gaziantep and Kilis). Each student was asked to share the study link with their friends studying in the nursing department via social media (WhatsApp, Facebook, Instagram). Data were collected by Snowball sampling method. Snowball sampling method was used and the research was concluded with the participation of 838 students who accepted to participate and completed the online survey. Furthermore, when the factors that made a statistically significant difference were evaluated through post-hoc analysis, the effect size obtained was d=0.46, and the alpha value was 0.05. In the calculation, the theoretical power of this study was found to be 99%.

Inclusion criteria for the study: Living in an earthquake zone, Being a nursing department student at a university in the region where the earthquake occurred (11 provinces), Volunteering to participate in the study, being over 18 years old.

2.2. Instruments

The study aimed to include nursing students from the 11 provinces affected by the major earthquake. However, the sample was limited to students studying in the provinces where the researchers were based (Gaziantep and Kilis), who were reached through social media. Each student was asked to share the study link with their friends in the nursing department via social media (WhatsApp, Facebook, Instagram). Data were collected online using the Google Forms survey platform. The snowball sampling method was employed to reach the nursing students who constituted the research sample.

Sampling: Students from the Nursing Departments of Gaziantep University and Kilis 7 December University Faculty of Health Sciences were invited to participate. They were also asked to share the survey with volunteer nursing students via email or social media. After accessing the survey, nursing students were presented with questions divided into three sections. The first section includes the informed consent form and the electronic consent question. The second section contains the Personal Information Form, developed by the researchers based on a literature review, which covers sociodemographic details, earthquake experiences, and education preferences (16, 18). The third section consists of the Disaster Response Self-Efficacy Scale. The informed consent form explained the purpose of the study and the inclusion criteria. Nursing students who did not meet the inclusion criteria were informed that they should not complete the online survey. To prevent duplicate responses, a Google login requirement was implemented. Additionally, when creating the online survey, respondents were required to answer the previous question before proceeding, ensuring that no missing data occurred.

The study used a Personal Information Form, developed by the researchers based on a literature review, consisting of 15 questions related to sociodemographic details, earthquake experiences, and educational preferences (16-18).

The second part of the study instrument included the Disaster Response Self-Efficacy Scale (DRSES), developed by Li et al. (19), and underwent Turkish validity and reliability tests

conducted by Koca et al. (20) in 2018. The DRSES consists of 19 items divided into three sub-dimensions: Disaster Emergency Rescue Competency (11 items), Disaster Psychological Nursing Competency (4 items), and Disaster Role Quality and Adaptation Competency (4 items). Participants rated each item on a 5-point Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). The minimum score on the scale is 19, and the maximum score is 95. Scale scores are calculated by summing the responses to the questions. A higher scale score indicates greater disaster response self-efficacy. In the Turkish validity and reliability study of the scale, the Cronbach's alpha coefficient was 0.96, while in our study, it was 0.94. Permission to use the scale was obtained from the authors via email.

2.3. Statistical Analysis

The data analysis was performed using SPSS Statistics (Version 25.0, SPSS Inc., Chicago, IL, USA). Descriptive statistics were used to present categorical values as frequencies (n) and percentages (%), while continuous numerical values were expressed as mean ± standard deviation. The normality of the data was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. Independent-sample t-tests and one-way analysis of variance (ANOVA) were used to compare categorical variables. Statistical significance was evaluated at a 95% confidence interval, with $p < 0.05$ considered statistically significant.

2.4. Ethical Aspects of the Research

Written permission was received via e-mail from the scale owner (Koca et all. 2018) to use the scale in the study. Ethics committee approval for the study was received from Artvin Çoruh University Rectorate Ethics Committee (date: 22.03.2023, number: E.86280). The study's objective was conveyed to the participants through a consent form accessible via a Google Form link. The study included nursing students who willingly consented to participate.

3. Results

The students had an average age of 20.72 ± 2.0 years, with 78.6% being female. Approximately 80.3% reported a middle-income status, and 83.7% were currently living in the earthquake-affected region. Among the participants, 45% had previously experienced a disaster, 49% reported losing a family member or friend in a disaster, 9.3% were voluntarily involved in disaster-related work in the earthquake-affected region, and 10.1% had received formal disaster training. Furthermore, 12.9% of the students were currently living in tents, and 45.6% preferred distance education for theoretical courses, while 23% preferred it for practical courses (Table 1).

Despite receiving education in the earthquake-affected region, the students' places of residence are as follows: 39.4% in Gaziantep, 11.9% in Şanlıurfa, and 5.6% in Kahramanmaraş, with a total of 83.7% residing in the earthquake-affected areas. Furthermore, 16.3% of the students reported living outside the earthquake-affected provinces.

The minimum, maximum, mean, standard deviation (SD), and Cronbach's alpha values for the Disaster Response Self-Efficacy Scale and its sub-dimensions are presented below. Accordingly, the sub-dimension 'On-site Rescue Competency' had a minimum score of 11.00, a maximum score of 55.00, a mean ± SD of 31.49 ± 8.87, and a Cronbach's alpha of 0.933. The sub-dimension 'Disaster Psychological Nursing Competency' had a minimum score of 4.00, a maximum score of 20.00, a mean ± SD of 11.76 ± 3.69, and a Cronbach's alpha of 0.918. The sub-dimension 'Disaster Role Quality and Adaptation Competency' had a minimum score of 4.00, a maximum score of 20.00, a mean ± SD of 14.67 ± 3.56, and a Cronbach's alpha of 0.898. The Total Scale Score had a minimum of 19.00, a maximum of 95.00, a mean ± SD of 57.92 ± 14.17, and a Cronbach's alpha of 0.949 (Tablo 2).

Table 1. Sociodemographic distribution of students' earthquake experiences and educational preferences (N=838).

Characteristics	n	%
Gender		
Male	179	21,4
Female	659	78,6
Grade		
1. grade	363	43,3
2. grade	172	20,5
3. grade	178	21,2
4. grade	125	15,0
Where do you live now?		
In the Earthquake Region	701	83,7
Outside the Earthquake Region	137	16,3
Your economic status?		
Poor	132	15,8
Moderate	673	80,3
Good	33	3,9
Have you received training on disasters before (Earthquake, Flood, Fire, etc.)?		
Yes	85	10,1
No	753	89,9
Would you like to receive training on disasters?		
Yes	710	84,7
No	128	15,3
Have you experienced a disaster before (Earthquake, Flood, Fire, etc.)?		
Yes	377	45,0
No	461	55,0
Have you lost any family/friends in the earthquake we experienced?		
Yes	418	49,1
No	420	50,9
Have you participated in services such as debris removal/search and rescue operations/volunteer internships in hospitals following the major earthquake we experienced?		
Yes	78	9,3
No	760	90,7
Where do you stay after the earthquake?		
Home/hotel/dormitory	730	87,1
Tent	108	12,9
How would you like to attend your theoretical classes?		
Online learning	382	45,6
Face-to-face learning	456	54,4
How would you like to attend your practical classes?		
Online learning	193	23,0
Face-to-face learning	645	77,0
Total	838	100

n: Number, %: Percentage

Table 2. Values related to the scale and its sub-dimensions

Scale and sub-dimensions	Minimum	Maximum	Mean±SD	Cronbach alfa
On-site rescue competency	11,00	55,00	31,49±8,87	0,933
Disaster psychological nursing competency	4,00	20,00	11,76±3,69	0,918
Disaster role quality and adaptation competency	4,00	20,00	14,67±3,56	0,898
Total Score	19,00	95,00	57,92±14,17	0,949

Following the examination of the Disaster Response Self-Efficacy Scale and its sub-dimensions among the nursing undergraduate students, it was observed that male students achieved higher scores in the 'On-site Rescue Competency' sub-dimension (34.62 ± 8.37) and the total scale score (61.05 ± 13.81), with this difference being statistically significant (p

<0.05). Moreover, students who had received disaster-related training scored statistically significantly higher in the 'On-site Rescue Competency' sub-dimension (34.18 ± 8.43), the 'Disaster Psychological Nursing Competency' sub-dimension (12.61 ± 3.90), and the total score of the Disaster Response Self-Efficacy Scale (61.28 ± 14.15). Additionally, students who actively participated as volunteer interns in debris removal/search and rescue operations following the earthquakes showed statistically significant higher scores in the 'On-site Rescue Competency' sub-dimension (35.57±8.88), the 'Disaster Role Quality and Adaptation Competency' sub-dimension (15.55±3.34), and the total scale score (63.42±13.79) (p<0.05). Furthermore, a one-way analysis of variance (ANOVA) was conducted based on the students' grade level, and according to the Bonferroni correction, it was found that third-year students achieved higher and statistically significant values in the 'On-site Rescue Competency' sub-dimension (34.10±8.43) (b>a, c>a, a>d). Fourth-year students had higher and statistically significant values in the 'Disaster Psychological Nursing Competency' sub-dimension (12.49±3.51) (c>a, d>a) and in the 'Disaster Role Quality and Adaptation Competency' sub-dimension (15.36±3.24) (c>a, d>a). Additionally, third-year students had higher and statistically significant values in the total scale score (61.57±12.88) (c>a, d>a) (Table 3).

4. Discussion

In this study, the disaster response self-efficacy levels of nursing students receiving education in the region affected by the two major earthquakes in Türkiye were assessed using the Disaster Response Self-Efficacy Scale. This scale includes sub-dimensions related to on-site rescue competency, disaster psychological nursing competency, and disaster role quality and adaptation competency. The purpose of this assessment was to prepare nursing students, who will be the future healthcare professionals in our country, to effectively intervene in public health emergencies or disasters that may occur globally. It also aimed to determine their self-efficacy levels to help mitigate the adverse effects of the increasingly frequent disasters in Türkiye.

When examining the results of our study, it was found that the majority of students had not received education related to disasters, yet a large majority expressed a desire to receive such education. This aligns with findings from previous studies. For instance, Korean nursing students expressed a need for disaster education (21), while another study highlighted nursing students' emphasis on the necessity of including a disaster-related course throughout their curriculum (13). A study conducted in Türkiye also found that students who received disaster education had higher perceptions of disaster response self-efficacy compared to those who did not, which aligns with our findings (22). Upon reviewing other studies in the literature, it is evident that nursing students often lack disaster-related courses in their formal education and training. The subject heading 'First Aid and Unusual Situations,' which is part of the Nursing National Core Education Program (HUÇEP) (2022), includes topics such as natural disasters, epidemics, accidents, terrorist and violent events, and more. It covers the planning, implementation, management, and evaluation of nursing care before, during, and after these extraordinary situations, as well as working in

Table 3. Comparison of sociodemographic characteristics and scale and sub-dimensions

Descriptive features	Disaster response self-efficacy scale in undergraduate nursing students			
	on-site rescue competency Mean±SD	Disaster psychological nursing competency Mean±SD	Disaster role quality and adaptation competency Mean±SD	Total score Mean±SD
Gender				
Female	30,64±8,82	11,69±3,68	14,73±3,59	57,07±14,16
Male	34,62±8,37	11,99±3,72	14,43±3,46	61,05±13,81
Statistical analysis(t/p)	-5,405/0,000	-0,951/0,342	1,009/313	-3,393/0,001
Have you taken disaster-related courses or training in your undergraduate nursing course program?				
Yes	34,18±8,43	12,61±3,90	14,48±3,81	61,28±14,15
No	31,18±8,88	11,66±3,66	14,69±3,53	57,54±14,13
Statistical analysis(t/p)	2,968/0,003	2,243/0,025	-0,523/0,601	2,308/0,021
Would you like to take courses on disasters?				
Yes	31,41±8,65	11,76±3,57	14,73±3,50	57,90±13,71
No	31,93±10,08	11,75±4,31	14,35±3,87	58,04±16,56
Statistical analysis(t/p)	-0,617/0,537	0,012/0,991	1,112/0,266	-0,104/0,917
Have you experienced a disaster before?				
Yes	31,54±9,12	11,84±3,81	14,63±3,70	58,02±14,56
No	31,45±8,68	11,69±3,59	14,70±3,45	57,85±13,85
Statistical analysis(t/p)	0,146/0,884	0,563/0,574	-0,256/0,798	0,174/0,862
Have you lost any family/friends in the earthquake you experienced?				
Yes	31,32±9,04	11,69±3,65	14,64±3,69	57,65±14,31
No	31,66±8,71	11,83±3,74	14,70±3,43	58,19±14,04
Statistical analysis(t/p)	-0,556/0,578	-0,546/0,585	-0,229/0,819	-0,548/0,584
Have you participated in services such as debris removal/search and rescue operations/volunteer internships in hospitals following the major earthquake we experienced?				
Yes	35,57±8,88	12,29±3,94	15,55±3,34	63,42±13,79
No	31,07±8,77	11,70±3,66	14,58±3,57	57,36±14,10
Statistical analysis(t/p)	4,312/0,000	1,339/0,181	2,286/0,023	3,621/0,000
Which grade are you studying in?				
1.grade[a]	29,42±9,16	11,27±3,79	14,32±3,71	55,01±14,81
2.grade[b]	31,93±8,43	11,72±3,72	14,37±3,70	58,03±13,82
3.grade[c]	34,10±8,43	12,28±3,46	15,19±3,16	61,57±12,88
4.grade[d]	33,17±7,85	12,49±3,51	15,36±3,24	61,03±12,73
Statistical analysis(F/p)	13,943/0,000 b>a, c>a, a>d	5,033/0,002 c>a, d>a	4,393/0,004 c>a, d>a	11,430/0,000 c>a, d>a

a=1.grade; b= 2.grade; c=3.grade; d=4.grade

cooperation with other team members in such circumstances. These findings are consistent with the results of our study and align with research conducted in various regions (2, 14, 23-26).

To provide effective intervention and services during disasters, nursing students must acquire the necessary knowledge and skills through education. Therefore, it is important to develop effective disaster intervention training programs for nursing students in order to change their perception of disasters and promote immediate response to disasters, making it a requirement for their education (27).

When examining the results of our study, it was found that nursing students had a moderate level of disaster response self-efficacy. A similar study conducted on nursing students in Türkiye found that the total score average of the Disaster Response Self-Efficacy Scale, along with the validity and reliability of the Turkish version of the scale, were consistent with our findings (20).

In general, the nursing students were found to have a moderate level of self-efficacy in disaster management, and it was determined that all three sub-dimensions of the Disaster Response Self-Efficacy Scale were at a moderate level of self-efficacy. Studies conducted with nursing students in Oman, Australia and Türkiye also found that the level of disaster self-efficacy was at a moderate level (13,17, 28). These studies in the literature are consistent with our findings.

Many of the nursing students who participated in our study are in the early stages of their education. It was expected that their self-efficacy in disaster management would be lower, as the majority of the participants had not previously experienced any disaster events and had not received disaster-related training. Disaster self-efficacy is an important predictor of actual disaster response. Therefore, the fact that most of the nursing students in our study demonstrated a moderate level of disaster self-efficacy, despite not receiving any disaster-related training, suggests that their foundational knowledge is relatively strong. This may indicate that nursing students have a high level of awareness and sensitivity toward disasters, even without having received specific disaster-related education. To enhance students' self-efficacy in disaster response, disaster nursing education should be integrated into the national undergraduate nursing curriculum. National nursing programs should revise their curricula to align with the NNCEP, incorporating disaster nursing content in greater detail. Additionally, it may be necessary to promote the accreditation of undergraduate programs and adapt their curricula to meet NNCEP standards. This will ensure that disaster nursing courses are offered at a valid and reliable level (37).

In our study, it was found that male students had significantly higher levels of disaster self-efficacy compared to female students ($p<0.05$). A study conducted in 2019 on nursing students regarding disaster events also found that female students, especially those in vulnerable groups, were more affected by disasters than male students. These findings align with the results of our study (21). This could be attributed to the notion that women are often more emotional and sensitive, which may make them more susceptible to the impacts of disasters.

In our study, it was found that individuals who had previously experienced disasters had higher levels of disaster self-efficacy compared to those who had not, although this difference was not statistically significant. In the literature, it has been shown that nurses who have experienced disasters in the workplace tend to have higher levels of disaster self-efficacy compared to those who have not, with this difference being statistically significant (4). Although our study found no statistically significant difference, the higher disaster self-efficacy levels among students who had previously experienced disasters, compared to those who had not, are consistent with the findings in the literature. In a study conducted with nursing students in Türkiye, although the self-efficacy levels of students who had experienced disasters were higher than those of students who had not, the difference was not statistically significant (29).

In our study, it was found that third- and fourth-year nursing students had higher levels of disaster self-efficacy in disaster management. Similarly, a study conducted by Bülbül (2021) on nursing students revealed that third- and fourth-year students had significantly higher levels of disaster self-efficacy compared to first-year students, and that fourth-year students had significantly higher levels than second-year students (17). In another study, it was reported that third-year students had higher levels of knowledge about disasters compared to students in other years (30). Our study's findings are in line with similar results in the literature. Factors such as third and fourth year nursing students having higher self-efficacy in disaster management, along with increased theoretical and practical knowledge, clinical experience, professional self-confidence, and exposure to disaster related courses and practices, contribute to their ability to handle disaster situations. These factors likely help prepare them and enhance their sense of competence.

In our research findings, the self-efficacy score averages of nursing students who participated in services such as debris removal, search and rescue operations and volunteer internships in hospitals were found to be significantly higher than those of students who did not participate in these services ($p<0.05$). This could be because the nursing students who experienced the earthquake were at a certain level of education, and their traumatic experience as future healthcare professionals may have made them more sensitive, thereby increasing their self-efficacy in disaster management.

4.1. Limitation

The aim of the research was to reach all nursing students studying in the 11 provinces affected by the earthquakes during the data collection process. Social media platforms (such as WhatsApp, Facebook, and Instagram) were used to connect with students. However, it was not possible to reach all students due to factors such as some students not using social media or experiencing slow or no internet access in the region as a result of the earthquakes. Therefore, the findings cannot be generalized to all nursing students.

5. Conclusion and Recommendations

Given the frequent occurrence of disasters in Türkiye, it is crucial not to underestimate the importance of preparedness for all healthcare professionals, particularly nurses, who play a pivotal role in disaster management. In the wake of the major earthquakes that affected eleven provinces on February 6, 2023, it was found that student nurses, who will play a crucial role as future healthcare providers, had a moderate level of self-efficacy in disaster response. To reduce the impact of traumatic events related to disasters on nursing students and to strengthen their perceived health status, psychological well-being, and positive coping strategies, it is imperative to prepare them adequately. Furthermore, to enhance nurses' readiness for disaster management and leadership, it is recommended to update the nursing curriculum by increasing the inclusion of fundamental and essential disaster education courses. It may not be sufficient to provide students, who have high awareness and sensitivity to disasters, with only theoretical knowledge throughout their education. Therefore, including simulation-based training could be considered among our recommendations. Thus, research should be conducted to raise nursing students' self-efficacy in emergency scenarios. This

approach would allow nursing students to strengthen their theoretical knowledge through practical application, ultimately enhancing their disaster nursing competence.

6. Contribution to the Field

A key predictor of effective disaster aid is self-efficacy in crisis situations. The preparedness and skills of nurses for disasters are closely correlated with their self-efficacy in disaster response. To date, limited research has been conducted on how nursing students' understanding and competency regarding disasters affect their sense of self-worth and their ability to respond to disasters. Therefore, the current study makes a valuable contribution to the literature.

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Conflict of Interest

There is no conflict of interest with any person and/or institution.

Authorship Contribution

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