

Evaluation of the Contents of the Disaster Training Courses Given in Nursing Undergraduate Programs in Turkey

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Abstract

Aim: This study aims to evaluate the contents of the disaster training courses given in nursing undergraduate programs in Turkey.

Methods: The study was conducted using a descriptive type research design. The data were obtained between March 1, and March 30, 2020, by screening Bologna education programs and curricula through the web pages of universities. Numbers and percentiles were used in the evaluation of the data.

Results: A total of 206 universities affiliated with the Higher Education Institution in Turkey were reached between the dates of the study. Of these universities, 58.7% had nursing departments and 32.2% of the universities with nursing departments had disaster training courses. The course was named as "Nursing and First Aid in Disasters" in 38.5% of the curricula investigated within the scope of the study, and it was provided as an elective course in 53.8% of the courses, as a theoretical course given 2 hours a week. It was possible to reach the course content of 53.8% of the programs examined within the scope of the research.

Conclusion: It was concluded that the contents and hours of the courses given for disaster training in nursing undergraduate programs were inadequate. In addition, significant differences were found in the comparisons of the course contents. It is necessary to minimize the differences in the disaster training courses, analyze the course contents, and address disaster-specific issues such as psychological first aid, nutrition, infectious diseases, and communication in disasters.

Keywords: Disaster education, disasters, nursing education

Introduction

A disaster is defined as "an unexpected, sudden ecological phenomenon that exceeds the possibilities and capabilities of the institutions disrupts normal functioning, requires outside assistance" by the World Health Organization, as "destruction caused by various natural phenomena" by the Turkish Language Association, and as "an accident, a natural event, or a human-origin event that develops suddenly or as a result of long processes other than the armed conflict that poses a significant and large-scale threat to human life, health, property, or the environment, and significantly disrupts the functioning of society" by the International Federation of the Red Cross and Red Crescent Societies.¹⁻³ Disasters can occur by nature or human origin.⁴ Natural disasters include earthquakes, floods, tsunamis, and landslides, whereas human-induced disasters include terrorist incidents, nuclear accidents, chemical and industrial accidents, wars, and migrations.^{5,6} Disasters are an important public health problem due to their unpredictable times, disruption in society and health services, loss of life and property, significant economic impacts, disruption in psycho-social well-being, and significant health problems in the subsequent periods.^{1,6-9}

The spread of war and terrorism on a global scale, the increase in migration, climate changes, nuclear accidents, and increasing natural disasters affect too many individuals worldwide. According to the World Disaster Report, there were 3751 natural disasters between 2008 and 2017, and these disasters affected the lives of 2 billion people, and the total cost was reported to be US\$1658 billion.³ Due to its geographical location, Turkey often experiences earthquakes, floods, and various disasters, especially landslides. It has been reported that there were 255 natural disasters in Turkey in 2016 alone,

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83 people lost their lives as a result of these disasters, and the lives of hundreds of people were affected negatively.¹⁰ In addition, there are frequent earthquakes in Turkey due to the fact that it is an earthquake-prone country.¹¹

Disaster training is of great importance for preventing disasters, reducing their damage, and providing a fast and healthy recovery process.⁹ Disaster training can be expressed as all the awareness-raising efforts made to reduce the psychological, social, and economic impact of disasters and to create a disaster culture.¹² Disaster training is very important for nurses, who constitute an indispensable part of health care providers in the world and in Turkey, in terms of the preparations to be done before a disaster, first aid and care at the time of a disaster, post-disaster care, and the presentation of what needs to be done.^{13,14} As a provider of basic health services, nurses work at various positions, including disaster preparedness, first responders in disasters, triage, on-site care, coordination, and post-disaster recovery in particular.¹⁵ For this reason, disaster training is vital for nurses and nursing students.

Looking at the disaster training and disaster-related courses provided in nursing undergraduate programs around the world, various differences are seen in the courses among the countries. In 2009, the International Council of Nurses (ICN) recommended the “disaster nursing qualifications framework” in nursing education, emphasizing that nurses should have adequate knowledge and skills in disaster care, planning, and management, regardless of the specialized field (manager, clinician, and researcher).¹⁶ In addition, due to the fact that ICN disaster nursing qualifications must be specific to the cultures of different regions, the importance of regulating the content and practices by considering these differences has been emphasized.⁶

International Council of Nurses has also stated that today's nursing students are the members of the nursing profession of the future and that nurses are the first among the health professionals who intervene in the event of a disaster, emphasizing the importance of disaster nursing in education.¹⁷ In the United States, the concept of disaster nursing was added to the nursing curriculum in the 1970s, and after the recent terrorist attacks and natural disasters, the contents of disaster nursing courses were revised and expanded.^{6,9} Although disaster nursing is present in nursing education in Taiwan, a “disaster nursing course” was launched by the Taiwan Nurses Association in 2012, and this training is started to be provided to a large number of individuals every year.¹⁸ A study conducted by Francesco et al¹⁹ in Italy reported that natural and human-caused disasters have increased in recent years, and emphasized the importance and necessity of disaster management.¹⁹ It is known that Japan has experienced frequent disasters, and a large number of people have been injured and lost their lives due to its geographical location. A study conducted by Kako et al²⁰ in Japan reported that disaster nursing has an important place in nursing education, studies conducted on disaster nursing have increased in the last decade, drills and simulations have been used for disaster preparedness in nursing education.²⁰ A study conducted in Australia stated that disasters are an important problem at the global level, and emphasized that disaster nursing is of extreme importance. In the study, it was reported that disaster nursing is included in nursing undergraduate programs. In addition, emphasis was placed on the need to enrich the course content, let experienced nurses give these courses, and expand the courses with

practices.²¹ It has been reported that there is no disaster nursing within the undergraduate nursing program in Oman and that nursing students are inadequate in terms of disaster training. In addition, it has been stated that there are frequent disasters due to the geographical location of the region, so disaster nursing is an important issue nationally and internationally, and nursing curricula should be organized.²² It has been reported that disaster training in nursing education is very limited in China, where there are frequent disasters due to its geographical location, and there are almost no disaster training courses for nurses.^{23,24} It is known that there are frequent disasters in Iran due to its geographical location and political reasons. It has also been reported that disaster nursing education in Iran is given in the form of theoretical and practical courses at the undergraduate level, and the course content and duration have been reported to be insufficient.²⁵ It is known that disaster nursing education in Turkey is provided as a compulsory or elective course within the undergraduate program, and the content of the courses varies.⁹

Since disasters are an important issue for public health globally, and disaster training in nursing education is of vital importance, this research aims to evaluate disaster training courses in undergraduate nursing programs and their contents in Turkey.

Purpose of the Study

This research was conducted to determine whether there is a disaster-related course in the curricula of universities with nursing departments in Turkey, to investigate the courses and course contents, and to reveal a profile on the subject. The fact that there is no research on the courses and contents of the courses given for disaster training in Turkey is the unique feature of this study.

Research Questions

Within the scope of the research, the answers to the following questions were investigated:

1. What are the types of universities that provide disaster education in nursing undergraduate education?
2. What are the characteristics of nursing disaster courses offered in nursing undergraduate education?
3. What is the content of the nursing disaster courses given in nursing undergraduate education?

Material and Methods

Type of the Study

The research was carried out using the screening model in the descriptive research design.

Study Population and Sample

The study population is all universities providing nursing education in Turkey. The sample of the research is nursing programs that provide disaster-related training. At the time of the research, there were a total of 206 universities in Turkey, 129 of which were public and 77 of which were private universities. There are nursing programs in 121 universities (58.7%) in Turkey, including 85 public universities (65.9%), and 36 private universities (46.8%). In the study, no data were obtained from one university on whether there is a nursing program, and 2 universities on whether there are any disaster-related courses. At the end of the study, 21 of the 39 universities, which

have disaster-related courses, were found to have accessible curriculum contents of nursing undergraduate programs, and data were obtained from these 21 universities. This number represents 53.8% of the study population.

Data Collection Questionnaire

The data collection form developed by the researchers was used for data collection. This form contains a total of 13 items on the type of universities, whether there is a nursing program, whether there is a disaster-related course, the full name of the course, the course hours and credits, course practices, the title of the academic staff in charge for the course, and the course content.

Data Collection

The data were obtained by screening Bologna and curricula on the web pages of universities between March 1, 2020, and March 30, 2020.

Evaluation of the Data

Statistical Package for the Social Sciences 24.0 package program was used in the evaluation of the data (IBM SPSS Corp.; Armonk, NY, USA). The data are presented in numbers and percentages.

Results

It was found that there were nursing departments in 58.7% of the universities located in Turkey, including about two-thirds (65.9%) of the public universities and about half (46.8%) of the private universities. It was found that only 32.2% of the universities with a nursing program provided disaster training and disaster-related courses (Table 1).

Looking at the full name of the courses given for disaster training, the course names were found to differ. The courses are mostly included in the curricula with the titles "Nursing and first aid in disasters," and "Disaster management and nursing."

The courses given for disaster training are mostly given as elective courses, 2 hours per week, 2 credits, 2 European Credit Transfer System (ECTS), and theoretical (without any practice). Considering the titles of the academic staff that give the courses for disaster training, it was found that most of the courses were given by doctor lecturers (Table 1).

Of the 29 public universities and 10 private universities, 14 and 10 universities were found to share their curriculum contents of nursing undergraduate programs, respectively, and data were obtained from these 21 universities out of a total of 39 universities (Table 1).

The topics included in the course curricula were classified according to name similarities and 30 subject headings were obtained. The subjects that are included only once in all the course curricula examined are denoted as "other". The most similar topics were "disasters, disasters in Turkey, laws and regulations related to disasters, patient transportation, carrying the patients away from the scene and first aid, cases requiring first aid, assessment of individuals," respectively (Table 2).

Discussion

In the study, it was found that about a third (32.2%) of nursing undergraduate programs had a disaster-related course, and these courses

were given as 2 hours per week, 2 ECTS, theoretical and elective courses. Nurses represent a very important and indispensable force in the provision of health care in disasters and health care services.²⁶ The main purpose of nursing practices is to provide care for the sick and injured, to help individuals and families cope with physical and emotional problems, and to work to improve well-being in society. These qualities are made possible by qualified nurses who are ready to respond in any condition, including disaster conditions. Nurses are in an indispensable position at the point of emergency care delivery and public health protection. Therefore, disaster training is vital for nurses.^{13,22,27}

In this study conducted to investigate the courses given for disaster training in undergraduate nursing programs in Turkey and their contents, it was found that only 32.3% of universities with a nursing department offered disaster training courses (Table 1). Looking at the course content, specific issues regarding disasters (logistics in disasters, communication in disasters, disadvantaged groups in disasters, disaster nursing, protection against disasters and disaster preparedness, infectious diseases in disasters, post-disaster recovery and reconstruction, etc.) were found to fall behind, whereas the issues specific to the practice of first aid and first aid practice (fractures, dislocations, sprains and first aid, changes in consciousness, shock, fainting and first aid, first aid, situations requiring first aid, evaluation of the person, cardio-pulmonary resuscitation practice) were at the forefront. It is seen that the topics of disaster nursing (4 times), nursing care in disasters (1 time), and public health nursing in disasters (1 time) are insufficient (Table 2).

The probability of estimating and knowing the time of occurrence of disasters is quite low, but it is known that the damage can be minimized through the measures to be taken.^{14,28} Looking at the course contents, it was found that the topic of "disaster protection and disaster preparedness" was present in about half (42.9%) of the universities that offer disaster training in the undergraduate nursing program. Although it is known that the negative consequences of a disaster can be minimized and the loss of life and property can be reduced by protection and preparation, current measures are considered insufficient.

Chemical, biological, radiological, and nuclear (CBRN) disasters are more likely to occur in today's circumstances where technology is advancing continuously. Chemical, biological, radiological, and nuclear disasters are an important issue, as they affect a wider region than where they occur, cause mass injuries, and their impact lasts for many years. The atomic bomb dropped on Japan in 1954, the Chernobyl accident in 1986, the chemical gas attack in Aleppo in 1988, the Fukushima-I nuclear power plant accident in Japan in 2011 are among the most tragic examples of the CBRN disasters.²⁹ Looking at the course contents, it was found that the topic of CBRN disasters was included in 38.1% of the universities' undergraduate nursing programs for disaster education. It is considered that the issue, which is quite possible and very important for public health in today's conditions, has been inadequately addressed in this regard.

Disasters can profoundly affect an individual at every stage of life (infancy, childhood, adulthood, and geriatric) in society. Post-traumatic stress disorders may occur after disasters.³⁰ Within the scope of disaster nursing, it is necessary to further investigate disasters, expand its theoretical framework, and comprehensively address age groups. Within the scope of disaster training, possible

Table 1. Characteristics of Disaster Courses in Nursing Undergraduate Programs in Turkey (n = 206)			
Characteristics	Public University, n = 129 n (%)	Private University, n = 77 n (%)	Total, n = 206 n (%)
Nursing program			
Yes	85 (65.9)	36 (46.8)	121 (58.7)
No	43 (33.3)	41 (53.3)	84 (40.8)
No data	1 (0.8)	-	1 (0.5)
The course about disasters			
Yes	29 (34.1)	10 (27.8)	39 (32.2)
No	55 (64.7)	25 (69.4)	80 (66.1)
No data	1 (1.2)	1 (2.8)	2 (1.7)
Full name of the disaster-related course			
Nursing and first aid in disasters	12 (41.4)	3 (30)	15 (38.5)
Disaster care and first aid	4 (13.8)	-	4 (10.3)
Disaster management and nursing	4 (13.4)	1 (10)	5 (12.7)
Nursing in disasters	2 (6.9)	-	2 (5.1)
Disaster culture	2 (6.9)	2 (20)	4 (10.3)
First aid in disasters	2 (6.9)	-	2 (5.1)
Management of disaster care	1 (3.4)	1 (10)	2 (5.1)
Nursing care in disasters	1 (3.4)	-	1 (2.6)
Disaster nursing	-	2 (20)	2 (5.1)
Basic disaster information	-	1 (10)	1 (2.6)
Accident, disaster protection, and first aid	1 (3.4)	-	1 (2.6)
Type of course			
Optional	13 (44.9)	8 (80)	21 (53.8)
Compulsory	15 (51.7)	2 (20)	17 (43.6)
N-A	1 (3.4)	-	1 (2.6)
Weekly course hours			
2 hours	29 (100)	10 (100)	39 (100)
Course credits			
2 credits	29 (100)	9 (90)	38 (97.4)
3 credits	-	1 (10)	1 (2.6)
ECTS of the course			
2 ECTSs	11 (37.9)	5 (50)	16 (41.0)
3 ECTSs	12 (41.4)	2 (20)	14 (35.9)
4 ECTSs	4 (13.8)	2 (20)	6 (15.4)
5 ECTSs	2 (6.9)	1 (10)	3 (7.7)
Implementation of the course			
Yes	1 (3.4)	2 (20)	3 (7.7)
No	28 (96.6)	8 (80)	36 (92.3)
Access to course content			
Yes	14 (48.3)	7 (70)	21 (53.8)
No/N-A	15 (51.7)	3 (30)	18 (46.2)
Title of the academic staff of the course			
Assoc. Prof. Dr.	1 (3.4)	4 (40)	1 (2.6)
Assist. Prof. Dr.	4 (13.9)	-	8 (20.5)
Dr. Lecturer	1 (3.4)	3 (30)	1 (2.6)
Lecturer	3 (10.3)	3 (30)	6 (15.4)
No data	20 (68.9)	-	23 (58.9)

Table 2. The Subjects of Disaster Training Courses (n = 21)

Subjects (n = 21)	n	%
Disasters, disasters in Turkey, and laws and regulations related to disasters	16	76.2
Transportation of the patient, moving away from the scene	14	66.7
First aid, cases requiring first aid, and assessment of the individuals	12	57.1
Fractures, dislocations, sprains, injuries, and first aid	12	57.1
Disaster management, disaster management in other countries	10	47.2
CPR Application	10	47.2
Hemorrhages, types of bleeding, and first aid for hemorrhages	10	47.2
Changes in consciousness, shock, fainting, and first aid	10	47.2
Intoxication/chemical poisonings, insect/animal bites,	9	42.9
Disaster protection and disaster preparedness	9	42.9
CBRN disasters	8	38.1
Triage	8	38.1
Sun/heatstroke, burns, frostbites, and first aid	7	33.3
Drownings and first aid	7	33.3
Civil defense tasks and organizations	6	28.6
National and international organizations in disaster management (UMKE, AFAD)	6	28.6
First aid in disasters	6	28.6
Epidemiology of disasters	5	23.8
The roles of nurses in disaster management	5	23.8
Communication, telecommunications, and international signs in disasters	5	23.8
Foreign object getting into the eye, ear, or nose	5	23.8
Earthquakes and things to do before, during, and after an earthquake	4	19.0
Disaster nursing	4	19.0
Recovery and reconstruction after disasters	3	14.3
The psycho-social aspect of disasters, post-traumatic reactions after disasters	3	14.3
Health services in case of disasters and emergencies	3	14.3
Disadvantaged groups in disasters	2	9.5
Logistics in Disasters	2	9.5
CDP-HDP	2	9.5
Domestic accidents	2	9.5
Other**	18	85.7

**Other: disasters, infectious diseases, what needs to be done at the moment of disaster, psychological first aid in disasters, the importance of keeping records in the functioning of organizations beds, the economic impact of disasters, disasters in information systems, and nutrition disasters, global climate change and disasters, disaster drills, nursing care in disasters, disasters, public health nurse, the impact of disasters on health, the impact of disasters on health care workers, legal and ethical issues in disaster response, bandage-bandage-detection applications, emergency service features, traffic accidents, occupational accidents (subjects included in the course content of the universities covered by the research only 1 time).

CPR, cardio-pulmonary resuscitation; CBRN, chemical, biological, radiological, and nuclear; CDP-HDP, community disaster plan, hospital disaster plan.

mental health problems, and post-traumatic stress disorders after disasters should be addressed, and training should be provided in this regard.³¹ Looking at the course contents, it is seen that the topics of psycho-social aspects of disasters and post-traumatic stress disorders are also insufficient (Table 2).

Limitations of the Study

In this study, which was conducted to evaluate the disaster education provided in nursing undergraduate programs, the information on the universities' websites was taken into account. The incomplete

information on the web pages and the inability to access the course contents are the limitations of the research.

Conclusion

As a result, it was found that the courses provided for disaster training in nursing undergraduate programs were inadequate, the course hours were limited to 2 hours, and the course names and contents were different from each other. In addition, it is noteworthy that there are significant differences between the course names and contents at universities providing education at the same level and program. Nurses, who have very important tasks in the protection, development, improvement, and rehabilitation of health, are also involved in disaster protection and preparedness, provision of care in disaster, disaster management, and post-disaster recovery stages. It is vital to make the necessary arrangements for the best and healthiest provision of these stages and to create educational curricula. It is necessary to minimize the differences in the disaster training courses, analyze the course contents, and address disaster-specific issues such as psychological first aid, nutrition, infectious diseases, and communication in disasters. For future studies, it is recommended to establish standards for courses provided for disaster education in nursing programs, review curricula, and make the necessary updates.

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