

Evaluation of Health Management Education Curriculum in Terms of Disaster Management

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ABSTRACT	
<p>Corresponding Author Sema DALKILIÇ</p> <p>DOI https://10.48121/jihsam.1317458</p> <p>Received 20.06.2023</p> <p>Accepted 08.09.2023</p> <p>Published Online 23.10.2023</p> <p>Key Words Health management education, disaster management, health managers</p> <p><i>This study was presented as an oral presentation at the 8th International Health Sciences and Management Conference (IHMC) (2023).</i></p>	<p><i>The Department of Health Management trains managers for health institutions serving in the public and private sectors. The health sector is in a very important place due to the duties and responsibilities it undertakes in the event of a disaster. For this reason, health professionals are expected to have a good knowledge of basic disaster response knowledge and skills such as disaster management and disaster medicine. In the literature review, when it comes to the disaster preparedness of health workers, only physicians and nurses draw attention, and health managers remain in the background.</i></p> <p><i>In this study, the curricula of universities providing health management education were analyzed in terms of disaster management.</i></p> <p><i>In this context, it was investigated whether there are first aid, public health, disaster management and occupational health and safety courses in the curricula. A total of 56 public universities providing health management education in Turkey were included in the study. When the curricula were analyzed; First Aid course is compulsory in only 7 universities. In 25, it is included in the elective course pool. Public health course is compulsory in 27 and elective in 20 universities. Disaster management course is compulsory in 11 and elective in 30 universities. Occupational health and safety course is compulsory in 11 and elective in 33 universities. Considering that the graduates may be in positions such as prevention of disasters, preparation of disaster plan or intervention in the hospitals where they will work, it is observed that the courses that may be related to disasters that they take during their undergraduate education are not sufficient.</i></p>

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1. INTRODUCTION

'Disaster Management' is a managerial approach that determines and implements the legal, administrative and technical works that should be carried out 'before, during and after the disaster' in order to prevent and minimize the damage, and improves the current situation in the light of previous experiences and experiences when faced with a disaster (Uluğ, 2009: 4). Turkey is exposed to natural disasters, especially earthquakes, due to its location and ranks 4th in the world in terms of the number of earthquakes experienced. Turkey is characterized as a "high-risk" country and experiences a large-scale earthquake that causes loss of life and property on average every 5 years (AFAD, 2018: 8).

An effective disaster response requires a well-planned and coordinated effort with many trained and experienced professionals who can apply specialized knowledge and skills in critical situations. Some of these professionals may have worked routinely with emergencies and also have disaster experience. However, many may lack critical knowledge and experience related to disasters and therefore may have difficulty performing effectively under the stressful conditions created by disasters. To ensure that these health workers are adequately prepared for disasters and public health emergencies, it is first necessary to specify the knowledge, skills and attitudes they will need.

Only then, it may be possible to adequately prepare health professionals through appropriate education and training (Walsh et al. 2012:45).

Hsu et al. (2006) listed the qualities that all health workers should have as "cross-cutting competencies" and explained these 7 competencies as follows.

Cross-cutting Competencies for Health Workers

1. Recognize a potential critical incident and implement first actions
2. Apply critical incident management principles
3. Know and apply critical incident security principles
4. Understand the corporate emergency operation plan
5. Ensure effective critical incident communication
6. Understanding the incident command system and its role in this system
7. Have the knowledge and skills needed to fulfill their role during a critical incident

Competency 1: Recognize a potential critical incident and implement first actions.

Critical incidents include disruptions to an organization's ability to maintain continuity of operations, disasters and emerging infectious diseases. An important component of appropriate disaster response is the health worker's ability to recognize a critical incident and know what to do, especially who to notify and how to activate a disaster plan. It is vital to ensure early incident recognition and early response

mobilization to minimize the damage of the critical incident. Given the scenarios that may be encountered during their normal professional duties, they should be able to identify all potential critical incidents. They should be able to identify the appropriate authorities to be notified, appropriate notification steps and key information to be reported. Staff should be able to list the immediate actions required to protect personal, environmental and public safety. Make recommendations for immediate response needs prior to activation of the disaster plan.

Be able to use their knowledge of potential critical incident recognition and emergency response needs to take appropriate notification, safety and mitigation actions for the incident in question.

Competency 2: Apply critical incident management principles.

For a facility to successfully manage all critical incidents, healthcare professionals must understand the key elements of effective preparedness and response, including the appropriate actions to take. They should be able to identify the phases of critical incident management and perform activities at the appropriate stage. Apply disaster preparedness knowledge to identify key components of preparedness and recognize appropriate preparedness activities. Apply their knowledge of disaster response to recognize appropriate response activities. They should know the basic components of rescue and be able to apply knowledge of disaster recovery to recognize appropriate rescue activities.

Competency 3: Know and apply critical incident security principles.

A critical response component for health workers is the ability to protect the facility, its resources and self during a disaster. Demonstrate knowledge of security principles by identifying security threats and appropriate actions.

Competency 4: Understand the organizational emergency operations plan.

Familiarity with the organizational emergency operations plan is important for people working within the organization to support and implement an effective, coordinated course of action during any critical incident. Personnel should know and apply the components of planning in critical incident response.

Competency 5: Ensuring effective critical incident communication.

Communication is a vital element for a successful critical incident. Health workers need to know how poor communication can undermine the effectiveness of disaster responses and need to learn effective critical incident communication skills.

They should be able to apply communication knowledge to meet basic communication needs,

including identifying appropriate timing, content, recipients and methods.

Competency 6: Understand the incident command system and their role in it.

Effective critical incident response requires the successful integration of internal and external (local, state and federal) participants. To achieve this, a recognizable and unified command and control structure is essential. Given a critical incident scenario, the participant will be able to recognize his or her role in the incident command system and identify the relevant responsibilities and the limits of his or her authority.

Competency 7: Possess the knowledge and skills required to fulfill his/her role during a critical incident. Healthcare workers responding to a critical incident require specialized knowledge and skills. These include triage, personal protection, decontamination and treatment. Apply knowledge and skills related to disaster triage systems. Apply knowledge and skills related to personal protective equipment (PPE) and have sufficient knowledge to successfully select and wear it. Apply knowledge and skills related to decontamination to select, demonstrate and monitor the correct decontamination method.

Most courses on preparedness responses to disasters caused by natural events and health emergencies are based on the assumption that participants are functional health care providers who have completed their professional training. To ensure preparedness at the national level, health professionals need training that focuses on the roles of the health care provider in practice (Smith et al. 2012: 492). As there is currently no accepted standard for training health workers in disaster response, a number of programs have adopted different formats to achieve stated education and training objectives. Many recognized courses and related training materials have aimed to improve standardization and accessibility. Given this rapidly evolving field, a number of competencies and recommendations for clinicians, hospital staff, hospital leaders, nurses, public health workers and health professional students have been articulated through various guidelines over the last few years. However, it is necessary to develop professional standards and educational programs based on both evidence and sound educational theory (Hsu et al., 2006: 2).

In addition to the importance of reducing the risk of disaster, building earthquake-resistant structures and continuous supervision, managing the disaster or emergency, having managers and personnel who know the process well at all stages of disaster management is an important step to reduce the loss of life and property. For this reason, it is necessary to inform the society on how to act systematically, professionally and in a timely manner in the face of danger and risk in a possible emergency situation, knowing how to protect

themselves without endangering their own lives (Şengün and Küçükşen; 2019: 200).

All health workers need training to develop basic knowledge and skills to work independently and also to act as part of a coordinated response effort (Hsu et al., 2006: 2). Thayaparan et al. (2014) emphasized that disaster management education should be lifelong learning by higher education institutions and stated that the desired success in education cannot be achieved due to the complexity and interdisciplinary nature of education and even the bureaucratic procedures of universities. With the awareness that education is the right approach in adopting the right behaviors, it can be said that the interventions of uneducated people in the face of disasters may cause loss of life and property. For this reason, supporting the curriculum with disaster trainings in primary and secondary education and higher education will both increase awareness and minimize losses (Şengün and Küçükşen; 2019: 194).

Disaster management training in Turkey is available in various institutions, associations and universities. Disaster preparedness and response training is provided by Turkish Red Crescent. The training is 4 days theory and 1 day practice and includes topics such as Disasters and Disaster Management Processes, National Disaster Management Structure, Disaster Response Services (nutrition, shelter and camp management, emergency needs assessment, logistics, distribution, communication, media and public relations, reporting). (Disaster Management, Red Crescent). In addition, universities and educational institutions provide face-to-face or web-based trainings such as disaster awareness training, disaster and emergency awareness training.

4-year disaster management undergraduate program is offered in 17 universities and associate degree education is offered in 19 universities, 2 of which are foundation universities (YÖK atlas, 2023).

Considering the studies conducted in our country on the preparedness of healthcare personnel for disasters, it is seen that employees such as nurses, physicians, midwives, health technicians are generally included in the research (Dinçer & Kumru, 2021; Yıldırım & Gerdan, 2017; Çelebi & Uçku, 2017; Sezer et al., 2013; Gündüz & Akyüz, 2022). However, considering the institutions where graduates of the department of health management will work, it is foreseen that they can also take part in disaster management phases such as disaster response and emergency planning. For example, in the hospital disaster and emergency plans (HAP) preparation commission, in addition to the chief physician, deputy chief physician, responsible nurses and physicians, there are also employees in the administrative staff of the hospital such as the director of administrative and financial services, deputy director, director of patient services and health hotel management, quality manager, deputy director

responsible for revolving capital (Hospital disaster and emergency plans (hap) implementation regulation, 2020).

In this context, the study examined the status of disaster management courses in the curricula of health management departments.

2. MATERIALS AND METHOD

Before the curricula were evaluated in terms of disaster management, it was decided which courses to focus on by taking the opinions of faculty members who are experts in the field. In this context, it was investigated whether the curricula included first aid, public health, disaster management and occupational health and safety courses. All state universities with health management departments in the YÖK atlas were included in the study. Information about the departments was obtained from the YÖK atlas. Curricula were accessed from the relevant department web pages. The aim is to investigate whether there are courses related to disaster management in the curricula of health management departments.

In accordance with the purpose of the research, document analysis, one of the qualitative research methods, was applied. This method, which is used to systematically and meticulously analyze the content of documents, is used to examine and evaluate all electronic or printed materials (Kiral, 2020). In the YÖK atlas, the web pages of all universities with health management departments were accessed, and systems with curricula such as course information packages or education information system were examined. In this way, the curricula of the departments were accessed.

3. RESULTS

In this section, first general information about the health management department will be given and then the curriculum review will take place.

3.1. General Information About Department of Health Management

According to 2023 YÖK atlas data, there are 61 state, 14 foundation and 3 TRNC universities with health management departments. The health management department is located within different faculties such as health sciences or economic administrative sciences. Table 1 shows the distribution of the department according to faculties.

Table 1. Faculty-School Distribution of Health Management Departments

Department Location Unit	N	%
Faculty of Health Sciences	40	66
Faculty of Economics and Administrative Sciences	13	21
Faculty of Business	3	5
Faculty of Applied Sciences- Faculty of Social Sciences and Humanities	3	5
Higher School	2	3
Total	61	100

There are a total of 17889 students studying in the department of health management. Table 2 shows the total number of students according to faculties.

Table 2. Total Number of Students by Faculties in the Department of Health Management

Department Location Unit	N	%
Faculty of Health Sciences	10855	61
Faculty of Economics and Administrative Sciences	4880	27
Faculty of Business	1180	7
Faculty of Applied Sciences- Faculty of Social Sciences and Humanities	460	2
Higher School	514	3
Total	17889	100

In addition to 17889 total students, 4350 student quotas are opened every year. Table 3 shows the total student quota according to faculties.

Table 3. Total Number of Quotas by Faculties in the Department of Health Management

Department Location Unit	N	%
Faculty of Health Sciences	2649	61
Faculty of Economics and Administrative Sciences	1154	26
Faculty of Business	258	6
Faculty of Applied Sciences- Faculty of Social Sciences and Humanities	165	4
Higher School	124	3
Total	4350	100

Among state universities, there are only 3 accredited universities. Table 4 shows these departments.

Table 4. Accredited Departments

University	Faculty	Accrediting organization
Ankara University	Faculty of Health Sciences	SABAK
Marmara University	Faculty of Health Sciences	SABAK
Sakarya University	Faculty of Business	AACSB

3.2. Curriculum Research in the Department of Health Management

The curricula of 61 state universities included in the study were accessed from their web pages. However, no information package or curriculum information was found in 5 universities. For this reason, the curricula of 56 universities were included in the study.

Table 5. Availability of First Aid Course in Health Management Departments

First Aid Course	N	%
Compulsory	7	13
Elective	25	44
None	24	43
Total	56	

As seen in Table 5, the First Aid course is compulsory in only 13% of universities.

Table 6. Universities with Compulsory First Aid Courses

University	ECTS	Faculty
Afyonkarahisar Sağlık Bilimleri Üniversitesi	2	Faculty of Health Sciences
Bandırma Onyedü Eylül University	3	Faculty of Health Sciences
İstanbul University-Cerrahpaşa	2	Faculty of Health Sciences
Kafkas University	3	School of Applied Sciences
Marmara University	3	Faculty of Health Sciences
Sinop University	5	Faculty of Economics and Administrative Sciences
Şırnak University	3	Faculty of Health Sciences

Table 7. Availability of Public Health Courses in Health Management Departments

Public Health Course	N	%
Compulsory	27	48
Elective	20	36
None	9	16
Total	56	100

The Public Health course is compulsory in 48% of universities, as seen in Table 7.

Table 8. Universities with Compulsory Public Health Courses

University	ECTS	Faculty
Ankara University	3	Faculty of Health Sciences
Ardahan University	4	Faculty of Health Sciences
Bandırma Onyedü Eylül University	5	Faculty of Health Sciences
Bayburt University	2	Faculty of Health Sciences
Bilecik Şeyh Edebali University	4	Faculty of Health Sciences
Bingöl University	4	Faculty of Health Sciences
Eskişehir Osmangazi University	2	Faculty of Health Sciences
Gümüşhane University	4	Faculty of Health Sciences
Hacettepe University	4	Faculty of Economics and Administrative Sciences
İstanbul University-Cerrahpaşa	3	Faculty of Health Sciences
Kafkas University	3	School of Applied Sciences
Karamanoğlu Mehmetbey University	7	Faculty of Health Sciences
Kayseri University	3	Faculty of Social Sciences and Humanities
Kırklareli University	4	Faculty of Health Sciences

Kütahya Sağlık Bilimleri University	2	Faculty of Health Sciences
Marmara University	5	Faculty of Health Sciences
Muş Alparslan University	4	Faculty of Health Sciences
Necmettin Erbakan University	4	Faculty of Health Sciences
Niğde Ömer Halisdemir University	4	Faculty of Health Sciences
Ondokuz Mayıs Üniversitesi	4	Faculty of Health Sciences
Ordu University	5	Faculty of Health Sciences
Samsun University	4	Faculty of Economics and Administrative Sciences
Selçuk University	3	Faculty of Health Sciences
Sinop University	5	Faculty of Economics and Administrative Sciences
Süleyman Demirel University	5	Faculty of Economics and Administrative Sciences
Şırnak University	3	Faculty of Health Sciences
Tokat Gaziosmanpaşa University	4	Faculty of Health Sciences

Table 9: Availability of Disaster and Crisis Management Course in Health Management Departments

Disaster and Crisis Management Course	N	%
Compulsory	11	20
Elective	30	53
None	15	27
Total	56	

The Disaster and Crisis Management course is compulsory in 20% of universities, as seen in Table 9.

Table 10: Universities with Compulsory Disaster and Crisis Management Courses

University	ECTS	Faculty
Bayburt University	3	Faculty of Health Sciences
Gümüşhane University	4	Faculty of Health Sciences
Iğdır University	4	Faculty of Economics and Administrative Sciences
İzmir Bakırçay University	4	Faculty of Health Sciences
İzmir Katip Çelebi University	5	Faculty of Economics and Administrative Sciences
Kahramanmaraş Sütçü İmam University	4	Faculty of Economics and Administrative Sciences
Marmara University	4	Faculty of Health Sciences

Ordu University	5	Faculty of Health Sciences
Sakarya University of Applied Sciences	5	Faculty of Health Sciences
Selçuk University	6	Faculty of Health Sciences
Tokat Gaziosmanpaşa University	3	Faculty of Health Sciences

Table 11: Availability of Occupational Health and Safety Courses in Health Management Departments

Occupational Health and Safety Courses	N	%
Compulsory	11	20
Elective	33	59
None	12	21
Total	56	100

The Occupational Health and Safety course is also compulsory in 20% of universities, as seen in Table 11.

Table 12: Universities with Compulsory Occupational Health and Safety Courses

University	EC TS	Faculty
Ankara Hacı Bayram Veli University	6	Faculty of Economics and Administrative Sciences
Bayburt University	4	Faculty of Health Sciences
Bingöl University	5	Faculty of Health Sciences
İstanbul University-Cerrahpaşa	4	Faculty of Health Sciences
İzmir Kâtip Çelebi University	2	Faculty of Economics and Administrative Sciences
Kafkas University	2	School of Applied Sciences
Karamanoğlu Mehmet Bey University	7	Faculty of Health Sciences
Kütahya Sağlık Bilimleri University	3	Faculty of Health Sciences
Marmara University	3	Faculty of Health Sciences
Niğde Ömer Halis Demir University	5	Faculty of Health Sciences
Uşak University	3	Faculty of Health Sciences

Table 13: Total Representation of First Aid, Public Health, Disaster Management and Occupational Health and Safety Courses

Course	Compulsory		Elective		None	
	N	%	N	%	N	%
First Aid	7	13	25	44	24	43
Public Health	27	48	20	36	9	16
Disaster Management	11	20	30	53	15	27
Occupational Health And Safety	11	20	33	59	12	21

As summarized in Table 13, 13% of first aid courses, 48% of public health courses, 20% of disaster management courses, 20% of occupational health and safety courses are compulsory.

4. DISCUSSION AND CONCLUSIONS

When the data expressed in the findings section are analyzed, it is seen that the courses related to the knowledge and skills needed before, during and after disasters are insufficient in the curricula of health management departments. First aid course is compulsory in only 13% of the universities. However, Davies (2006) stated that health management education should include courses that provide basic information about health services. The purpose of including these subjects is to equip students with a set of concepts that will help them relate to clinical colleagues and interpret the various challenges of their own practice.

The aim of the first aid course is to provide students with the knowledge and skills to provide correct, effective first aid in the most common emergencies and disasters in working life, daily life (Marmara University Course Information Package). The awareness that correct first aid saves lives shows its importance not only for health management students but also for all individuals.

Public health courses are compulsory in 48% of universities and elective in 34%. The aim of this course is to define health problems in the community, to comprehend and relate environmental, hereditary, social and behavioral factors affecting these problems, to adopt the principles of preventive medicine and to associate this information with service delivery in health management (Marmara University Course Information Package). Public health problems in disasters are problems that require urgent intervention especially after the disaster. For this reason, it is important to include this course in the curriculum in order to equip students with the necessary knowledge and skills.

The aim of the disaster management course is to provide students with knowledge about the basic concepts of pre-hospital emergency health services, management organization in disasters and emergencies covering ordinary conditions and / or situations and extraordinary situations (Marmara University Course Information Package). This course, which is directly related to disaster management, is a compulsory course in 20% of the universities and an elective course in 53% of the universities. It is recommended that this course should be included in the curricula like other courses. The aim of the occupational health and safety course is to teach the conceptual development of the right to healthy work, legal, social and organizational aspects of occupational health and safety, basic risks in the working environment and ways of protection, occupational health and safety practices in the world and in Turkey (Eskişehir Osmangazi University Course Information Package). This course is especially important in the stages of risk reduction and

preparedness before disasters, as can be understood from its purpose. In addition, considering that health management students do internship in hospitals, it is thought that this course should be compulsory. Most of the students are required to have received occupational health and safety training from the health institutions where they will do their internship, and if not taken as a course, they are asked to obtain a certificate. This course, which is very important for students, is compulsory in only 20% of universities. In 59%, it is included in the elective course pool.

Students of the department of health management, who are trained to be employed in health institutions and related ministries, constitute the workforce that can primarily take part in disasters in terms of the sector they will work in. Considering that the graduates may be in positions such as prevention of disasters, preparation of disaster plan or intervention in the hospitals where they will work, it has been observed that the courses that may be related to disasters during their undergraduate education are not sufficient. In this direction, the curricula of Health Management departments can be reviewed.

Many recent events, such as the COVID-19 pandemic, emphasize the need for health managers to master emergency and disaster management and have the right knowledge and skills to prepare for increasingly frequent and intense crises (Hertelendy et al., 2021). Hertelendy et al. (2021) stated that the design of competency-based curricula for disaster management should meet the needs of health managers representing multiple settings.

Ansari et al. (2003) also point out that if graduates of health professions are expected to improve the public health of society, curricula should be developed that can contribute to the development of managers and leaders with a public health focus. Both graduate and

undergraduate programs for health management education should educate students on current and future trends in health care and be able to define public health (Hooker et al., 2017).

When the literature on health management education in Turkey is examined, it is seen that there are highly criticized issues.

Yorulmaz and Gençtürk (2018) drew attention to the problems related to education in their research on the main problems encountered in the health management profession. The fact that the curricula are not common and are located in different faculties are among some of the problems of the department. As a matter of fact, in the study conducted by Şener (2004), 50% of the academic staff and 51% of the students were of the opinion that the courses in the curriculum of the department were "partially" sufficient to meet the interests and needs of the students. Kiroğlu Aslan and Akşahin (2021) examined the curricula on the websites of the departments of universities with Health Management Departments and stated that the curricula are not common and only 25 courses are common in all departments. These studies show that health management education needs to be improved and developed.

With this study, it is thought that by addressing health management education in terms of disaster management, it will contribute to the literature and to the disaster awareness of health management department faculty members in the curricula.

Conflict of Interest:

No

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REFERENCES

- AFAD, (2014). Açıklamalı afet yönetimi terimleri sözlüğü, Başbakanlık Afet Ve Acil Durum Yönetimi Başkanlığı, Ankara
- Afet Yönetimi, Kızılay. <https://afetyonetimi.kizilay.org.tr/tr/egitimler/ahm.html>
- Çelebi, İ., & Uçku, Ş. R. (2017). Kayseri ili 112 acil sağlık hizmetlerinde görev yapan sağlık personelinin deprem bilgi düzeyi ve etkileyen etmenler. *Hastane Öncesi Dergisi*, 2(2), 91-103.
- Eskişehir Osmangazi Üniversitesi ders bilgi paketi. <https://ects.ogu.edu.tr/Lisans/Program/74>
- Davies, S. (2006). Health services management education: why and what?. *Journal of health organization and management*, 20(4), 325-334.
- Dinçer, S., & Kumru, S. (2021). Afet ve acil durumlar için sağlık personelinin hazırlıklı olma durumu. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi*, 10(1), 32-43.
- Gündüz, T., & Akyüz, H. Ö. (2022). Acil sağlık hizmetleri çalışanlarının afet bilinci konusundaki durumlarının incelenmesi-batman örneği. *Hastane Öncesi Dergisi*, 7(2), 191-206.
- Hertelendy, A. J., Burkle, F., Greenia, E., Goniewicz, K., Donahue, D. A., & Ciotto, G. (2021). A new core competency for healthcare administrators: Discussing the need for emergency and disaster management education in the graduate healthcare administration curriculum. *Journal of Health Administration Education*, 38(3), 709-726.
- Hooker, E. A., Caron, R. M., Hewitt, A. M., Carmalt, J. H., Landry, A. Y., & Carlton, E. L. (2017). Defining population health: Leveraging advisory board members' perspectives to identify health administration curriculum content. *Journal of Health Administration Education*, 34(1), 5-20.
- Hsu, E.B., Thomas, T.L., Bass, E.B. et al. (2006). Healthcare worker competencies for disaster training. *BMC Med Educ.* 6, 19
- Kıral, B. (2020). Nitel bir veri analizi yöntemi olarak doküman analizi . *Siirt Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 8 (15), 170-189.

- Kıroğlu Arslan, I. & Akşahin, A. (2021). "Türkiye'deki Sağlık Yönetimi Bölümlerinin Başarılı Sağlık Yöneticisi Yetiştirme Bakımından Müfredatlarının Değerlendirilmesi", *International Journal of Disciplines Economics & Administrative Sciences Studies*, (e-ISSN:2587-2168), Vol:7, Issue:35; pp:973-981
Marmara Üniversitesi ders bilgi paketi.
<https://www.marmara.edu.tr/akademik/egitim-programlari/meobs>
- Sezer, A., Demirbaş, H., & Ergun, A. (2013). Afet yönetiminde halk sağlığı hemşiresinin rol ve sorumlulukları. *Florence Nightingale Journal of Nursing*, 21(2), 122-128.
- Smith, J., Levy, M., Hsu, E., & Lee Levy, J. (2012). Disaster Curricula in Medical Education: Pilot Survey. *Prehospital and Disaster Medicine*, 27(5), 492-494.
- Şener, E. (2004). Türkiye'deki Sağlık Eğitim Fakültelerinin Programlarının Değerlendirilmesi (Yayınlanmamış yüksek lisans tezi). Ankara Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara.
- Şengün, H. & Küçükşen, M. (2019). Afet yönetimi eğitimi niçin gerekli? . *Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* , 33 (46) , 193-211 .
- T.C. Sağlık Bakanlığı, 2020, Hastane Afet ve Acil Durum Planları (Hap) Uygulama Yönetmeliği.
<https://www.resmigazete.gov.tr/eskiler/2020/03/20200318-2.htm>
- Thayaparan, M., Malalgoda, C., Keraminiyage, K., & Amaratunga, D. (2014). Disaster management education through higher education–industry collaboration in the built environment. *Procedia Economics and Finance*, 18, 651-658.
- Uluğ, A. (2009). Nasıl bir afet yönetimi. *TMMOB İzmir Kent Sempozyumu*, İzmir, 1-18.
- Walsh, L., Subbarao, I., Gebbie, K., Schor, K. W., Lyznicki, J., Strauss-Riggs, K., ... & James, J. J. (2012). Core competencies for disaster medicine and public health. *Disaster medicine and public health preparedness*, 6(1), 44-52.
- Yorulmaz, M., Gençtürk, M. (2018). Türkiye'de sağlık yönetimi mesleğinde karşılaşılan temel sorunlar: nitelikli bir inceleme. işletme ve yönetim çalışmaları: *BMIJ* , 6 (4), 1310–1321.
- YÖK Atlas. <https://yokatlas.yok.gov.tr/onlisans-program.php?b=30001>
- Yıldırım, S. A., & Gerdan, S. (2017). Hastane Öncesi Acil Sağlık Çalışanlarının İş Sağlığı Ve Güvenliği Kapsamındaki Mesleki Riskleri. *Hastane Öncesi Dergisi*, 2(1), 37-49.