Crisis Management in Health: The Role of the High Education Institutes in Libya

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Abstract:

Libya's continuing conflicts and political instability have impacted nearly every dynamic sector in the country. Indeed, Libya's health-care system is one of the most severely degraded sectors. Libyan high education institutes, whether medical or paramedic, would play an important part in the country's development of health emergency preparation. We analysed Libyan universities' preparedness for a health crisis, as well as their responsibilities in crisis training, education, and research programs. A web-based questionnaire was distributed to medical, paramedical, and economic faculties at various Libyan universities. A total of 22 questionnaires were filled out, with nine from economic faculties and the rest from medical and paramedical institutions. Our findings revealed that Libyan universities have limited roles in health crisis management, whether in the acute phase or in crisis risk reduction. When a crisis strikes, the majority of Libyan academic institutions participate in health-related training and education activities at a minimal level. Financial constraints were highlighted as major impediments to the implementation of crisis management programs in these faculties. Lack of technical and administrative assistance, expertise in the sector, and human resources were also noted as major difficulties. At numerous Libyan universities, there is an urgent demand for crisis

management and catastrophe medical education. Engaging with the Libyan government and encouraging international partners and organizations to offer financing and training will improve the ability of various Libyan institutions to address long-term health crises and plan strategically. And integrating and accreditation specialized bachelor's and master's degrees

Keywords: crisis managements, disaster medicine, health crisis

Introduction

The use of tactics to assist an organization in dealing with a sudden and severe bad event is known as crisis management [1, 2]. A crisis might arise as a result of an unexpected incident or as an unanticipated consequence of an event that was previously considered a potential concern. In either event, crisis situations nearly always necessitate quick decisions in order to reduce the organization's harm[1, 3] . The potential damage varies depending on the nature of the situation. In most circumstances, however, a crisis will have an impact on the organization's health or safety, its finances, or its reputation, or some combination of these[4]. Crisis management is a multi-step approach that starts long before, during, and after a crisis to decrease the impact of the crisis. A crisis management strategy addresses staffing, resources, buildings, business operations management, employee health and safety, resource coordination, and, most importantly, communications [5]. In the event of a public health emergency, a crisis communications plan is essential to keep relevant parties and the general public informed.

Building monitoring systems that can provide early warning signals of any anticipated disaster is just as important as identifying risks and developing methods to manage those risks and their consequences. Depending on the threats that have been identified, early warning systems might come in a variety of forms and sizes, and it is vital to include as many stakeholders as possible in pre-crisis planning [4]. Members of the legal, human resources, finance, and operations departments are frequently included in corporate crisis response teams [4, 6]. The keys responsibilities of pre-crisis management team include

reviewing previous crises, analysing resources, developing policies, studying standards and laws, developing tactics, identifying vulnerabilities, and training [7]. After a crisis, the team should assess how well the plan worked and what parts of the plan needed to be changed based on what they learned during the crisis [1, 7, 8].

In health emergencies, regardless of the cause, human resources are a crucial component of health sector crisis management and catastrophe preparedness [9]. They may be categorized into a wide range of groups, with each having a unique connection to performing safety tasks in different health sectors: For instance, employees of the health administration office, public health protection organizations, healthcare service providers, and medical equipment suppliers [10]. Positively, the crisis manager's personality has a considerable influence on any crisis-management plan. He is in charge of directing the organization's reaction in line with its crisis plan, communicating with the public, and keeping stakeholders informed about the situation and how far recovery efforts have progressed [2, 9].

A successful health crisis manager should have prior experience or understanding in the healthcare industry. Knowledge of the health sector, its advantages and disadvantages, as well as its operational principles, improves the manager's ability to react to the nature of the situation [9, 11]. A health crisis manager must have experience, leadership, knowledge, and the ability to adjust operational tactics, as well as adaptability, logic, and social awareness. The health crisis manager must also remain informed on worldwide and national events that may have an impact on health. A skilled crisis manager is capable of anticipating and dealing with any potential involvement in a crisis that has an impact beyond his area. In addition, the health crisis manager must be psychologically stable and balanced in order to encourage his team [11]. The human factor, as represented by the health crisis manager, is therefore the foundation of a health crisis management preparedness system.

Libya's health system has been deteriorating due to the country's ongoing conflict since 2011, and a health catastrophe such as the COVID-19 epidemic aggravated the situation. According to reports, the violence has destroyed hospitals and clinics, created a lack of

water and energy in medical facilities, and reduced the quality of medical services [12]. The system was also under-resourced, which left the primary health-care system inoperable. In addition, multiple assaults on medical institutions have been reported, which resulted by severe shortages of medical experts, midwives, and nurses, as well as large gaps in coverage by general practitioners[12,13]. Libya remains classified as an L2 emergency country by WHO [12]. As such, the dynamic character of Libya's health sector, coupled with potential health threats, whether anticipated or not, underline the need of arranging health systems for health crisis management.

The COVID 19 epidemic makes Libyan's crisis management networking and communication with both national and international agencies even more necessary. Libya has two emergency operations centres, one in Tripoli and the other in Benghazi, launched with WHO cooperation in 2019, and 2020, respectively [12] . Both serve as focal points for emergency planning and acquiring, analysing, and distributing data on the impact of the current crises on the country's health system. WHO also helped with the training of 1939 healthcare workers in areas including laboratory diagnosis, infection prevention and control, case characterisation, risk communication, and contact tracing that are connected to COVID-19 [12]. In addition, 469 people got training in non-communicable diseases, mental health and psychological support, care for women's reproductive health, emergency and trauma, and integrated treatment of children's illnesses [12].

Crisis preparedness and education go hand in hand. The only way society can be made as ready as possible is by educating all sectors and training professionals. Universities could play a critical role in developing crisis management leaders, networking and communication skills, providing theoretical and practical training and assistance to their students and employees [14-16]. For instance, during the COVID-19 pandemic, many universities helped with education, public health communication, consultancy/advice, and research related to the pandemic [16]. Additionally, some universities have created COVID-19 medications that work, provided data on current and anticipated cases, begun genome sequencing, and gained a better understanding of the "long COVID-19" scenario [16]. However, because there is no guidance on how higher education institutions should respond to crises, some may have struggled to respond to the outbreak.

In response to Covid-19 pandemic, the Libyan ministry of education created a national plan to close all schools by March 15, 2020 [17]. That had a negative impact on the learning process, but it also decreased the likelihood of sickness and mortality among students by lowering the danger of exposure [18]. Additionally, a number of Libyan educational institutions have later started utilizing online learning methodologies in order to stay in contact with pupils and guarantee that they complete their academic work. Microsoft Teams, Google Meeting, Google Classrooms, MS OneDrive, and more tools are examples [17]. The University of Tripoli, for instance, has benefited from other online learning institutions like Coursera, which provides free access to more than 3800 courses from prestigious universities [17]. In addition, a number of Libyan medical and paramedical schools engaged in teaching, public health communication, research, consultancy, and advice connected to COVID-19 through their staff members [19]. However, there is still very little information available regarding the functions of Libyan universities in crisis response and management, particularly with regard to health crises. Concerns are also raised about how well-prepared Libyan hospitals, universities, and other healthcare facilities are for health crises.

The main aim of this project is to investigate the implementation of emergency preparedness programs at Libyan universities. With the objectives of assessing Libyan universities' roles in crisis management in terms of training, education, and research programs, and defining the obstacles to the establishment of risk-reduction and emergency-preparedness programs in Libya.

Methodology

A web-based questionnaire was given to several medical and paramedical faculties, as well as faculties of the economics at different Libyan universities to assess the role of the Libyan universities in health crisis preparedness. The questionnaire aimed a decision-makers within the universities, represented by deans, the vice dean of scientific affairs, the quality and insurance department of the faculties. The targeted faculties were those who have a direct

association to health services, managing or providing health services. The targeted universities were mainly University of Zawiya (ZU), University of Tripoli (UOT), Misrata University, Sabha University, Libyan International Medical University (LIMU), University of Benghazi, Sirte University, and Al-Mergib University, Aljofra University, and Juffara University.

The questionnaire is divided into two sections that cover the main project topics. These sections evaluate Libyan universities' responsibilities that play in crisis management and specify the challenges and requirements for developing emergency preparation programs inside Libyan institutions. The responsibilities of universities were evaluated based on their participation in crisis prevention, training and education, research, and the acute period of a crisis. There were 28 questions asked in all.

The questionnaire was created based on research from the literature and the Toolkit for Strengthening Health System Emergency Preparedness for Crisis Management : Evaluation form [20]. It was distributed online using google form. The collected data were analysed for a descriptive analysis using IBM SPSS statistic 26.

Results

A total of 22 questionnaires were completed: seven from the University of Zawia, two each from Aljofra, Tobruk , and Juffara Universities, three from Sabha, and one each from the Universities of Benghazi, Misurata, Sabratha, Sirte, Sorman, and Tripoli. Nine surveys were filled up by economic faculties, and eleven were completed by medical technology faculties, as shown in Table 1. Additionally, there were two colleges of medicine, two in faculties of pharmacology, and one in dental medicine. Faculty from the biomedical sciences also took part.

Table 1: summarized table for the participated universities

Case summary		
	University Name	**Name Of The Faculty**

Specialty	**Medicine**	**1**		**Zawia**	**Faculty of Medicine**
		2		**Tripoli**	**Faculty of Medicine**
		Total	**N**	**2**	**2**
	Para-Medical Sciences	**1**		**Zawia**	**Faculty of Medical Technology**
		2		**Zawia**	**Faculty of Medical Technology\Anesthesia**
		3		**Juffara**	**Faculty of Medical Technology**
		4		**Aljofra**	**Faculty of Medical Technology**
		5		**Misurata**	**Faculty of Pharmacology**
		6		**Juffara**	**Faculty of Biomedical sciences**
		7		**Sabha**	**Faculty of Pharmacology**
		8		**Aljofra**	**Faculty of Medical Technology**
		9		**Sabratha**	**Faculty of Medical Technology**
		10		**Zawia**	**Faculty of Dental Medicine**
		11		**Tobruk**	**Faculty of Medical Technology**
		Total	**N**	**11**	**11**
	Economic	**1**		**Zawia**	**Faculty of Economics**
		2		**Zawia**	**Faculty of Economics**
		3		**Benghazi**	**Faculty of Economics**
		4		**Sirte**	**Faculty of Economics**
		5		**Zawia**	**Faculty of Economics**
		6		**Zawia\Sorman**	**Faculty of Economics**
		7		**Sabha**	**Human Resource Management Department**
		8		**Tobruk**	**Faculty of Economics**
		9		**Sabha**	**School Of Business And Economic Sciences**
		Total	**N**	**9**	**9**
	Total	**N**		**22**	**22**
a. Limited to first 100 cases.					

The number of undergraduate students in Libyan universities ranges from 70 at the University of Juffara's Faculty of Biomedicine to over 10,000 at the University of Benghazi. While just eight of the participating faculties have already started offering postgraduate programs, thirteen of them do not. Additionally, there are around 500 postgraduate students enrolled at the university of Benghazi, 250 in the faculty of the economy at the university of Zawia, but only 10 in the faculty of biomedicine at the University of Juffara. The number of teaching staff in the participating Libyan institutions varied as well, ranging from seven at Sabha University's

school of medical technology to a total of 290 at Benghazi University. These differences across universities were caused by whether the questioner submitted for the entire institution or simply a branch of a university.

Furthermore, as seen in the Table 2, the number of teaching programs in Libyan universities varies by specialisation. For example, the college of medicine at both Zawia and Tripoli universities offers one program, but the Faculty of Economy at the University of Zawia offers almost 150 and 30 programs for undergraduates and postgraduates, respectively. However, Libyan institutions' faculties of medicine provide what is known as a sub-program. The University of Zawia, for example, offers over 15 sub-programs leading to a bachelor's degree in medicine and general surgery (MBBS).

Table 2: number of approved undergraduate and postgraduate programs at some Libyan's universities

The University	Faculty name		undergraduate		postgraduate
Aljofra	Faculty of Medical Technology	1	10		0
		2	8		0
		Total	N	2	2
Benghazi	Faculty of Economics	1	5		3
		Total	N	1	1
Juffara	Faculty of Medical Technology	1	1		0
		Total	N	1	1
	Faculty of Biomedical sciences	1	2		2
		Total	N	1	1
Misurata	Faculty of Pharmacology	1	40		0
		Total	N	1	1
Sabha	Faculty of Pharmacology	1	1		0
		Total	N	1	1
	Human Resource Management Department	1	6		0
		Total	N	1	1
	school of business and economic sciences	1	240		0
		Total	N	1	1
Sirte	Faculty of Economics	1	6		2
		Total	N	1	1
Sabratha	Faculty of Medical Technology	1	6		0
		Total	N	1	1
Tobruk	Faculty of Economics	1	12		0
		Total	N	1	1
	Faculty of Medical Technology	1	4		0
		Total	N	1	1

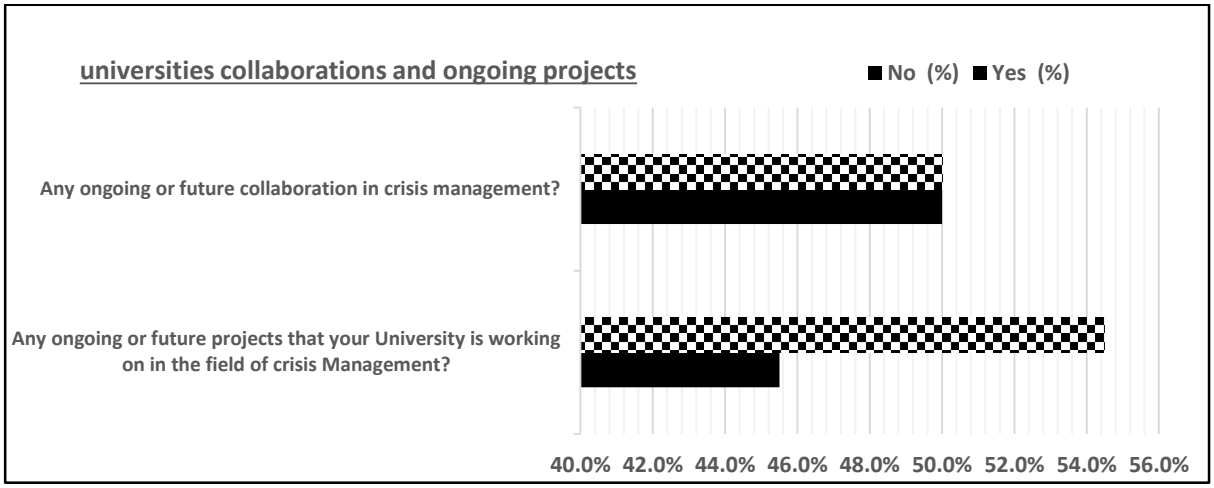
Tripoli	**Faculty of Medicine**	1	1		5
		Total	N	1	1
Zawia	**Faculty of Medical Technology**	1	8		1
		Total	N	1	1
	Faculty of Medical Technology\Anesthesia	1	32		0
		Total	N	1	1
	Faculty of Dental Medicine	1	1		0
		Total	N	1	1
	Faculty of Economics	1	6		6
		2	6		5
		3	150		30
		Total	N	3	3
	Faculty of Medicine	1	1		0
		Total	N	1	1
Zawia\Sorman	**Faculty of Economics**	1	0		0
		Total	N	1	1
Total	N		22		22

Moreover, the language of teaching at medical and paramedical faculties is English, whereas at faculties of economic is virtually entirely in Arabic. Ten of the participating faculties stated that they were not linked with any medical institutions; nevertheless, six faculties indicated at least one medical facility. The anesthetic department at the college of medical technology at the University of Zawia listed 6 medical facilities, while the Faculty of Biomedicine at the University of Juffara listed 13 medical facilities.

Current Initiatives and Partnerships in Crisis Management

Universities in Libya were formally questioned about ongoing or planned projects, partnerships, and crisis management-related activities. As can be seen in Graph 1, about 45.50% of the responded said that they were running projects or planning initiatives related to crisis management. The universities of Zawia, Aljofra, Misurata, Tripoli, Juffara, Sirte, and Sabha are among these establishments and they grant degrees in medicine, medical technology, and economics. Additionally, about 50.0% of the participating institutions announced partnerships in crisis management with national or international organizations.

Graph 1: the ongoing projects and collaboration of the Libyan universities for crisis managements



Roles of Libyan Universities in Acute Phase of a Health Crisis and in Crisis Reduction

Universities may play a significant role in the development of crisis management leaders, networking and communication, theoretical and practical training, and consultancy or advice. We assessed the involvement of Libyan universities in health crisis management during the acute period of a crisis as well as at-risk reduction when a crisis occurs.

As shown in Table 3, a small proportion (9.1%) of Libyan faculties have developed emergency response plans and are prepared to deal with significant health emergencies. In addition, 9.1% of respondents claimed that they contributed knowledge and experienced professionals during a health crisis. Only 4.5% of respondents indicated that they contributed human resources to national and international organizations during a crisis, while 9.1% said they sent food and medical supplies. Furthermore, only 18.2% of institutions produced a significant catastrophe report and regularly attended disaster management meetings. To phase a health crisis, 63.6% of the participating institutions said they had not yet created emergency action plans for a number of their facilities. Only 18.2% of the institutions regularly updated the evacuation procedures for the buildings as residence halls.

In addition, only 9.1% of faculties have evaluated crisis management protocols on a regular basis to specify duties of certain agencies during health crises. Besides, roughly 31.6% of institutions encouraged frequent information exchange and close connection with decision-

makers. However, just 9.1% of the faculties evaluated and improved their emergency preparedness and disaster mitigation strategies. likewise, just 18.2% of the faculties have actually implemented efficient risk reduction methods. Moreover, a small number of faculties (9.1%) were in charge of setting up, managing, and expanding crisis risk reduction committees. Similar to this, 9.1% of the faculties involved in the planning and development of hazard-resistant infrastructure or the upgrade of existing facilities.

In conclusion, the role of Libyan universities in health crisis management, whether in the acute phase or in crisis risk reduction, is limited.

Table 3: Roles of the Libyan universities in health crisis management at the acute phase of the crisis and in crisis reduction.

	Frequency	Percent	Valid Percent	Cumulative Percent
Does emergency response protocols have been established in your university?				
No	10	43.5	45.5	45.5
Yes	2	8.7	9.1	54.5
Maybe	10	43.5	45.5	100
Is the University prepared to handle major emergencies on campus?				
No	13	56.5	59.1	59.1
Yes	2	8.7	9.1	68.2
Maybe	7	30.4	31.8	100
Does the university play effective roles in bringing knowledge and expertise during crisis?				
No	8	34.8	36.4	36.4
Yes	2	8.7	9.1	45.5
Maybe	12	52.2	54.5	100
Does the university provide national relief organizations with adequate human resources support?				
No	14	60.9	63.6	63.6
Yes	1	4.3	4.5	68.2
Maybe	7	30.4	31.8	100
Does the university get involved in food and medicine donations during a crisis?				
No	13	56.5	59.1	59.1
Yes	2	8.7	9.1	68.2
Maybe	7	30.4	31.8	100
Does the university draw up a major report on the disaster and also held regular disaster management summits?				
No	10	43.5	45.5	45.5
Yes	4	17.4	18.2	63.6

Maybe	8	34.8	36.4	100
Does building Emergency Action Plans have been developed for a number of buildings in your university during crisis?				
No	14	60.9	63.6	63.6
Yes	2	8.7	9.1	72.7
Maybe	6	26.1	27.3	100
Are evacuation plans for University buildings, including residence halls, in place and reviewed regularly?				
No	15	65.2	68.2	68.2
Yes	4	17.4	18.2	86.4
Maybe	3	13	13.6	100
Does the university define the role and functions of the main agencies for regular review of their procedures?				
No	14	60.9	63.6	63.6
Yes	2	8.7	9.1	72.7
Maybe	6	26.1	27.3	100
Has the university implanted effective and efficient risk reduction approaches and policies?				
No	13	56.5	59.1	59.1
Yes	4	17.4	18.2	77.3
Maybe	5	21.7	22.7	100
Does the university play roles in establishing, planning, and development committees dedicated to crisis risk reduction?				
No	12	52.2	54.5	54.5
Yes	2	8.7	9.1	63.6
Maybe	8	34.8	36.4	100
Does the university participate in designing and planning for hazard-resistant infrastructure or improving existing facilities?				
No	14	60.9	63.6	63.6
Yes	2	8.7	9.1	72.7
Maybe	6	26.1	27.3	100
Does the university build a close collaboration, coordination, and knowledge exchange among decision-makers?				
No	10	43.5	45.5	45.5
Yes	3	13	13.6	59.1
Maybe	9	39.1	40.9	100
Does the university establish education/awareness/training programs, and organizes multi-stakeholder dialogues in regard to crisis management?				
No	9	39.1	40.9	40.9
Yes	4	17.4	18.2	59.1
Maybe	9	39.1	40.9	100
Does the university review and rationalize legal arrangements for disaster mitigation and emergency action?				
No	11	47.8	50	50
Yes	2	8.7	9.1	59.1
Maybe	9	39.1	40.9	100

The Research and Educational Programs in Crisis Management offered by The Libyan Universities

In addition to their involvement in crisis management and reducing the impact of a crisis, higher education institutes play an important role in providing knowledge and experience. Universities could provide educational programs to define the impact of the crisis and also provide consultation and research related to the crisis. In this section, we evaluated the contributions of Libyan universities in education, research, and consultation linked to health crisis management Table 4. Only 9.1% of faculties had training in both basic and advanced disaster life support, and only 13.6% had a program in crisis management and disaster medicine as part of their official curriculum. Nearly 18.2% of the institutions provided employees, students with basic and advanced training in crisis management, and 9.1% for volunteers during a health crisis. Additionally, 68.2% of faculties lack a strategy for needs-based training as part of their readiness for health crises. However, only 4.3% of the faculties had an opportunity to access emergency management training, and 68.2% of them lacked enough funding for training programs related to health crises.

Only 9.1% of institutions standardized their curriculum and training materials for crisis management programs among stakeholders, indicating a low level of stakeholder participation. Furthermore, when a disaster strikes, just 4.5% of institutions established and implemented comprehensive disaster public awareness programs. Barely 4.5% of colleges conduct research, collect data, and analyze it as part of crisis management and disaster evaluation. however, hardly 9.1% of universities have an emergency operations center equipped to manage emergency communications and organize emergency responses.

In conclusion, the majority of Libyan academic institutions participate in health-related training and education initiatives at a low level when a crisis strikes.

Table 4: role of the Libyan universities in health crisis-related educational programs and training.

	Frequency	Percent	Valid Percent	Cumulative Percent

Does the university provide organized educational programs covering the basic principles of disaster medicine and crisis management in its curriculum?					
	No	13	56.5	59.1	59.1
	Yes	3	13.0	13.6	72.7
	Maybe	6	26.1	27.3	100.0
	Total	22	95.7	100.0	
Does a formal mechanism exist for reviewing and revising curricula?					
	No	13	56.5	59.1	59.1
	Yes	2	8.7	9.1	68.2
	Maybe	7	30.4	31.8	100.0
	Total	22	95.7	100.0	
Are there training courses available as core disaster life support, and advanced disaster life support within the university?					
	No	13	56.5	59.1	59.1
	Yes	2	8.7	9.1	68.2
	Maybe	7	30.4	31.8	100.0
	Total	22	95.7	100.0	
Are opportunities provided for emergency-management training?					
	No	14	60.9	63.6	63.6
	Yes	1	4.3	4.5	68.2
	Maybe	7	30.4	31.8	100.0
	Total	23	100.0		
Does a needs-based training plan exist?					
	No	15	65.2	68.2	68.2
	Yes	2	8.7	9.1	77.3
	Maybe	5	21.7	22.7	100.0
	Total	22	95.7	100.0	
Do needs assessments determine the frequency and content of training, as well as the number of participants?					
	No	15	65.2	68.2	68.2
	Yes	3	13.0	13.6	81.8
	Maybe	4	17.4	18.2	100.0
	Total	22	95.7	100.0	
Does training include exercises and drills?					
	No	16	69.6	72.7	72.7
	Yes	2	8.7	9.1	81.8
	Maybe	4	17.4	18.2	100.0
	Total	22	95.7	100.0	
Have sufficient resources been allocated for training programs?					
	No	15	65.2	68.2	68.2
	Yes	2	8.7	9.1	77.3
	Maybe	5	21.7	22.7	100.0

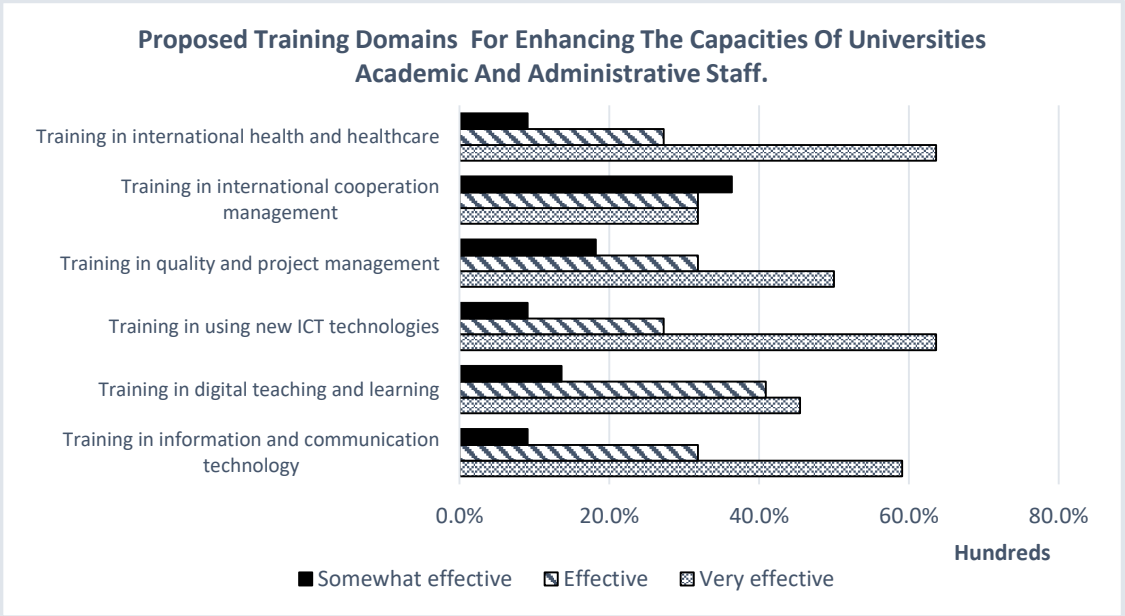
	Total	22	95.7	100.0	
Does the university provide basic and advance training to volunteers during crisis?					
	No	14	60.9	63.6	63.6
	Yes	2	8.7	9.1	72.7
	Maybe	6	26.1	27.3	100.0
	Total	22	95.7	100.0	
Are the curricula and training materials harmonized across stakeholders?					
	No	15	65.2	68.2	68.2
	Yes	2	8.7	9.1	77.3
	Maybe	5	21.7	22.7	100.0
	Total	22	95.7	100.0	
Does the university develop and implement a comprehensive disaster public awareness?					
	No	15	65.2	68.2	68.2
	Yes	1	4.3	4.5	72.7
	Maybe	6	26.1	27.3	100.0
	Total	22	95.7	100.0	
Does the university do research, data collection, and analysis to identify, assess and monitor the risk and enhance early warning?					
	No	13	56.5	59.1	59.1
	Yes	1	4.3	4.5	63.6
	Maybe	8	34.8	36.4	100.0
	Total	22	95.7	100.0	
Can the university establish and equip a suitable emergency operations center capable of handling emergency telecommunications and coordinating emergency responses involving many services?					
	No	10	43.5	45.5	45.5
	Yes	2	8.7	9.1	54.5
	Maybe	10	43.5	45.5	100.0
	Total	22	95.7	100.0	
Are there any training programs offered by the university for its employee and students in the field of crisis management?					
	No	17	73.9	77.3	77.3
	Yes	4	17.4	18.2	95.5
	Maybe	1	4.3	4.5	100.0
	Total	22	95.7	100.0	

The Obstacles and Needs for Establishment of Risk-Reduction and Emergency-Preparedness Programs

Because a few of the included faculties in this study have a crisis disaster management program as part of their official curriculum, we examined the key barriers inhibiting other institutes from integrating the program into their curricula. The majority identified a financial shortage as the main problem. Lack of technical and administrative support, proficiency in the field, and human resources are some of the additional issues identified. As summarized in graph (2), More than half of the faculties named training in international health and health care, new networking technologies, and in information and communication technology as particularly beneficial training fields for strengthening the capacities of university academic and administrative staff in crisis management programs. Other training programs as management international corporation believed to be somewhat effective by more than 50% of the responded faculties.

Overall, the findings indicated that participation in crisis management at Libyan institutions is limited. However, the majority of these universities emphasized the effectiveness of the various crisis management training programs.

Graph 2:effectiveness of training programs in health crisis management



Discussion

Despite the huge impacts of COVID-19 outbreak, it served as a learning experience that highlighted the importance of effective health crisis management [17, 21, 22]. It also highlights

the significance of networking and communication, the international collaborations of diverse health agencies to combat the disease's devastation [4, 23]. While some nations and their leaders have received credit for their quick actions and responsible leadership during the COVID-19 disaster, others received criticism [24]. Modern leaders must consider not just the primary impact on the population, economy, and infrastructure of their nations, but also the secondary impact that may arise from crises experienced outside of those nations [21, 24]. That is highly influenced by globalization, international interconnection, and interdependence through global supply chains. Therefore, in times of crisis, particularly with regard to health, governments should take into account the specific circumstances of their own citizens and work with neighboring countries during and after crises to ensure that people are rescued and their abilities and skills are strengthened. This could be achieved by the government and key stakeholders creating an effective crisis strategic plan.

Libya, whose healthcare system has steadily deteriorated over the last nine years, was especially vulnerable to a health crisis as COVID-19 outbreak [25, 26]. In fact, the pandemic exacerbate the situation with its negative effects on social, economic, and political environments of Libyan residents and citizens, as well as outsiders and migrants [26]. The Libyan government took numerous efforts to combat the pandemic as part of its crisis management strategy. This strategy included shutting the educational institutions, initiating awareness campaigns to encourage social separation, and suspending travel to and from Libya [17, 26]. Travel restrictions, on the other hand, were enforced abruptly, leaving hundreds of Libyan people trapped overseas [26, 27]. Additionally, several non-governmental groups and local civil society worked to combat the COVID-19 disaster by concentrating their efforts on cleansing public areas and educating local constituencies and vulnerable populations [28].

Universities, Schools, and Departments of Public Health have demonstrated their ability to support the governance and public health systems required to combat COVID-19 [16]. They can provide support in terms of academic contributions like an institute for disaster research, education and training of professionals, and consultancy for the implementation of a relevant, effective, ethically and economically acceptable intervention [16]. It is still unknown what responsibilities Libyan colleges and higher education institutions in handling of a public health crisis like the recent COVID-19 outbreak. Hence, here we assessed the level of readiness and

degree of involvement of Libyan higher education institutions for a health crisis, and targeted those directly linked to the healthcare system. They survey directed to schools of medicine, para-medical specialties like technology, dentistry, pharmacology, beside to faculties of economics.

The presence of around ten Libyan medical institutes with varied specialties, as well as additional paramedical and non-medical organizations closely linked to healthcare supply using government financing, is advantageous [29]. These institutes might take turns offering medical assistance during times of health crises. However, according to our study, the participation of the responded faculties in acute crisis phases or risk reduction related to health was rather low. A minority of these institutes have had an emergency response strategy in place and are prepared to deal with significant health crises. Also, a few percentage of them have really implemented an effective risk reduction strategy or were in charge of forming, managing, and developing crisis risk reduction committees. Furthermore, their roles in education and providing training as well as qualified professionals at time of a health crisis were unfortunately limited. Besides, they played little part in disaster reporting or in supplying food and medical supplies when a health crisis struck.

On the contrary, public health departments at European universities and schools have shown impressive involvement in health emergencies like the COVID19 pandemic through teaching, research, public health communication, and participation in major decision-making entities through consultation and advising [16]. A lack of training in health-related crisis management programs among our institutes' students and workers is most likely a contributing factor. Moreover, our institutes may not see participation in a health crisis as a chance to advance research. However, the majority of participated faculties argued that a lack of funding restricted their institutions from establishing of these programs.

As an academic institution, the university may be obliged to develop and implement comprehensive educational disaster programs or curricula for the community. The programs should be simple, easy to follow, of excellent quality, and inexpensive. Core Disaster Life Support, Basic Disaster Life Support, and Advanced Disaster Life Support are just examples for a few offered programs for the health crisis management training [15, 30]. These courses should not just target students and university employees, but also individuals who play key roles in disaster management. As such, it is intended for professionals in a variety of

disciplines, such as hospital administration, medical reserve corps, police enforcement, and government, to strengthen their talents and ensure their ability to work during a specific phase of a crisis [7].

At reality, most departments in the Libyan universities continue to use old curriculum and teaching techniques, which are seldom reviewed or updated [29] . For instance, ever since Benghazi's first medical school opened its doors in 1970, all subsequent medical schools have copied its curriculum [29]. This curriculum lacks a problem-based learning technique, as well as, research, medical ethics, health economics, and communication skills are not major components of it [29]. Indeed, one of the primary roles of universities in the event of health crisis preparation is to provide the training and education required for building professionalism and effective leadership. This leader can analyse and evaluate a complex environment while adhering to a clear vision and organizational principles, undertaking strategic and tactical planning, enhancing communication, negotiation, and teaming abilities, and making effective and efficient decisions. [9].

Unfortunately, according to our study, only a minority of the participated faculties offered crisis management and disaster medicine training programs as part of their official teaching curriculum. They did not provide training in dealing with health issues to their employees, students, or volunteers. Further to that, the available training programs do not adopt a needs-based training strategy. This could be due to a lack of university funding for health-related training programs, technical and administrative assistance, and health crisis management professionals. It is also noted that only a tiny percentage of these institutes have ongoing or planned projects or activities connected to crisis or disaster management collaborations with local or international agencies. Therefore, it is critical to provide comprehensive fellowship training programs for all university staff as well as health workers that are based on reliable scientific evidence.

Conclusion

After investigating the role of Libyan universities in health crisis management, we conclude that there is an urgent need for crisis management and disaster medical education at various

Libyan universities. All healthcare professionals and volunteers in society should participate in formal education programs that include the principles of crisis and disaster medicine. It would be useful to have training in crisis management-related networking, communication, and information and data technology. Also, Libyan institutions should seize the chance to work with various national or international organizations like WHO, UNICEF, and the European Union to enhance their programs related to health emergencies. Engaging with the Libyan government and encouraging foreign partners and organizations to provide funding and training would also increase the ability of various Libyan institutions for long-term health crisis management and strategic planning.

Study limitations

This survey only addressed medical and paramedical faculties, as well as colleges of economics at several Libyan institutions; nevertheless, only two of nine official Libyan medical schools replied. Furthermore, other specialties at Libyan institutions were not included in this study, so their involvement in health crisis preparation and management are still unclear, and more research with a larger sample size and a variety of specialties is needed.

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