



Narrative Review

Characteristics and Skills for Medical Librarians as the Information Experts in Accidents and Disasters

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Abstract

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Introduction: The accident and disaster team's access to reliable and up-to-date information can mean faster crisis management, requiring specialist forces in this field. Therefore, this research aims to determine the characteristics and skills medical librarians need to be disaster and disaster information experts.

Methods: The current research is descriptive and has been conducted using a narrative review method. In this study, 46 articles were found based on searches conducted in databases and websites of journals, which met the researchers' criteria for inclusion in the study. In the next step, to achieve the main goal of the research, the content of these articles was examined and analyzed in-depth, and as a result, the characteristics and skills needed by librarians of accidents and disasters were extracted.

Results: The results showed that the characteristics and skills needed in the order of abundance in the sources include the provision of information services, the use of information technology tools, collection managers, training in disaster response activities, institutional supporters, internal planners, government partners, mental health support, safe shelter, community resilience, familiarity with crisis management topics, and meeting needs.

Conclusion: The results of the source review showed that librarians can play an influential role in the field of accidents and disasters. For this purpose, they must have the required characteristics and skills acquired through workshops or training courses, which add lesson units to educational topics.

Introduction

Accidents and disasters occur naturally or by humans and impose difficulty and hardship on society suddenly and increasingly (1). These events, such as floods, earthquakes, storms, epidemics, and war, are unpredictable and require rapid management

in a period that the organization does not define. This period is sometimes so short that it limits the possibility of making decisions and taking action to reduce damages. Uncertainty is another characteristic that results from decisions made in the face of



incomplete, wrong, or ambiguous information (2). Accidents and disasters are naturally challenging because they disturb the natural process of human life and cause crises. One of the dimensions of this crisis is the production and spread of pseudo-information among the general public. Pseudo-information is false information that is inadvertently or intentionally produced and disseminated (3).

Leaders across all organizations are now involving more team members in decision-making processes. This approach aims to speed up decisions and ensure more information is available during incidents. By including a diverse group in these critical moments, organizations can quickly identify and tackle various risks more effectively (1). One of the biggest challenges for healthcare professionals, governments, politicians, and the general public to make timely and informed decisions to overcome the crisis is the need for timely and quick access to reliable and relevant information to adequately manage incidents and prevent crises. Decision-making at different stages of crisis is critical and must be made with correct information. Information challenges can be managed if there are experts in organizing and retrieving valid and up-to-date information during incidents and crises. Among all organizations, the library has been in charge of transmitting appropriate and timely information to society as a resource and information center from the past until now (4-6). This essential task is done by librarians who are experts in this subject.

Therefore, according to this role of information management, libraries and librarians must be ready to respond to the information needs of society and users' access to information in critical situations caused by accidents (7). If librarians have their central role in providing authentic information to people like in the past, they can continue their role in today's society and act authoritatively during accidents and disasters (4-6). Medical libraries and librarians can act as a part of the crisis management center, especially concerning access to health resources and their capabilities and skills in searching and quickly finding valid and updated information in the health field. Suppose they receive the necessary training in accidents and disasters

and acquire the necessary skills. In that case, they can provide valid and up-to-date information to decision-makers, minimizing damages, preventing immediate damage, reducing costs, saving time, increasing the speed of access to information, control, proper planning, preparation, coping, speeding up decision-making, reconstruction, and proper management of the crisis process (1).

Librarians worldwide not only fulfill their regular duties but are also equipped to handle emergencies by offering specialized information services to the community. For instance, the American Medical Library Association has organized a training program for librarians to assist during disasters (8). However, in Iran, librarians have yet to be actively involved in responding to accidents and disasters (6, 9).

Various research studies have highlighted the significance of disaster librarians and the role of librarians in disaster management. For instance, Soleimani et al. conducted a study focusing on Isfahan citizens' information-seeking behavior and needs regarding COVID-19. The study identified five subcategories related to the citizens' behavior, including attitudes toward the COVID-19 crisis, information needs, information sources, information validation, and information search barriers (10). Additionally, the findings of Malekolkalami, Moghadami, and Mantegh emphasized the importance of non-medical librarians enhancing their knowledge and awareness to serve as effective information consultants in society (11). Ashrafi-Rizi et al. conducted research to identify the role of medical librarians in the COVID-19 crisis in Iran, and the result of this study is seven main categories and 24 subcategories. The main categories included the promotion of health services, the development of health information-seeking skills, health research services, the development of interaction level, the development of evidence-based policy, the promotion of information dissemination services, and the development of management services (12). Chisita and Ngulube conducted a study titled "A framework for librarians to inform the citizenry during disasters: Reflections on the COVID-19 pandemic." Librarians can actively prevent false information and educate

citizens about health practices (13). Donahue, in research entitled “New roles for hospital librarians: a benchmarking survey of disaster management activities,” examined a measure of disaster management activities, and the results of this study showed that the majority of librarians (60%) were not involved in disaster management activities in their hospitals (14). Featherstone, Lyon, and Ruffin, in a study entitled “Library roles in disaster response: an oral history project by the National Library of Medicine,” found that roles for librarians fall into eight categories: institutional supporters, collection managers, publishers’ information, internal planners, community advocates, government partners, educators, and information society builders (15). Featherstone conducted research entitled “The Disaster Information Specialist: An Emerging Role for Health Librarians.” In this study, different roles for librarians include providing extensive literature search and information skills training for disaster workers, appropriate training in disaster response activities, information officers, the role of protecting the collection and ensuring the continuity of library services in disasters were extracted information services for emergency managers and disaster workers (16). Previous studies indicate that librarians have a basic understanding of the job requirements and competencies of an accident and disaster librarian. By familiarizing themselves with these essential traits and skills, they can actively contribute to disaster response efforts and effectively assist during emergencies and crises.

However, librarians need training to be ready to perform such services in critical situations. In order to implement such training programs, it is necessary to identify the characteristics and skills needed by disaster librarians to be considered as a background for training these skills and lead to the

adequate provision of disaster librarian services in crisis areas. As medical librarians in countries like Iran often need more formal academic training to operate in crises effectively, their limited presence in such environments has become a concern. This study aims to pinpoint the essential qualities and expertise librarians require during emergencies and disasters. By introducing educational initiatives tailored to the needs of professionals in this field and organizing training sessions, the goal is to equip medical librarians with the necessary tools to play a more active role in crisis settings.

Methods

The current research was descriptive and conducted using a narrative review method. In this study, by searching reliable domestic and foreign databases and websites of specialized journals, articles that somehow investigated disaster librarians’ characteristics and skills and were published from 2011 to 2022 were retrieved. After screening the search results by the researchers, 46 Persian and English articles eligible for inclusion in the study were selected and analyzed in depth to achieve the main goal of the research. As a result, the characteristics and skills needed by disaster librarians were extracted. These characteristics and skills extracted from the studies (137 cases) were arranged in the form of ten concepts and their sources and frequency due to the number and variety of terms related to each of these characteristics and skills.

Results

The analysis informs the design of 46 articles presented in Table 1 to demonstrate the characteristics and skills required for the role of medical librarians as accident and disaster librarians.

Table 1. Selected studies on the role of librarians in the crisis to analyze and extract skills

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
1	Mohamadesmaeil S, Nasehi Oskouei M. (2015)	Libraries and Natural Disasters (A Case Study of	Applied and with survey-analytical	Researcher-made questionnaire	130 librarians of medical sciences	Familiarity with crisis management topics, use of information technology

Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
		Medical University Libraries Affiliated to Ministry of Health and Medical Education of Iran, Tehran) (17).	method		university libraries located in Tehran	tools such as social networks, email services, telemedicine with the cooperation of medical librarians, and online publication of pictures of natural disasters through the library
2	Ashrafi-Rizi H, Kazempour Z. (2020)	The challenges of information services related to the COVID-19 crisis (18).	-	-	-	Increasing the health knowledge of people and healthcare professionals
3	Taheri A, Ashrafi-Rizi H, Saeedizadeh M. (2020)	Challenges and Actions of Public Libraries for Reopening and Providing Services Under COVID-19 Crisis: An Analysis of International Guidelines and Actions (19).	Narrative review/ Content analysis	Inductive content analysis	Web pages	Acceleration in providing basic services on virtual platforms, quality of information, and promotion of health information literacy
4	Kazempour Z, Soleymani MR, Najafi NS, Ashrafi-Riz, H. (2021)	Identifying the roles of medical librarians in the COVID-19 crisis in Iran (12).	Qualitative content analysis	Interview	Medical librarians	Promotion of health services, development of health information search skills, health research services, development of interaction level, development of evidence-based policies, promotion of information dissemination services, and development of management services
5	Ghasemi R, Ghaffari S. (2022)	Investigating the Readiness of University Libraries of Isfahan for Encountering the Coronavirus (COVID-19) Pandemic (20).	Survey	Questionnaire	Librarians of university libraries in Isfahan city, Iran	Digitization of resources, provision of offline services, development of infrastructure and increasing the level of digital and media literacy, development of access to information resources, control of digital content, and use of multimedia resources
6	Winston MD, Quinn S. (2005)	Library leadership in times of crisis and change (21).	Review and analysis	Review of Literature	-	Providing access to information, providing information services, and serving as resources

Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
7	Featherstone RM, Ruffin AB, Lyon BJ. (2008)	Library roles in disaster response: an oral history project by the National Library of Medicine (15).	Qualitative method and literature review	Interview by phone and email	23 librarians of medical libraries and review sources	Roles fall into eight categories: institutional supporters, collection managers, information disseminators, internal planners, community advocates, government partners, educators, and information community builders
8	Braquet D. (2010)	Library experiences of Hurricane Katrina and New Orleans flood survivors (22).	Online surveys and in-depth interviews	Questionnaire, online survey, and interview	New Orleans City Libraries	Assisting with free access to the Internet, information, and technology aids, providing a safe psychological escape asylum.
9	Zach L. (2011)	What Do I Do in an Emergency? The Role of Public Libraries in Providing Information During Times of Crisis (23).	Content analysis	Website content analysis	Websites of public libraries in the 50 largest cities in the United States	Providing quick and easy access to information, protecting the library collection, and maintaining library services to users
10	Madge O. (2011)	Evidence-Based Library and Information Practice (24).	Qualitative (online questionnaire with open questions/ interview	Qualitative (online questionnaire with open questions/ semi-structured interviews)	New Orleans City Libraries	Assisting with the information, asylum, internet access, information, and technology needs of disaster survivors
11	Featherstone RM. (2012)	The Disaster Information Specialist: An Emerging Role for Health Librarians (16).	-	-	General and medical librarians	Provide extensive literature search and information skills training for disaster workers, appropriate training in disaster response activities, information officers, protection of the collection, and ensuring continuity of library services in disasters and emergencies, as well as information services for emergency managers. and employees of accidents and disasters
12	Malizia M, Vargas K. (2012)	Connecting Public Libraries with Community Emergency Responders (25).	Telephone interviews/ Meetings	Interview/ Meeting	29 public library managers and reference librarians	Providing online information resources to disaster response workers



Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
					from eighteen libraries	
13	Grace D, Sen B. (2013)	Community Resilience and the Role of the Public Library (26).	Mixed methodology	Situation analysis	Public libraries	Community resilience
14	Lovea CB, Arnesen SJ. (2014)	National Library of Medicine Disaster Information Management Research Center: Achieving the vision, 2010–2013(27).	-	-	-	Managing information before, during, and after disasters, helping to collect and analyze data, improving and maintaining databases, identifying and disseminating information, helping disaster information specialists, helping society's resilience
15	Veil SR, Bishop BW. (2014)	Opportunities and Challenges for Public Libraries to Enhance Community Resilience (28).	Inductive and deductive	Inductive and deductive	Two librarians from 12 different community libraries throughout North Alabama	Providing resources and technology assistance, increasing community resilience
16	Flaherty MG. (2016)	Here, there and everywhere: Disasters and public libraries (29).	-	-	Public libraries	Providing information, internet access, meeting spaces, and access to restrooms
17	Meeks R. (2017)	Weathering the storm: a systematized review of public library disaster literature (30).	Mixed approach (systematic/quantitative/qualitative review)	Interviews	Management and staff of public libraries	Providing physical needs, emotional or psychological needs, logistical needs, and informational needs of users
18	Young E. (2018)	The Role of Public Libraries in Disasters (31).	Literature review	Content analysis	Public libraries	Strengthening access to critical information and resources following a disaster
19	Lewis DE. (2018)	Emergency Preparedness in the Legal Librarian Community in the United States: Current Culture and the Need to Expand Collaboration (32).	Phone interviews	Interviews	Disaster specialist librarians and disaster management experts	Information providers

Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
20	Michele HC, Ngwuchukwu M. (2019)	Challenges of disaster training: implication for federal and state university libraries in Nigeria (33).	-	-	Public libraries	Strengthening community resilience, center for disaster recovery and communication technology, information first responders, emergency management staff, post-disaster volunteer staff, social media, and emergency response
21	Yu F, Mani N. (2020)	How American Academic Medical/Health Sciences Libraries Responded to the COVID-19 Health Crisis: An Observational Study (34).	Browsing website content/ observation	Content analysis	United States Medical Sciences Academic Libraries website	Managing resources, supporting clinical care, providing education and information to the public, providing online services
22	Kosciejew M. (2020)	The coronavirus pandemic, libraries, and information: a thematic analysis of initial international responses to COVID-19 (35).	Qualitative analysis/ Content analysis	Document content analysis	Various library and information associations	Providing information, maintaining services, digital migration of services, workplace concerns, libraries' background requirements (diversity, conditions, and challenges), health and proper hygiene concerns, dealing with false information, foreign collaborations with public health organizations, and partnerships with industry, including publishers
23	Yousuf Ali M, Gatiti P. (2020)	The COVID-19 (Coronavirus) pandemic: reflections on the roles of librarians and information professionals (7).	-	-	University Librarians of Pakistan	Promoting public health awareness by creating and disseminating information on preventive measures, supporting the research team, providing information on the latest developments by researchers and professors, and researching and continuing traditional services to clients.
24	Cox A, Brewster L. (2020)	Library support for student mental health and well-being in the UK: Before and during	Survey/ Analysis	A questionnaire with open and closed questions	British academic libraries	Supporting the mental health and well-being of students



Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
		the COVID-19 pandemic (36).				
25	Mardis MA, Jones FR. (2020)	Librarians as natural disaster stress response facilitators: building evidence for trauma-informed library education and practice (37).	-	-	-	Stress response facilitators
26	Patin B. (2020)	What is essential? Understanding community resilience and public libraries in the United States during disasters (38).	Qualitative	Interview	Seven disaster librarians, library managers, assistant or branch managers, or public library managers	Increasing community resilience, providing critical information in the face of severe challenges
27	Okike BI. (2020)	Information dissemination in an era of a pandemic (COVID-19): librarians' role (39).	-	-	-	Use social media tools to provide information to users, text notifications via mobile devices or mailing lists to share updates or personalized information with selected users
28	Walsh B, Rana H. (2020)	Continuity of Academic Library Services during the Pandemic (40).	Descriptive	Observation	University of Toronto Academic Libraries	Creating and providing online courses on course-oriented information skills, designing and providing short-term courses on information search, information retrieval, plagiarism, information ethics
29	Tsekea S, Chigwada JP. (2020)	COVID-19: strategies for positioning the university library in support of e-learning (41).	Quantitative study	Questionnaire	50 professional librarians in private and public universities in Zimbabwe	Making it possible to access electronic resources, cooperating with publishers to access electronic resources and reduce the digital divide, and providing information resources and services through digital library platforms
30	Pokornna L, Indrak M. (2020)	silver lining of the COVID-19 crisis for digital libraries regarding remote access (42).	Case study/ analysis	Content analysis	Google Analytics reports	Providing web links from reliable web resources on digital library platforms for users to access valid and relevant information, scanning the information

Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
						resources needed by users, and loading the organizational repository
31	Wang T, Lund B. (2020)	Announcement Information Provided by United States' Public Libraries during the 2020 COVID-19 Pandemic (43).	Stratified random sampling method	Content analysis	United States Public Libraries	Providing reliable information about epidemics
32	Asif M, Singh K. (2020)	Trends, opportunities, and scope of libraries during the COVID-19 pandemic (44).	Review	Literature Review	Library professionals	Scanning chapters of books and journal articles and presenting them via chat or email, listing various resources available in the library and updating them regularly, creating valuable tutorials for patrons, and uploading to the library
33	Bangani S. (2021)	The fake news wave: Academic libraries' battle against misinformation during COVID-19 (45).	Qualitative research/ literature review/ content analysis	Content analysis	South African Public Universities Websites / LibGuides	Combating fake news, including providing quality and authentic information, teaching information and media literacy, and creating awareness about fake news. Other strategies include engaging in professional learning, such as attending or presenting at seminars and conferences, as well as developing a Collection
34	Olubiyo PO. (2021)	An Assessment of Library and Information Science (LIS) Professional Skills among Librarians in Bab Fafunwa Library, Adeyemi College of Education, Ondo, Nigeria (46).	Survey	-	Medical librarians	Providing critical information services to institutions
35	Shastri DK, Chudasma P. (2021)	The perception of ICT skills and challenges of usage of technologies among the library	Survey	Questionnaire	Gujarat State Library Specialists	Information dissemination and access to the library, the role of technology



Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
		professionals of the Gujarat State during the COVID-19: a comprehensive study (47).				
36	Aliasghari N. (2021)	Role of Librarians and Medical Information Experts in Response to COVID-19 in Iran (48).	-	-	-	Collecting and managing information resources, managing and distributing knowledge, controlling information pollution, promoting awareness of public health protocols, creating and disseminating information related to preventive measures, providing information on the latest developments, research and the press to support the research team, researchers and Faculty members, responding to the basic needs of regular library users, refining information through evaluation and decontamination of information, using infographics, posters to educate people about the implementation of health guidelines, evaluating evidence and providing up-to-date and reliable information for doctors. , researchers and health workers in order to support evidence-based research and decision-making in the field of health, use of online communication environments and software for education and dissemination of health information, digitization of some valuable resources and open access
37	Haugh D. (2021)	Communicating with medical library users during COVID-19 (49).	-	-	Harvey Cushing / John Hay Whitney Library of Medicine	Communicating and promoting remote resources and services

Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
38	Srirahayu DP, Harisanty D. (2021)	Information Institution Services in Indonesia during the COVID-19 Pandemic (50).	Quantitative approach with descriptive method	Checklist	50 libraries in public and private universities in Indonesia	E-resource services, use of library social media to promote digital services and implement creative programs, i.e., live Instagram and digital seminars through webinars
39	Oyelude AA, Ebijuwu AS. (2022)	Perception of Librarians on COVID-19 Information and Sensitization: Challenges and Change Agenda (51).	Qualitative	Qualitative	20 librarians across Africa	Preparing and disseminating information on COVID-19 and creating awareness
40	Kang Q, Song Z. (2022)	COVID-19 impact on the Chinese top academic libraries: Libraries' response to space, collection, and services (52).	Content analysis approach	Content analysis	China's Top Academic Libraries	Access to space restricted by security measures, digitization of the collection, and online services
41	Chisita CT, Ngulube P. (2022)	A framework for librarians to inform the citizenry during disasters: Reflections on the COVID-19 pandemic (13).	Qualitative research	Interview	Trusted websites, including Elsevier and Emerald	Prevent false information, educate citizens about health practices
42	Kester B. (2022)	Crisis Librarianship: An Examination of Online Librarianship Roles in the Wake of the COVID-19 Pandemic (53).	Cross-sectional survey approach	Survey	Academic Librarians of America	Conducting classes and research consulting, creating online learning objects, creating LibGuides, and assisting with student questions via chat, text, and email
43	Vakili MA, Paranam Z. (2022)	Information Seeking Behavior of Health Professionals Encountering COVID-19 Crisis and Analyzing the Content of Messages Sent on social media (54).	Case study and content analysis by the descriptive-analytical method	Content analysis	All messages exchanged in WhatsApp groups of health workers of Golestan University of Medical Sciences during the coronavirus crisis	Methods of preventing the spread of COVID-19 are still at the forefront of health experts' attention, and these experts focus on the issues presented in this field. Web-based platforms such as websites and social networks also play a crucial role in providing the information needs of researchers, specifically



Table 1. Selected studies on the role of librarians ... (continued)

Row	Authors	Title	Research methodology			Results
			Methods	Tools	Population	Characteristics and skills
						in the field of COVID-19, and therefore, it is essential to pay attention to providing scientific and verified content on the web
44	Chisita CT, Chiparausha B. (2022)	Remaking academic library services in Zimbabwe in the wake of the COVID-19 pandemic (55).	Qualitative snowball method	Interview	One of the five branches of the Zimbabwe Library Association	Using online platforms to access information, especially library web pages, e-books, and e-journals
45	Pereira S. (2022)	Skill Sets Essential for Librarians in The Post-Pandemic Scenario: A Study on Librarians in Higher Education Institutes in The State of Goa, India (56).	Survey method	Questionnaire	Academic librarians working in various college libraries in Goa, India	Applying digital skills to provide services to users
46	Charbonneau DH, Vardell E. (2022)	Health sciences librarian research and instruction services in pandemic information environments (57).	Online survey	Questionnaire/ Survey	Academic health sciences librarians and other information professionals with health science communication responsibilities in the United States	Online training support, virtual consultation

In the current research, the information from 46 sources was extracted in the form of Table 1, and this information includes bibliographic information related to each source (including the last name of the author along with the year of publication of the source), research title, methodological information, and findings (the role of librarians in the crisis) is every study. The primary source is Featherstone's research entitled "The Disaster Information Specialist: An Emerging Role for Health Librarians" (16). The author believes that more sources emphasize the role of librarians, who ensure the protection of the collection and the continuity of library

services during accidents and disasters. Meanwhile, librarians can go beyond traditional roles, provide information services to crisis managers, disaster managers, and the community, and be present in crisis management planning teams.

The study identified 137 characteristics and skills associated with librarians in accidents and disasters, which were then categorized into ten concepts. All the features and skills gathered from various sources were organized based on concepts, resources, and frequency to account for the diverse terms related to each. Noteworthy characteristics and skills, ranked by the availability of resources, include providing

information services, utilizing information technology tools, managing collections, disaster response training, institutional supporters, internal

planning, government partners, mental health assistance, safe havens, community resilience, crisis management expertise, and meeting needs (Table 2).

Table 2. Frequency distribution of the characteristics and skills emphasized for the librarian of accidents and disasters in the literatures

Row	Characteristics and skills	Resources	Frequency
1	Providing information services	(3, 7, 8, 12, 15-17, 21-23, 25, 26, 28-35, 39, 43, 44, 48-50, 52, 53, 57)	29
2	Using information technology tools	(7, 13, 16, 17, 21, 24, 27, 28, 30, 34, 36, 40, 41, 43-45, 47-50, 52, 54, 55)	23
3	Collection managers	(16, 22, 25, 29, 35, 38, 45, 49, 57)	9
4	Training in disaster response activities	(8, 19, 28, 35, 41, 45, 49, 53, 57)	9
5	Institutional supporters, internal planners, and government partners	(7, 19, 22, 35, 38, 49)	6
6	Mental health support	(23, 31, 37-39)	5
7	A safe haven	(13, 23, 24, 30, 34)	5
8	Community resilience	(27-29, 34, 39)	5
9	Familiarity with crisis management issues	(17, 34)	2
10	Meeting needs	(31)	1

Discussion

The accidents and disasters team heavily relies on accurate and up-to-date information for effective incident and crisis management. Librarians who possess expertise in organizing and retrieving information can also contribute to incident management by acquiring skills in accidents and disasters. Through their proficient search capabilities, librarians can promptly furnish the disaster team with reliable and current information.

In this research, 137 characteristics and skills related to the librarian of accidents and disasters were extracted, and these characteristics and skills were grouped into ten categories in the form of concepts. Ten categories include providing information services, information technology tools, collection managers, training in disaster response activities, institutional supporters, internal planners, and government partners, mental health support, a safe haven, community resilience, familiarity with

crisis management issues, and meeting needs.

The results revealed that among the characteristics and skills extracted from the texts, the skills of providing information services, using information technology tools, collection managers, training in disaster response activities, and institutional supporters, internal planners, and government partners have the highest number, respectively. Repetitive themes emerge in sources discussing the librarian's perspective on accidents and disasters. This shows the importance of these characteristics and skills from the point of view of literature reviews (10, 12, 13, 15-17, 19-21, 45, 48). The skill of providing information services is consistent with the research of Ashrafi-Rizi et al. (12), Featherstone (15), Winston (21), Braquet (22), and Zach (23). In addition, acquiring this feature is necessary for an accident and disaster librarian to meet information needs, information search, information validation, and information search barriers. Librarians with the skills of searching for information and developing

it, as well as teaching these information skills to disaster workers, can play an essential role in providing quick and timely access to up-to-date and reliable information to the disaster management team and the community—the result of making the right decisions. Accident and disaster information professionals should also be familiar with various disaster gray databases and sources. Additionally, professionals should be aware of disaster information dissemination methods. Knowledge of disaster information resources is essential to serve disaster workers and students in disaster management training programs.

The skill of using information technology tools is consistent with the research of Bangani (45), Haugh (49), Mohamadesmaeil and Nasehi Oskoue (17), Ghasemi and Ghaffari (20), Taheri, Ashrafi-Rizi and Saeedizadeh (19). In addition, for a disaster librarian to produce, provide, process, store, and disseminate materials and information, it is necessary to acquire this skill. Familiarity with new information technologies such as artificial intelligence, virtual reality, social networks, and the like helps librarians provide information services as quickly as possible and access them to those responsible for managing disasters and society. Furthermore, as an accident and disaster librarian, one can effectively combat the dissemination of misinformation on social media platforms during emergencies and crises by utilizing advanced technologies to ensure the availability of accurate and up-to-date information. This proactive approach not only mitigates the potential consequences that may arise but also aids in the efficient management of such situations. Besides, librarians can produce information content with the help of new technologies and make this authentic content available to policymakers, officials, and society during a crisis.

The characteristics of collection managers are consistent with the research of Featherstone (16), Braquet (22), Malizia et al (25), and Flaherty (29). The meaning is that during the critical conditions caused by accidents and disasters, librarians, as managers of the collection of libraries and information resources, should provide and guarantee access to this collection of information resources as in normal conditions.

As we know, one of the primary responsibilities of librarians and libraries is to provide, organize, store, and access the information resources their users need. This characteristic emphasizes that librarians must also provide these responsibilities and access and protection of the collection in times of crisis. Moreover, librarians need to acquire management skills to help managers and policymakers properly manage accidents and disasters.

The skill of training in disaster response activities is consistent with the research of Featherstone (16), Chisita (13), Aliasghari (48), and Bangani (45). An accident and disaster librarian must acquire this skill to plan and manage incidents. Librarians train emergency responders using relevant information and databases, evaluate emergency and disaster software, teach disaster management skills classes, develop technology tools for emergency responders, and train other information professionals to provide reference services in emergencies.

The characteristics of institutional supporters, internal planners, and government partners are consistent with the research, including Featherstone (15) and Bangani (45). The librarians of accidents and disasters must know the politicians, organizations, and supporting institutions in times of crisis so that when accidents and disasters happen, they can quickly benefit from their help. Additionally, they can cooperate with the abovementioned cases to manage accidents and disasters.

Institutional supporters play a significant role in academic libraries, serving as central hubs for various activities. These libraries oversee university information online, support students and professionals (such as doctors, nurses, faculty, and researchers), and participate in university-wide incident and crisis management initiatives, highlighting the crucial functions of the libraries and their librarians.

Internal Planners: Librarians prepare planning documentation for their organizations, conduct documentation activities for crisis management staff, and generally work on an ad hoc basis to keep their libraries operational.

As government partners, libraries prepare reports and seminars for government officials.

They participate in government emergency drills and help organize them. They refer fellow citizens to social service agencies, apply for grants and contracts for information, and work with state health departments, police and fire departments, and other related agencies.

Conclusion

Based on the results of this study, it is evident that librarians can play a crucial role in the context of accidents and disasters. To fulfill this role effectively, they must understand a librarian's essential characteristics and skills specializing in accidents and disasters. This can be accomplished through participation in workshops, training programs, and practical experience in emergency scenarios to assist disaster response teams. The review of sources and websites in this research showed that no academic curriculum exists under the name of accidents and disasters librarianship at undergraduate or graduate levels. Therefore, librarians have library knowledge, participate in workshops and training courses, and gain experience in these environments to provide services to the crisis team (8). Ultimately, it is recommended that educational authorities and stakeholders explore the implementation of a training program for preparing librarians for accidents and disasters, incorporating necessary modules into

the curriculum. Additionally, conducting further qualitative studies, mainly gathering insights from experts in the field, is advised to understand better this course's educational requirements within the cultural framework of different countries.

Declaration

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Conflicts of Interests

The authors declare no conflict of interest.

Ethical Statement

Researchers have complied with all ethical requirements throughout the research. Data are available and will be provided if anyone needs them.

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Authors' contributions

All authors contributed to writing all parts of this study.

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