B.C. (Before Covid): How Libraries Build Community Resilience throughout Disasters through Roles and Services

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ABSTRACT

Information and communication play critical roles in community resilience. Empirical and anecdotal evidence show the vital roles that public libraries play during disasters. However, few studies have explicitly looked at the roles libraries can play and services public libraries can provide to enhance community resilience across multiple disaster types. In order to understand how libraries respond in a Covid 19 world, it is critical we understand how they responded B.C. or Before Covid 19. This research explored community resilience within the context of public libraries and how they, as FEMA-designated essential community organizations, might enhance community resilience. Specifically, this research identified, defined, and clarified the roles and services played by public libraries across different types of disasters. These findings give guidance for how we should train information professionals.

ALISE RESEARCH TAXONOMY TOPICS

Critical Librarianship; Risk Management; Public Libraries.

AUTHOR KEYWORDS

Community Resilience; Crisis Informatics; Disaster Preparedness; Public Libraries; Risk Management.

Background and Conceptual Framework

Our nation has experienced many disasters and will continue to do so. Many recent disasters demonstrate the overwhelming character of these extreme events: Hurricane Katrina (2005), the Deepwater Horizon explosion and oil spill in the Gulf of Mexico (2010), the 4/27 Tornadoes in the State of Alabama (2011), and the Coronavirus (2019). While these extreme events varied in scope, size, and degree of disruption, each overwhelmed local authorities, necessitating state and federal assistance. Prevention of disasters is ideal, but not practical. A practical approach includes both preparedness and resilience. Preparedness works towards readying a community for a disaster, whereas resilience considers one's ability to bounce back after something has happened. For example, we can do nothing to prevent tornadoes from occurring. Instead, we must focus our attention and prepare future library leaders to understand how to be ready in case extreme events occur. Resilience expands traditional preparedness and prevention programs by also encouraging actions that build a community's ability to return to normal after a disaster.

In 2010, FEMA called for specific organizations to build core capabilities to confront disasters and to measure and track how communities can collaborate to respond better and rebuild after they occur. These essential community organizations, as they are designated by FEMA, are organizations whose services are "necessary to save lives, or to protect and preserve property or public health and safety" (FEMA, 2010, p. 1). The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act) was first issued to provide states and local governments with assistance in case of disasters, and continues to be amended and defines the role of the federal government in disaster events. However, there is a lack of clarity about precisely how these essential community organizations are to help communities. Substantive and rigorous research is needed to identify how community organizations might add to resilience. Without a clear understanding of what it means to be resilient, supported by research findings, local organizations have no reliable guidelines for how they can enhance community resilience.

Public libraries have served community information and communication needs for decades (Bishop et al., 2011; Bertot, 2012) and have important roles to play in disasters. Ninety-eight percent of U.S. counties and parishes contain at least one library, with an average of five per county or parish, making 17,487 public libraries across the country (Public Library Association, 2015), making them a ubiquitous part of the U.S. public infrastructure, which are also often centrally located within their communities. (Buschman & Leckie, 2007; Oldenberg, 2001). Their placement within the community and their provision of information and communication services make them institutions that are clearly poised to be an essential component of disaster response. However, many librarians remain without the knowledge our ability to create a flexible and responsive disaster management plan.

Methodology

This work utilized content analysis to determine the roles and services public libraries provided throughout disasters to help create a useful framework for creating a course on crisis informatics for librarians. A content analysis was performed on the *Disaster Information Management Research Center* database, which is composed of items identified by the U.S. Department of Health and Human Services'

National Library of Medicine focusing on: the services libraries have demonstrated previously throughout disaster; and, the roles public libraries play throughout disaster.

   The Disaster Information Management Research Center's (DIMRC) *Bibliography on Library Roles in Disaster Preparedness, Response, and Recovery* is the most complete collection of disaster and library-related resources and provided rich data to answer the research questions posed in this dissertation. One of the *DIMRC*'s initiatives includes the ongoing development of this bibliography of the published literature and other resources on the role of librarians and information professionals in the provision of disaster-related information. At the beginning of the research, the entire bibliography included 253 items, including journal articles, magazine articles, blog posts, special reports, newspaper articles, dissertations, narratives, and conference proceedings. To conduct the study, twenty-five percent (n=63) of the items were selected from the *Bibliography on Library Roles in Disaster Preparedness, Response, and Recovery* (n=253) and analyzed using the community resilience framework. A random number generator was used to select the items to be coded in the analysis. The selected items were then uploaded into a qualitative analysis program and analyzed. To help frame the data a coding scheme was derived from the community resilience framework (Norris et al 2007).

FIDINGS

   The content analysis revealed a wide array of disaster experiences. The major disaster types mentioned were: wildfires, tornadoes, shootings, hurricanes and storm surge, a water crisis, the opioid epidemic, flooding, severe snowstorms, earthquake, terrorist attacks, rioting, and landslides. The diverse nature of these disaster types helps us understand what libraries did to respond to disasters across the board. The frequency of the codes are visualized in the *Word Count Result from Coding* (fig.1). From this visualization, we can see which codes appeared most often in the data. Information Needs, Sense of Community, Infrastructure, Trusted Sources of Information, and Flexibility/Creativity were the codes appearing most often. Whereas Economic Development, Responsible Media, and Redundancy were represented least in the data.

Figure 1
Word Cloud Result from Coding

Research Question 1: Services

What services have public libraries provided to their communities during and after extreme events?

Libraries are known for the services they provide to their communities, so one of the research questions looks specifically at services. To answer this question, I looked for data demonstrating how the libraries served their communities after a disaster. The services libraries provided were very similar to those provided on a "blue sky day" but in times of crisis, these services proved even more critical. This section discusses services specifically related to the disaster (*See Tab. 1*).

Table 1
Disaster-Related Library Services after Disasters

Economic Development	Helped Patrons fill out insurance/FEMA forms Ran Small Business Association (*SBA*) workshops Hosted free financial planning seminars
Information and Communication	Provided infrastructure such as power, Wi-Fi hubs, internet access, laptops, and computers Updated emergency response networks and crisis mapping applications Created LibGuides about disasters Provided trusted information about needed resources such as food, shelter, and transportation

The evidence shows that after disasters, libraries were more likely to provide outreach services. There were several examples of libraries meeting their communities where they were. For example, after mudslides, the libraries in that community set up a mobile book trailer and delivered books to nearby communities where the roads were making travel difficult. With the exception of the library staff themselves, the number one service the libraries provided was information infrastructure: power, Wi-Fi hubs, internet access, laptops, and computers. FEMA forms must be filled out online and for communities without power or internet access, this was impossible. Often, the libraries were ready to step up and provided this service. The libraries not only gave access to the information, but they provided a trusted information service by helping citizens fill out forms and work through the complicated process of applying for FEMA funds.

Libraries also provided critical trusted information about free resources –shelters, food banks and emergency procedures. (Morris 2017). Some libraries took it upon themselves to update information on Twitter, emergency response networks, crisis mapping applications, and even on LibGuides. Not only did libraries provide information about disaster resources but often they distributed donated resources. Libraries gave out bottled water, diapers, food, batteries, sympathy, fellowship, and even distributed thousands of warm coats (QPLSM 2012). Several libraries influenced economic development by providing resources such as free financial planning seminars for victims, including Small Business Association (SBA) or FEMA workshops, helping community members recover financially from disasters.

In addition to the community needing to access the internet to use e-government and other disaster information related services, it also needed to provide personal services. For example, libraries provided the means for people to reconnect with their family and friends. A service mentioned quite a bit in the documents analyzed were the services that provided entertainment. Story times, watching movies, and other programming helped communities take a break and forget about the disaster, if only for a little while. This was especially true for children and teens in the community.

Though most of the data in the content analysis pointed to outreach services, there were also examples of support via technical services. For example, Morris (2017) suggests libraries without collections addressing disasters and other kinds of crises should consider adding books and other media on preparing for and coping with disasters appropriate for all ages. Many libraries also worked to archive disaster experiences to make sure future generations would understand what happened in their community.

Research Question 2: Roles

What roles have public libraries played in their communities during and after extreme events?

The data demonstrated that the roles libraries played included collection managers; information disseminators; internal planners; community centers and supporters; government partners; educators and trainers; lifesavers and shelters (*See Table 2*).

Table 2
Roles Public libraries played after disasters

Roles	Examples from Content Analysis
Collection Managers	Ford 2017; Dankowski 2015; Oder 2008; Spear 2012; Weiss 2012; Yee 2012
Information Disseminators	Corbray 2017; Ramos 2016; Featherstone 2012; Langford et al. 2013; Long 2006; Oder 2008; Wilson 2013
Internal Planners	Blinder 2017; Barger 2015
Community centers and supporters	Blinder 2017; Peet 2016; Berry 2015; MBLC 2008; NYPL 2001; QCPL 2012; Will 2001; Zavalick 2012
Government Partners	Ramos 2016; Bardyn 2015; Barger 2015; Brobst et al. 2012; Chant 2013; Goldberg 2011
Educators and Trainers	Garcia-Febo et al. 2016; Berry 2015; Bishop et al. 2011; Rasmussen 2005; Weiss 2012
Lifesavers	Pundsack 2017; Fletcher 2006; Gilbert 2008
Shelters	Bauman 2013; Gazette 2012; Kramer 2012; Love et al. 2014; Orel 2012

DISCUSSION AND CONCLUSION

Throughout time, libraries have disseminated information so it is not a great surprise that this is one of the vital roles that libraries played after disasters. Beyond providing all of the information they normally provided to their patrons, some librarians worked diligently to update crisis maps and other online resources specifically related to the current disaster, (Corbray 2017; Love 2006) and there were several examples of libraries adjusting in order to provide better services.

After the police shootings in Dallas, librarians there worked to help educate themselves on race relations and considered what they needed to work on internally to help better serve their communities (Blinder 2017). Barger (2015) wrote about the importance of the role of internal planners for the library community. Internal planning refers to the work that organizations undertake in order to organize services, resources, and workers to better provide for their community.

Public libraries played the role of collection managers throughout disasters. Some libraries revamped their collections in order to cater to new populations (Oder 2008). Other libraries expanded their collections to include materials helping communities to heal emotionally after disasters (Ford 2017; Spear 2012). Libraries also worked to collect resources and materials about disasters for children (Weiss 2012; Yee 2012).

The data analyzed showed that most libraries assumed roles as community centers and supporters (Blinder 2017; Peet 2016; Berry 2015; MBLC 2008; NYPL 2001; QCPL 2012; Will 2001; Zavalick 2012). Some libraries offered their space to allow communities to gather together. Other libraries acted as de facto therapy services, with librarians debriefing with community members about the disasters, and helping them with processing the trauma. There were many instances of libraries working with government as a partner (Ramos 2016; Bardyn 2015; Barger 2015; Brobst et al. 2012; Chant 2013; Goldberg 2011). Libraries worked with local, state, and federal organizations as well as local community organizations including churches and nonprofits. For example, The Far Rockaway branch collaborated with the Joseph Addabbo Family Health Centers to "provide programs on disaster-related health issues such as post-traumatic stress order" (QPLSM 2012, Para. 7).

Public libraries also played roles as educator and training centers. Garcia-Febo et al. (2016) argued for the importance of library services during disasters specifically for immigrant communities experiencing language and culture barriers. After riots in Ferguson, the public library stayed open and served as an educational center when many of the local schools closed down (Berry 2015).

After the opioid epidemic began, many public libraries began to play the role of lifesavers. Though librarians have always played the role in calling first responders in case of an emergency like a heart attack, many are now getting trained to intervene during an overdose. Many librarians learned how to give Naloxone shots in order to counteract an overdose (Pundsack 2017). Others mentioned the roles libraries played in verifying and sharing information during other health emergencies (Fletcher 2006; Gilbert 2008).

Libraries are also acting as shelters to their communities. After Superstorm Sandy, libraries along the east coast served as shelters for victims of the hurricane (Bauman 2013; Kramer 2012). Other examples included libraries acting as warming or cooling centers (Gazette 2012). In addition to

providing shelter, many libraries served as a refuge by being open, clean, and providing light and power when many of their patrons were without it (Orel 2012).

Many libraries did not have disaster plans in place when disasters occurred. Those that did mostly had plans for small incidents such as fires, localized flooding, or active shooters. It was clear from both the content analysis and the interviews that libraries have considered disasters from a localized point of view. That is, they think about how to respond to smaller, localized incidents but often fall short of planning for more extensive, extreme events. This result indicates the importance of directors of libraries expanding their emergency response plans to include plans for more widespread disruption and to incorporate plans for their business continuity.

Many services libraries provided during disaster events were the same as pre-disaster services, including collection development, storytime, access to computers, and the Internet. These services continued to make up a substantial part of what libraries did for their communities after a crisis. In many cases, new services emerged. Organizing Small Business Association (SBA) workshops, helping patrons fill out FEMA forms, collaborating with other organizations to provide communities with resources and supplies, and providing disaster prep programming, were services that emerged after a disaster. Given these results, library directors consider these emerging services after a disaster and have backup plans for new services. Library directors can participate in free training sponsored by both FEMA and the SBA to help them consider the needs of a community after a disaster. Understanding the shifting community needs will help directors prioritize services in the case of an extreme event as well as develop more robust plans for future disasters.

The roles libraries played in disaster events were: institutional supporters, collection managers; information disseminators; internal planners; community supporters, government partners, educators and trainers; and, information community builders. These identifiable roles were corroborated by both the content analysis and the interviews. Library directors should adequately prepare for how to play each of these roles in their communities.

FUTURE DIRECTIONS

There is a disconnect between how librarians and disaster response agents view the role of libraries in enhancing community resilience. It is also critical that emergency management personnel are aware of libraries as essential community organizations and be willing to work with them. I propose planning joint workshops of EM planners and librarians for each to fully understand the roles both play and may play during disasters. Without working together, it is unclear what essential roles libraries must play.

Few librarians are exposed to disaster management in their LIS curriculum and there were relatively few courses focusing on trauma or disaster. It is critical for us to create lectures, courses, webinars, and workshops around the roles of libraries during disasters in MLIS programs. Expanding risk management and response courses to focus on educational institutions such as libraries is also critical. Directors of libraries and librarians should have a general understanding of community needs during a crisis.

This research demonstrates public libraries are essential and trusted organizations in our community in terms of helping respond after a disaster. Libraries take action to provide service and, as such, have become pillars of their communities and safe harbors in the storm. Hopefully, this work moves in the direction of providing library directors, disaster response agents, and emergency management teams with a variety of reasons to reach out to and work with their local public libraries. More research is necessary to identify ways that public libraries can better meet the critical needs of their communities when libraries are needed the most.

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