What is essential?: Understanding community resilience and public libraries in the United States during disasters

Beth Patin

Abstract
Hurricane Katrina, the 4/27/2011 Tornadoes, the Oso Mudslide, and even more recently, the Coronavirus Pandemic, all demonstrated the devastating experience of disaster. While each of 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. Preferably, the emphasis is placed on resilience or a community’s ability to bounce back. Public libraries are considered trusted pillars in their community, posing them to provide critical information in the face of extreme challenges. This work explores community resilience and how public libraries in the United States, as Federal Emergency Management Agency (FEMA)-designated essential community organizations, enhance community resilience. American Library Association Policy already recognizes the role libraries should play, and more recently, FEMA recognized libraries as “essential community organizations,” tasking them with the responsibility of fulfilling critical information needs in the case of a disaster. However, this designation was made without a clear understanding of how libraries should support their communities, leading to confusion during the United States’ response to Covid19. This work identifies a gap between the perspectives of the librarians and disaster response agents and suggests methods for closing this gap.

KEYWORDS
community resilience, crisis informatics, disaster management, public libraries and disasters

1 | INTRODUCTION
The United States has experienced many disasters and will continue to do so. While 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 attention on how to be ready in case disasters occur and how to stabilize communities before and after such events. Resilience expands traditional preparedness and prevention programs by encouraging actions that build a community’s ability to return to normal after a disaster.
This qualitative study explored the phenomenon of community resilience and how public libraries, as FEMA-designated essential community organizations, might enhance community resilience. In seeking to understand this phenomenon, the study addressed the following research questions:

- How do public library directions/managers think public libraries enhance community resilience and build adaptive capacities?
- How do disaster responders think public libraries enhance community resilience and build adaptive capacities?

1.1 Emergency management and public libraries in the United States

Resilience is an essential part of the emergency management plan in the United States. President Obama (2011) formally established the Office of Resilience within the National Security Council in the White House with a goal. If communities can increase their resilience, then they are in a better position to withstand adversity and recover more quickly than if the case would otherwise. The national preparedness agencies seek to create more resilient communities (Homeland Security, 2006; Obama, 2011; White House, 2010).

Unfortunately, the concept of resilience was incorporated into emergency management without the ability to predict or measure it (Cutter & Finch, 2008). This is an example of policy ahead of research: we have incorporated the concept of resilience as a significant aspect of the United States emergency response without a clear understanding of what it is or how to obtain it. Further, resilience was adopted into the national response while lacking metrics for benchmarks or measurements. Substantive and rigorous research studies are 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 specific directives for how they might enhance community resilience or determine the effectiveness of their efforts.

The Federal Emergency Management Agency (FEMA) (2010) called for the building of core capabilities by specific organizations to confront disasters and measure and track how communities can collaborate to better respond and rebuild after an event. These Essential Community Organizations, as FEMA designates them, are those organizations whose services are “necessary to save lives, or to protect and preserve property or public health and safety” (FEMA, 2010). Specifically, FEMA formally designated public libraries (Stafford Act 2011) as essential community organizations, adding public libraries to the category of essential community services, including police, fire protection/emergency services, medical care, education, and utilities. This new designation assumes public libraries have the potential to enhance resilience, justifying public libraries as a critical focus for this research study.

The emergency response literature is clear about the importance of resilience, and the organizations expected to be involved in emergency management. However, FEMA falls short in identifying the specific roles said organizations should play. This research fills this gap by naming specific actions, roles, and services libraries can play to make their communities more resilient.

After the 2004 and 2005 Gulf Coast hurricanes, a significant amount of anecdotal evidence about the roles public libraries play during disasters was published. However, as with disaster plans and planning, there remains a shortage of scholarly research identifying and clarifying those roles. However, two studies exist that identify the roles libraries are playing in disasters. Featherstone, Lyon, and Ruffin (2008) have, so far, provided the only comprehensive list of the roles of libraries throughout disaster events. They relied upon an oral history project conducted by the National Library of Medicine to identify specific roles. Researchers conducted 23 telephone and email interviews of North American librarians who responded to bombings and other acts of terrorism, earthquakes, epidemics, fires, floods, hurricanes, and tornados. They included various library types in their interviews but were focused on illuminating roles for medical libraries.

Some of the most crucial research evidence was discovered almost by accident. A yearly national survey of U.S. public libraries examined trends in Internet and public computing access in public libraries. Jaeger, Bertot, McClure, and Rodriguez (2007) 2004 to 2006 survey yielded 4,818 responses for a response rate of 69%, and they found, “public libraries also face increased demands to supply public access computing in times of natural disasters, such as the major hurricanes of 2004 and 2005” (p. 4).

Though the goal of this national survey was to understand internet access in public libraries and not the role of libraries during disasters, the open-ended question at the end of their survey captured the significance of libraries after several Gulf Coast Hurricanes in 2004 and 2005. The last question of the survey asked, “In the space below, please identify the single most important impact on the community as a result of the library branch’s public access to the Internet” (Jaeger et al., 2007, p. 201). Respondents overwhelmingly discussed the services they provided in the wake of several hurricanes. This survey led to their next study, reviewed below, which is a complete study of libraries during disasters.

Building from their unexpected discovery in their public library and internet access survey, Jaeger et al. (2007) demonstrated public libraries successfully
provided “a range of disaster preparedness and recovery services that were not provided and could not have been provided by other government agencies” (p. 200). Though the majority of the data for this article was drawn from the 2006 Public Libraries and the Internet study (Bertot, McClure, & Jaeger, 2006), they conducted dozens of interviews with public librarians and state library officials along the Gulf Coast about the activities, roles, and services of public libraries concerning the hurricanes.

Jaeger et al. (2007) found that libraries strengthened their communities in several ways, including:

- Helping communities prepare
- Providing emergency information
- Giving shelter
- Providing physical aid
- Caring for community members in need
- Working with relief organizations
- Cleaning up the damage after the storms

After tornadoes hit the South-eastern United States on April 27th, 2011, Veil and Bishop (2014) conducted interviews with librarians and identified opportunities for libraries to enhance community resilience. For instance, their interview participants identified the following opportunities for libraries: offering technology resources and assistance, providing office, meeting, and community living room space, serving as the last redundant communication channel and providing a repository for community information and disaster narratives. They found that librarians perceived themselves to be able to meet the changing needs of the community, adapting or expanding services already offered.

1.2 Community resilience

The theoretical concept of resilience originated from mathematics and physics, which led to mostly quantitative views of its conceptualization. Crawford Holling (1973) used mathematical conceptions of resilience to study ecological systems to determine the characteristics that make natural systems adaptive and resilient. Holling’s extensions of resilience to the world of ecology are relevant because it emphasizes the need to have multiple options and to view events in a regional context. He went further to point out that we should not presume to have sufficient knowledge; instead, we should recognize that we have limited knowledge and that events are often unexpected (Holling, 1973).

Resilience assumes hazards or disasters cannot be prevented and that a community can be equipped with resources and information that will enhance its ability to anticipate threats, reduce vulnerability, and respond to and recover from hazard events when they occur. Colten and Sumpter (2009) define community resilience as a community’s ability to strengthen its response to deal with crises or disruptions (Colten & Sumpter, 2009). A resilient system is “one that can withstand shocks and surprises, absorb extreme stresses, and maintain its core functions, though perhaps in an altered form” (Innes & Booher, 2010, p. 205). Tierney and Bruneau (2007) describe resilience as the inherent strength of a community and as the ability to be “flexible and adaptable” (p. 14). For them, resilience is measured after a disaster and is an outcome of how the community responds. As part of their work in the Multi-disciplinary Center for Earthquake Research, Bruneau et al. (2003) developed the 4R’s of Resilience (4 R’s): robustness, resourcefulness, redundancy, and rapidity.

Norris, Stevens, Pfefferbaum, Wyche, and Pfefferbaum (2008) believe that resources have dynamic attributes. They draw upon Bruneau et al.’s 4R’s to describe the dynamic nature of these resources. Robustness, redundancy, and rapidity are all seen as dynamic attributes of resilient communities. In the community resilience framework, robustness measures the strength of resources in the community and considers their probability of deterioration. Redundancy measures the extent to which resources are sustainable in the event of a disaster or crisis. Finally, rapidity refers to how quickly the resources in the community are accessed, used, or mobilized. Community resilience relies on both the resources themselves and the dynamic attributes of those resources.

Goodman et al. (1998, p. 259) defined community capacity in two ways: “(a) the characteristics of communities that affect their ability to identify, mobilize, and address social and public health problems and (b) the cultivation and use of transferable knowledge, skills, systems, and resources that affect the community.” These capacities are adaptive if they are robust, redundant, or rapidly accessible.

The concept of adaptive capacities incorporates both resources and dynamic attributes. Adaptive capacity is the ability of a system to adjust, change, moderate the effects, and cope with a disturbance (Brooks, Neil Adger, & Mick, 2005; Burton, Huq, Lim, Pilifosova, & Schipper, 2002; Cutter et al., 2008). Norris et al. (2008) identified four interconnecting resources of a community affecting its overall resilience: Economic Development; Social Capital; Community Competence; and, Information and Communication. These four resources act as adaptive capacities if they are robust, redundant, and rapidly accessible. In the next section, the four adaptive capacities are discussed in more detail.

1.3 Economic development

Economic Development involves the sustained, concerted actions of policymakers and communities to promote the
standard of living and economic health of a specific locality or neighborhood and is a critical aspect of the community (Schumpeter & Backhaus, 2006). Norris et al. (2008) identify three dimensions of economic development: fairness of risk and vulnerability to hazards, level, and diversity of economic resources, and equity of resource distribution.

The first aspect of economic development is concerned with the *fairness of risk and the vulnerability to hazards* that a community assumes. Norris et al. (2008) argue that people in more impoverished communities assume more risk because there are fewer infrastructures, organizational networks, and social supports. Another critical aspect of economic development is the *level and diversity of economic resources*. Economic growth, the stability of livelihoods, equitable distribution of incomes and assets, land and raw materials, physical capital, accessible housing, health services, schools, and employment opportunities are all significant economic resources for communities (Norris et al., 2008). Norris et al. (2008) explain the importance of *equity of resource distribution* as a component of economic development. Resource distribution studies look at the equity of income and other resources and how they are divided among community members. Economic resilience at a community level depends to a large extent “not only on the capacities of individual businesses but on the capacities of all the entities that depend on them and on which they depend” (Norris et al., 2008, p. 136).

### 1.4 Social capital

The second adaptive capacity is social capital. It includes the need for network structures and linkages, social support and community, bonds, roots, and commitments (Norris et al., 2008). Pierre Bourdieu (1986) distinguished three forms of capital: economic, cultural, and social. He defines “social capital” as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of acquaintance and recognition” (p. 198). You can see the relationship between Bourdieu's conception of social capital and its application in the community resilience framework.

Social capital involves an individual's ability to gain returns by investing, accessing, and using resources embedded in social networks. This first factor “emphasizes the need for networks over hierarchies as methods of organizing” (Grace & Sen, 2013, p. 515). Received (enacted) and perceived (expected) social support are important aspects of social capital. Individuals or communities might expect social support from specific social ties but receive support from a different relationship.

*Formal ties* to the community include citizen participation and leadership as manifested through voter participation, membership in religious congregations, school and resident associations, neighborhood watches, and self-help groups. Formal community ties determine who is participating, why, and how. *Informal ties* to the community include notions of social embeddedness that determine the strength of one's social network. A sense of community encompasses “the relationship between individuals and their larger neighborhoods and communities” (Norris et al., 2008, p. 139).

### 1.5 Information and communication

Norris et al. (2008) describe the effective use of information and communication as the “creation of common meanings and understandings and the provision of opportunities to articulate needs, views, and attitudes” (p. 140). Defining characteristics of this capacity include responsible media, narratives, skills, infrastructure, and trusted sources of information. *Responsible media* refers to whether the media coverage and the information within that coverage include relevant information for those who need it; rather than media coverage of repeated misery images.

“Systems and *infrastructure* inform the public, with trust being a key issue and with a preference for localized sources” (Grace & Sen 2013, p. 516). For information to be useful, it needs to come from a *trusted information source*. Trusted information sources are embedded in communities and typically have demonstrated reliability previously. After disasters, we often see memorials and communities coming together to share their stories. This type of narrative “gives the experience shared meaning and purpose” (Norris et al., 2008, p. 140). The narratives demonstrate experiences of shared meaning and purpose and help members of the community create a collective understanding of reality and put them on the path to healing. It was common to bump into former neighbors or colleagues after Hurricane Katrina, and sharing your stories became a norm for us.

### 1.5.1 Community competence

Community competence was defined by Cottrell (1976) as a community that is “able to collaborate effectively in identifying the problems and needs of a community; can achieve a working consensus on goals and priorities; can agree on way and means to implement the agreed-upon goals, and can collaborate effectively in the required actions” (p. 197). Norris et al. (2008) consider community competence to be the collective of human agency.
Community competence is very much like social capital but on a community level. Beyond what social capital we have as individuals or organizations, community competence is about what we can all achieve.

Community action is the community’s ability to act in a way that will help it recover from adverse physical or social events and includes coping strategies and shared plans for the future. Not only must a community be able to identify its problems, but also it must be able to work towards solving them. Critical problem-solving skills are vital in identifying issues and needs and helping the community reach a consensus regarding goals and priorities. Flexibility and creativity determine a neighborhood’s ability to adapt and change goals and objectives in light of new information and learning. Collective efficacy and empowerment determine trust and the shared willingness to work for the common good of a neighborhood and one’s belief that one can and should participate. Finally, political partnerships are a type of political approach to civic involvement, and they can be either proactive or reactive.

2 | METHODOLOGY

Qualitative interviews were conducted with seven librarians and six disaster response agents. The librarians interviewed were library directors, assistant directors, or branch managers. Public library director/manager participants had to have been working for any size public library that experienced a disaster in the last 15 years. The disaster response agents were recruited through an emergency management listserv. The disaster response agents held positions such as emergency preparedness coordinators, directors of response and rescue, and head of a county emergency response team. All response agents had to have experience working for a community organization responsible for emergency management in a recently FEMA-declared disaster zone. Participants were recruited to represent a diversity of experience on markers (see Table 1) including library size, disaster type (see Table 2), and library type.

Although the sample size for this work was small, the sample size was suitable for testing the suitability of the Community Resilience framework as a coding scheme. With such a small sample size, it is not possible to truly reflect all of the library organizations present in the United States but participants were considered according to the selection criteria in order to produce the most diverse group possible. Interviews took place over the phone and were recorded, and lasted around an hour. The interviews were then transcribed and analyzed qualitatively utilizing the Community Resilience framework as coding scheme.

3 | FINDINGS

To understand how public library directors/managers think public libraries enhance community resilience and build adaptive capacities, I used the four primary adaptive capacities identified in the community resilience theory: economic development, social capital, information and communication, and community competence. The data demonstrate that public libraries were able to enhance community resilience in all four adaptive capacities.
3.1 Economic development

Two areas related to economic development appeared in the interview data: economic resources and fairness of risk. Libraries were able to enhance the economic resources in the community in three significant ways. First, every library director mentioned that their staff helped community members fill out FEMA forms. Though not explicitly mentioned in the data, the potential result of filling out these forms is both disaster assistance funds and access to temporary food stamps. Second, most of the library directors mentioned the community using computers and internet access to fill out and submit insurance claims. Third, three libraries said hosting Small Business Association (SBA) workshops and training for how to fill out forms to receive help from the government to get local businesses operational again.

The concept of the fairness of risk has to do with economic disparities already existing in communities before a disaster strikes. In communities experiencing economic disparity, often, infrastructure is older, making it more vulnerable during disasters. Newer buildings are built according to building safety codes, making them more resilient in the face of disasters. One library director mentioned their library being “vulnerable because of its lower elevation” (Librarian 5 Transcript). During the second interview, the library director said their building had recently been renovated and that it “actually experienced the least amount of damage of any municipal building” (Librarian 2 Transcript) enabling the library to respond immediately to its community and form partnerships with other government organizations to allowing them a safe place to operate.

3.2 Social capital

Attachment to place and sense of community was mentioned in every interview. Every library director said that there was solace in sharing space in addition to the resources and services provided by the library. Community members demonstrated their sense of community, showing loyalty to their neighborhoods. Members of the community returned to the library because of their relationship to the place and the people inside. People came to the library to be with their community and as part of the healing process: “just being there for our community and providing just a tiny bit of normalcy” (Librarian 5 Transcript). Library Director 3 agreed with this, “I think it just helped them to be around each other. So I also think to provide space just kinda to be” (Librarian 3 Transcript).

Most of the directors also indicated though people seemed to come to the library to use specific information resources, the appreciation of space was a bonus. “They came to use computers, but they also came to talk and sometimes even to cry. It was overwhelming, and we wanted our community to know that we cared about them. Not just about providing information services but that we cared about them as individuals” (Librarian 5 Transcript).

Many library directors mentioned it was important for the libraries to be open because, in many instances, people had nowhere else to go. Library Director 2 said, “we had an immediate response from the municipalities’ upper echelon that we were to remain open the very next day, which was good ... because they had no other place to go in a lot of cases to get information about what was going on or to locate assistance” (Librarian 2 Transcript). Other library directors echoed this sentiment. “We were in the center of town and positioned to make a difference in our community. I think by being open, some people just wanted to be there to build back their sense of community” (Librarian 6 Transcript).

Multiple library directors mentioned that in addition to using the space to rebuild a sense of community, people also used it because it was considered safe. “Some of our buildings acted as shelters, and other buildings were repurposed as an assistance center” (Librarian 6 Transcript). Agreeing with this, Library Director 6 reported, being a “safe place to shelter” for people to “get local information or just seek a little refuge” (Library 6 Transcript).

After disasters, libraries played an essential role in helping communities rebuild their sense of community by providing a place for the community. “I think that just that general community center connection was massive, that people had a place to come together and see each other, and just step out of everything else for a little while” (Library Director 1 Transcript). Going further, Library Director 1 stated:

“I feel like in a kind of more esoteric kind of the way; it was just the community. Everything that reopened, every new point of interpersonal connection was a small victory for everybody that participated in it. I think that there was just some general emotional uplifting that was happening because people had something that was there again. They would come in and just want to talk to people. Everyone was so kind of separated from each other and so caught up in their stuff that I think that it was nice just to have a place to be. (Librarian 1 Transcript).

The library directors provided a great deal of evidence about working and cooperating with other organizations to help enhance community resilience. All of them agreed, “librarians can work with their communities and governments to provide better services” (Librarian Director 5 Transcript). Library directors mentioned several organizations they worked with including “organizations like
churches, the Salvation Army, the Red Cross, FEMA” (Librarian Director 5 Transcript) and, “definitely local responders, firefighters, human service agencies, nonprofits, state organizations; I think we worked with as many groups as possible” (Librarian Director 6 Transcript). One library director mentioned working with minor league baseball teams who “donated around 2000 tickets to the game to help us through a community night after things had settled down a bit. We previously worked with the baseball team, so I think that made this project work even smoother” (Librarian Director 7 Transcript).

Not all attempts to work with others were immediately seen as valuable. For example, “When I first offered to help, I don’t think the emergency management people were interested. It is like they couldn’t understand how BOOKS would help. They had no clue about all of the resources that we have and all of the different services we provided” (Librarian 7 Transcript).

Two of the library directors mentioned having relationships with other members of the government, allowing partnerships to happen organically. Another librarian and the emergency manager in her county worked together in workshops and training and had clear directives for how to help and respond in a crisis. “I would say that relationships are essential. I think our project was so successful because our director already had such a good relationship with the mayor. She was able to reach out, even when everything was pretty chaotic, and instantly got the go-ahead to start. I think it was also good that the staff had some training beforehand. I think that helped us understand roles and how we could help. It, well, we were prepared (Librarian 4 Transcript).

Maybe the most revealing aspect of social networks in this research is the importance of those relationships established before an event takes place. “I think it is important that we position ourselves as trusted parts of our community before something happens; this means making sure the public knows the types of services we provide. But not just the libraries, also the EM people. I don’t think they took us seriously until we started to provide service” (Librarian Transcript 7). This points to make sure the emergency management people are aware of what libraries can do.

3.3 | Information and communication

It is no surprise that libraries were significantly able to enhance community resilience in the area of information and communication. Information and communication are critical during disasters. For libraries, this is our concern all the time. Immediately after a disaster, one of the first things people need to be able to do is to “communicate with loved ones” (Librarian 5 Transcript). Many libraries even functioned as an information assistance center (Librarian 6 Transcript). “Our key role was providing internet and information services,” explained Library Director 7, “and I think delivering books and DVDs were also very appreciated” (Librarian 7 Transcript). This section discusses the codes from the Information and Communication section of the theory: information needs, information infrastructure, narratives, responsible media, and trusted sources of information.

Libraries also used book trucks and mobile services to help support infrastructure after disasters. One library director set up a “mobile satellite that would provide access to the internet” (Librarian 5 Transcript). “We had large trucks in our system, and these were stationed near different ends of the disaster so that the rescuers could store any type of valuables they found during the recovery” (Librarian 7 Transcript). Library Director 1 discussed this experience at length:

I think the most prominent role we played had the FEMA station open at the library, which was great, at the main library, because it gave people somewhere to go. It was really heavily utilized in that way, but also, I think the most significant role the smaller branches played was just being computer access points. The regional branch had gotten destroyed in the storm from rain damage actually, no flooding, but we got a few trailers that had been at one of the rural areas that people were staying in trailer parks having left their homes. We got a trailer from them in June of that year. It was set up as a library, but basically, it was just computers. It was set up in the parking lot at the regional branch so that people had somewhere to come to get online, file claims, do all those things that they couldn’t do at home for various, or not having homes, or whatever. I think that really being able to connect with insurance companies and FEMA and all those things were probably one of the most significant roles we played at that point. It was more about being connected to the outside world than it was about providing services connectivity (Librarian 1 Transcript).

Narratives tell the stories of the community after a disaster and preserve the experiences of the community for
those in the future. Though narratives did not appear too often during the interviews, they did appear several times in the content analysis, especially in events like shootings and the opioid epidemic. During this phase of the research, one assistant library director mentioned the library working on a memorial for the flooding happening in their city. “The director reached out to the mayor, and they [sic] wanted to start a type of memorial. I mean, you always hear about the 100-year flood, this was like the 1,000-year flood. So, almost immediately, we started collecting memorabilia, documents from businesses, pictures that people were taking. We even had people come in and record their experiences” (Librarian 4 Transcript). Not only did they have community members record their experiences, but they also encouraged local celebrities to participate: “I think one of the cool things we did was have local musicians come in and talk about their experiences. We were all, pretty much, in the same boat” (Librarian 4 Transcript). Narratives are an essential part of the disaster experience. “I guess I would have to say that documenting and memorializing this type of experience helps the community heal in the long-term and helps give context to those who didn’t experience it. Yeah, I think providing the archive and its educational value. It was healing” (Librarian 4 Transcript).

Responsible media in the community resilience literature points to media coverage containing information that a community experiencing a disaster can use to make decisions. Often national media coverage runs frightening images repeatedly and does not provide information that will accurately keep communities safe or help them recover. “Media was slow about reporting the floods, and it was at the same time as an oil spill, and it seemed like the national news was only covering that” (Librarian 4 Transcript). After disasters, people turned to libraries to make sure the information they got was both credible and actionable.

According to Library Director 2, the local and federal governments did not do a great job of keeping the community informed. The library was responsible for “keep people informed in like where they could go if they needed assistance. Keep them updated on what was happening with the municipality as well as what was happening with the schools, too, which was difficult” (Library Transcript 2). Sometimes the reason for lack of communication can be blamed on lack of infrastructure, but in this case, it was because “there was a lot of siloing that was revealed, I think it was bad communications. That was something that was really hard to deal with. We had to run around and try to make these connections for people” (Librarian Transcript 2).

Even communication from the federal government was slow at times. For months after an earthquake, FEMA still did not have offices set up locally. Poor communication and uncertainty are examples of irresponsible media, for example:

There’s been a lot of mix up and confusion over where the FEMA offices were going to be located. Initially, they were going to locate a FEMA Office in the main library for the city here. Then they decided instead to move it to this mall structure that the University has. It’s a little difficult for people that know where to go. Even staff for the entire library system were like, “We don’t know. Where are supposed to send people?” They do have like an office now that they have opened up within the library, but it's smaller, and it’s very short term” (Librarian Transcript 2). Responsible media helps ensure community members know where to go for safety and resources.

Public libraries are often pillars in their communities, and many of the library directors mentioned the importance of libraries in their communities. Simply put, “libraries are trusted” (Librarian 5 Transcript). “I think it’s important that we position ourselves as trusted parts of our community before something happens, this means making sure the public knows the types of services we provide” (Librarian 7 Transcript). Frequent users of the library were present in the library after disasters, and surprisingly, new users came to the library after the disaster. “Even people that didn’t typically use the library were coming to use the library. That was pretty exciting” (Librarian 5 Transcript). Library Director 2 also shared this opinion, “we had people that were coming in that would never have come to our branch at all. We found people that were just like, ‘I’m just hanging out because it’s a place that’s open and safe for right now.’ That was apparent that very first week after the earthquake” (Librarian 2 Transcript). Simply put, “People trusted us” (Librarian 6 Transcript).

### Community competence

In the community resilience framework, community competence is about the organized action of communities and institutions and their ability to make decisions and improve communities. Several aspects of community competence appeared in the data, including flexibility and creativity, reflections, and problem-solving.

Many of the library directors talked about the selflessness of their librarians and their dedication to keeping the libraries open. “Even though almost all of our staff lived in homes that were flooded, everyone showed up to work. We all wanted to do something. In the first few days before we had power, we still reported because it was better than just sitting home in the dark and not
knowing what to do with yourself” (Librarian 5 Transcript). Along those lines, another director mentioned, “even though the message had gone out that staff didn’t have to show up on that day, all of my staff actually did show up, and we were really fortunate enough not to be closed at all the next day, which all the other libraries were closed for multiple days after that” (Library Director 2 Transcript). One director even joked a bit about the dedication of her staff, “People came in and worked, even though some of them had lost their own homes. I was kinda blown away (laughing) Ummm...I guess I shouldn’t have said that” (Librarian 3 Transcript).

Many library directors demonstrated creativity and flexibility with how they responded to disasters. Even when they did not have plans, they were still able to react because of it: “(we didn’t have a plan), but you know what? That didn’t really stop us” (Librarian 5 Transcript). Immediately after a disaster, the library directors “started to brainstorm ways that the library system could help” (Librarian 7 Transcript).

Libraries were flexible about policies, services, hours, and fines. “One of the important things that we did was to shift our hours so that we could extend the time the library was open” (Librarian 7 Transcript). Some libraries offered extra delivery services to the areas directly outside of the damaged area” (Librarian 7 Transcript). “We also need to be flexible, not sending out overdue notices, erasing fines, all helped our community as well. We also let people use the library, which was from our county. During the crisis, our library was open for everyone, and I think that’s what we should all focus on” (Librarian 6 Transcript). Finally, being flexible allowed libraries to continue serving their communities: “I think being flexible and creative helped us serve our community. The staff thought outside the box and was able to improvise service” (Librarian 7 Transcript).

One of the most common reflections made by the Library Directors was that many of the libraries did not have disaster plans in place. Though this did not stop them from responding, it indeed delayed and hindered a coordinated response. “We had no training, no plan. There were no plans for any kind of disaster, hurricane-related or not at that time” (Librarian 1 Transcript).

Library Director 7 said, “I think we could have been even more useful if we had training. We learned a bunch from this experience, but I think that at least one person in the county system should be in charge of understanding and working with organizations to help plan for a response” (Librarian 7 Transcript). Library Director 3 spoke about this at length:

Gosh. Well, to be honest, I don’t think we really had a plan. I mean, there was a binder, and there was information in it about what to do if there was a fire or some internal problem like that but not anything specific. I guess we have tornadoes and warnings all the time, so we all just kinda know what to do. I didn’t really have any training. I mean, I took some classes in admin and management, and I think we talked about disaster stuff, but I think it was focused on preserving books and stuff like that, ya know. I wish I knew more about communicating after a disaster, like how to get a hold of staff. I had a lot of people’s personal numbers, but there were a few that I didn’t. That’s definitely something I’ve changed (Librarian Transcript 3).

Many librarians also mentioned the importance of having a disaster plan for the library and also to work with local agencies to make the response more effective. “I’m trying to think. I guess, yeah, I think just having a plan and being prepared for what to do in the immediate aftermath, and how to get out what your needs are” (Librarian 1 Transcript). Going further, “partnering with local government agencies, and emergency management personnel to help make new disaster plans that consider the role the library can play” (Librarian 5 Transcript).

Several library directors mentioned the stress and the experiences of the staff as a thing to consider. Many staff in these situations also lost their homes or were under tremendous amounts of stress. Library Director 2 spoke about this at length:

On the other hand, my staff was really under stress because they had no opportunity to catch up with what was happening with their own homes, which means their own houses might have been unstable. One person’s house was really hit hard (sic) break itself, that we were dealing with a lot of the stressors as well. The first week after the earthquake, we had displaced employees as well. Some of them worked part-time, and so, their hours were not able to be fulfilled properly. It was very unusual, I think, and not very emotionally supportive that we have this pay structure that required people to continue showing up to work when there was no place for them to work. They’re scrambling around trying to figure this out, and then getting responses from human resources and payroll saying like, “If you don’t fulfill these hours, you’re going to be cut essentially.” I mean, it wasn’t quite as severe as that, but there was that tone to it.

Of the six disaster response agents interviewed, only one of them mentioned working with libraries without prompting. “Libraries have always filled the role of a trusted information source...Libraries are not just places...
with information but are social and activity centers where the community can come and work with new technologies” (DRA 2 transcript). While this was only one data point out of six, this experience suggests a positive relationship between libraries and community resilience.

One agent, while discussing partnerships with community organizations, mentioned libraries provided some resources but still did not think about them as part of an overall emergency response plan. When mentioning partnerships, he remarked:

State and local emergency responders, other agencies within the county government, the medical reserve corps, the local health department... let’s see who else. Of course, local community organizations like churches or whatnot. The Red Cross. (Beth: how about the local library) Hmm... I’m not...yeah. We did work with them. Let’s see, I can’t exactly remember, but I know they lent us some resources like a truck or two. And, I know several organizations used the library as a kind of satellite office. Yeah, I think that’s it” (DRA 6 Transcript).

Four of the agents interviewed did not mention public libraries at all. The implications here are important: The disaster response agents talked quickly about collaboration and emergency response, but libraries were seldom mentioned as collaborators.

4 DISCUSSION AND CONCLUSION

This work provides evidence of the many ways libraries strengthen their communities and help them rebuild. For the most part, those in charge of preparedness plans overlooked libraries as a potential resource. Libraries must do a better job of making sure people are aware of the roles they can play and clarifying what it means to be essential. One possible way to increase awareness would be to have training and workshops geared towards whole community planning bringing librarians and those responsible for disaster response together so libraries can understand emergency response on a large scale, and responders can understand how libraries can help.

While disaster response agents did not often mention ways public libraries enhance community resilience, two agents did mention the specific ways libraries worked to strengthen their community’s resilience, such as by sharing infrastructure. Library directors discussed ways libraries enhanced their communities, especially in information and communication, social capital, and community competence. Economic Development was mentioned to a lesser extent, but almost every one of them mentioned assisting in helping fill out FEMA forms, which certainly could lead to financial resources.

It is critical libraries prepare for serving their communities in times of crisis. This research highlights an issue between the United States federal designation of public libraries as critical but without specifying the exact roles libraries should play. Going forward, public library directors in the future need to consider the roles libraries have previously played to support community resilience and make sure to have clear directives for a critical response to a myriad of disasters.

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