

When natural disasters strike, researchers may be called on to perform double duty: generating knowledge while also addressing human needs.



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Research after Natural Disasters: Recommendations and Lessons Learned

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Abstract

When natural disasters occur, university researchers and their community partners, particularly those in the disaster areas, are often expected to assume responsibility for generating knowledge from these events. As both natural and man-made disasters continue to occur, more faculty will be unexpectedly thrust into the arena of disaster-related research. This article explores the opportunities and challenges experienced by four social work faculty who made their initial forays into disaster-related research in the midst of Hurricanes Katrina and Rita. The research projects, partnerships, innovations, and problems associated with their research endeavors are discussed. In addition, recommendations for engaging in disaster-related research for researchers new to this area of inquiry are explored.

Introduction

The need for researchers and service providers to respond to natural disasters becomes more vital as the occurrence of natural disasters increases and the number of people affected continues to rise. Social workers, for example, will be called upon not only to provide services on the front-lines, but also to

engage in research to address human needs in terms of coping, stress, resiliency, the ability of organizations to deliver services, and the impact of disasters on survivors (Streeter & Murty, 1996). In the future, university faculty members are likely to be approached to engage in disaster research while they themselves are in the midst of natural disasters (Zakour & Harrell, 2003). However, the realities of research on disaster situations are far different from most empirical academic research, especially in areas that have just suffered greatly. Researchers in the affected areas are often untrained in disaster research; research institutions and their personnel may be adversely affected; and the community infrastructure, people, and services to be studied are often in disarray. Being aware of the challenges, obstacles, and difficulties associated with this area of inquiry prior to the occurrence of a natural or man-made disaster may facilitate more effective and productive research efforts (Padgett, 2002).

This article details the authors' disaster-related research experiences following Hurricanes Katrina and Rita. It discusses the opportunities and challenges experienced in conducting three unique disaster-related research studies. Recommendations for engaging in disaster-

related research based on those experiences are provided, especially those new to this area of inquiry.

The Storms and the Need to Respond

In the summer of 2005, Hurricanes Katrina and Rita (which made landfall within weeks of each other) caused catastrophic damage to the U.S. Gulf Coast region. The hurricanes led to major disruptions in communications, basic utilities, and the delivery of social and health care services. Changes to the infrastructure of service delivery systems were exacerbated by the personal and professional challenges of personnel, many of whom had to deal with issues of relocation and loss, among other stressors (Bacher, Devlin, Calongne, Duplechain, & Pertuit, 2005).

While universities, departments, and individual faculty members within the Gulf Coast region were also victimized by the hurricanes, they simultaneously felt compelled to provide help (Allen, 2007). Immediate needs took precedence and resulted in faculty members donating full-time work for several weeks to assist at shelters, area hospitals, pet rescue centers, or in efforts to support children separated from parents at the New Orleans airport (Allen, 2007). Faculty were also faced with accommodating displaced students, helping students deal with personal and educational challenges, and balancing increased teaching loads and overcrowded classrooms. Given their professional training and the severity of needs, responding to the crisis was the primary concern for many faculty for almost a month. This left little time for attention to research issues.

It was within the midst of this environmental context that the authors (four faculty members in schools and departments of social work located within the Gulf Coast area) were introduced to research on disaster situations. Prior to the hurricanes, none of the four had ever conducted work on or had a primary interest in disaster-related research. In fact, each had diverse research interests that included adolescent aggression and school violence; child welfare; religion/spirituality and social work practice; and social work education. However, as both academicians and practitioners, the authors felt compelled to conduct research related to the disasters. This impetus stemmed from the emergence of funding

opportunities and numerous requests from other universities to collaborate, as well as from a sense of responsibility to generate knowledge from these events – a responsibility felt even as we ourselves recovered from the disaster and began to respond to extreme community needs.

Research Projects

The three disaster-related research projects undertaken by the authors focused on religious institutions and the provision of services subsequent to the hurricanes; the impact of the hurricanes on undergraduate and graduate social work students; and clinical services for children and caregivers who were survivors of the hurricanes. The first project was a descriptive study of the services provided by religious institutions following Hurricane Katrina. The study employed a mailed questionnaire to a random sample of churches within a metropolitan area and a telephone survey follow-up. Specifically, the study identified the extent to which religious institutions provided both tangible (food, shelter, financial assistance) and intangible (spiritual) support for hurricane survivors. Interview questions related to the churches' primary sources of funding for these activities were also included (Cain & Barthelemy, 2008).

The second project was a cross-campus survey of five Gulf Coast-area schools and departments of social work in four states. The study examined social work students' reactions to and ability to cope with the aftermath of the hurricanes. Specifically, the study focused on social work students' faith, religion, and spirituality; previous traumatic experiences; altruism; volunteer activities (during and after the hurricanes); social work values; and commitment to the profession. This study was initiated by a social work researcher (outside the Gulf area) who had conducted prior studies with social work students related to the terrorist attacks of September 11, 2001.

Social work faculty within the five programs recruited student participants. All social work majors were eligible to participate, including students who were transfers from universities temporarily closed because of the hurricanes. Data was collected through self-administered anonymous surveys. Initial findings of the study indicated that despite experiencing multiple

hurricane-related stressors, the vast majority of social work students in the sample engaged in some form of volunteer activity. Stressors, altruism, and increased commitment to social work values were found to be the strongest predictors of volunteerism (Plummer et al., 2008).

The third project focused on the delivery and evaluation of psycho-educational Psychological First Aid (PFA) groups for children and their hurricane-survivor caregivers. Groups met weekly in area schools and onsite at one of the FEMA trailer communities. The study included measures of anxiety, depression, coping ability, and educational outcomes. A social work practitioner with a primary interest in the delivery of services to this population initiated this study. A total of 158 children and 18 caregivers participated from May 2006 through December 2007. Pre- and post-test data on child outcomes and lessons learned (Plummer et al., 2009), as well as focus group data on caregivers' outcomes, are currently being analyzed and will be published.

OPPORTUNITIES

Despite the many challenges and obstacles that emerged as a result of the natural (Hurricanes Katrina and Rita) and man-made disasters (the levee failures in New Orleans) (Knabb, Rhome, & Brown, 2006; Murphy, 2005), positive outcomes resulted. These included the development of new partnerships and collaborations, opportunities to expand research directions, and the ability to strengthen community connections.

1. Partnerships/Collaborations

The projects in which the authors participated involved interdepartmental, multi-university, and community-university collaborations. These projects resulted in faculty within the same school (with diverse research interests) serving as research partners, while also facilitating new professional relationships and overall more collaborative ventures. One project helped foster a mentoring relationship between junior and senior social work faculty from different universities, a relationship that sparked ongoing collaborations. In addition, the authors partnered with community organizations, established relationships with researchers who had experience in the research on disaster situations from other

universities, and formed ongoing collaborations among faculty and practitioners.

In most instances, the unique partnerships that developed as a result of these disaster-related research studies were not likely to have occurred otherwise. For example, a faculty member from a west-coast university solicited involvement from social work faculty in five Gulf-Coast schools. None of these faculty knew one another previously, but they now work jointly in analyzing and publishing data, co-present at national conferences, and have even found ways to work together on new research projects.

2. Opportunities to Expand Research Directions

Each of the authors was well established in their chosen topical areas and knew a literature that was unique to their specialization. However, the hurricanes led to opportunities to expand their research in new directions. For example, two assistant professors at the same land-grant public university in the affected area who studied child abuse trauma and parenting practices expanded their research areas to include disaster trauma and PFA interventions for children and their parents (Plummer et al., 2009).

Another assistant professor, interested in social work education pedagogy, joined with additional faculty members to study the impact of the hurricanes on social work students, incorporating their adherence to social work values as a variable to consider in their reactions and coping responses (Plummer et al., 2008). Still other faculty members, previously involved in research on adolescent aggression and violence and African-American parenting practices, decided to engage in the study of church response after the hurricanes (Cain & Barthelemy, 2008). While remaining grounded within their original areas of research, all of the authors expanded the scope of their research to encompass disaster-related issues.

3. Funding

The abundance of funding for hurricane-related studies also created an opportunity to engage in research on disaster situations. Faculty within the disaster area were encouraged by department deans and chairs, as well as a variety of university administrators, to take advantage of

funding streams. The unique position of those situated within the disaster area, where culture, place, and tradition were familiar, made the expansion of research into new areas relatively easy.

First, faculty members living within the disaster area were familiar with the culture, people, organizations, and systems with which interaction would be required in order to perform effective research. Second, receiving research support from federal or large foundation sources was viewed as a means by which to recover at least a small part of the catastrophic losses suffered by communities within the disaster area. Third, money would be spent on research, and so it seemed only reasonable that local institutions should receive a fair share of those funds. Finally, faculty were encouraged to utilize disaster-related funding to build their university's research infrastructure and enhance community-university partnerships.

Further, in this unique position, experienced researchers contacted local faculty members and provided them with opportunities to learn about research on disaster situations. These partners enhanced funding possibilities for local faculty since well-known disaster researchers already knew the questions and literature in the field and had proven records of grant writing and in conducting disaster-related research.

4. Strengthening Community Connections

Because of a pervasive sense that "we are all in this together," faculty and community groups worked more closely than ever before, sharing resources, asking for help, filling in where there were urgent needs, and providing mutual support. This led to a broad exploration of needs, including research needs. In one case, a community therapist approached one university to pilot an intervention she had adapted for use with children, complete with several funding possibilities. Two faculty members decided to collaborate with her and wrote the grant that was eventually funded.

This partnership led to student involvement under the therapist's direction, additional research funding for the faculty members, and many services for children and their caregivers displaced by the storms. In addition, this project strengthened bonds between community

practitioners and university faculty, extending opportunities for both. Because the practitioner was not affiliated with a private non-profit, her partnership with the university made it possible for her to receive funding both to perform her intervention and evaluate its effectiveness (Plummer et al., 2009).

Another example of strengthened community connections involved meeting the needs of individuals and families at Renaissance Village, the largest FEMA trailer park in the Baton Rouge area. Area schools, the mayor of the town, social work professors, community practitioners, and agencies as diverse as Big Buddy, Catholic Charities, the Children's Health Fund, and the Children's Health Project met one another and embarked on joint service and research projects.

CHALLENGES

Engaging in disaster-related research in the midst of the chaos created by the hurricanes was both difficult and overwhelming. Despite the different focus of each of the research projects, the authors experienced many of the same challenges related to conducting disaster-related research. The challenges included managing multiple requests for research participation, balancing personal and professional needs and obligations, funding obstacles, and staying focused on established research agendas. Additional challenges involved difficulties with collaborations and information sharing, ensuring sensitivity to the needs of research respondents, and effectively managing outside influences that sought to minimize results and censor research participants' remarks.

1. Managing Multiple Requests for Research Participation

One of the primary challenges involved in disaster-related research carried out in areas affected by the disaster is evaluating the feasibility of requests to engage in various research projects. A part of the challenge in responding to these requests was that at the time they were initially made, the authors were in the midst of addressing the immediate needs of their friends, family, students, and communities. In light of this, many of the requests appeared insensitive. So, in addition to dealing with feelings of being overwhelmed and taxed by family and

community needs, faculty also had to expend energy determining diplomatic ways to deny many requests for research-related assistance, information, and/or support. Even opportunities for collaboration and participation in laudable projects that fit firmly within the authors' areas of interest had to be declined.

2. Balancing Personal and Professional Needs and Obligations

The act of balancing research, teaching, and other professional obligations with personal obligations and needs was an additional challenge. The authors participated in the disaster-related research projects in the immediate aftermath of the hurricanes. Thus, they found it difficult to balance research projects with their hurricane-related volunteer activities, needs of immediate family and friends who were victims of the hurricanes, and the additional needs of their students. Balancing multiple roles and obligations under normal conditions can be a challenge. Simultaneously serving as mentors and advisors for students displaced by the storms, developing and implementing viable teaching methods, and engaging in research seemed at times to be impossible tasks.

3. Obstacles to Funding

Securing funding to engage in the research projects was extremely difficult despite its apparent availability. Part of the problem involved the need to collect the data in a time sensitive way. The immediacy with which data needed to be collected, combined with the stressors associated with being in the disaster-affected areas, restricted the authors' ability to identify and apply for funding. As a result, the authors themselves provided primary funding for research activities. For example, two faculty members personally paid for the expense of a citywide mail survey on the provision of social services by churches to hurricane displaced individuals immediately following Hurricane Katrina.

Because of the low response rate with the initial mail survey, the dean of the school provided some funding from school discretionary funds to offset the costs of the subsequent telephone survey that provided data suitable for publication of the research (Cain & Barthelemy, 2008). In contrast, universities across the country

that were not affected by the hurricanes were able to mobilize quickly and apply for federal disaster research funds. Some of those funded from outside the affected area requested local faculty to provide information, contacts, and consultation, but usually without compensation or an offer to include them in the funding package. In addition, the lack of experience in federal procedures made for a steeper learning curve and was responsible for some critical mistakes by those who had not previously applied for funding at the national level. For example, two of the co-authors worked with a third colleague to write a proposal that studied parent/child relationships in the aftermath of a natural disaster. Using a model similar to a study conducted after the 9-11 tragedy and collaborating with researchers in New York, the group detailed their plans in an inquiry, complete with instruments, consultants, and design details, to a federal project officer. The response was very discouraging and, as a result, the proposal was scrapped. Later these colleagues learned two things: This project officer often initially responds negatively, asking questions in a "devil's advocate manner," and that another similar project submitted, despite the project officer's negative remarks, was viewed positively by the review committee and ultimately funded.

4. Continuing to Focus on Ongoing Research Agenda

Despite being new to the field of research on disaster situations, each of the four faculty members desired to find a way to participate in research projects that would contribute to the body of knowledge on disasters, while in some way relating this research to their specific areas of interest. The challenge inherent in this goal was the need to focus on their own research interests while simultaneously facilitating and engaging in research agendas stimulated by the disaster and in collaboration with university partners. Although some collaborative efforts became problematic, most partnerships were strengthened through frank discussions about shared interests, misunderstandings, and the specific goals of each researcher.

Differences were not always easily resolved. For example, lack of clarity regarding authorship credit resulted in conflict. An additional example occurred when community partners did not

understand the need to adhere to university and Institutional Review Board (IRB) guidelines. Specifically, a service provider desired to change an intervention protocol which had already been approved by a university IRB, resulting in broken communications and the eventual suspension of her involvement in the project when the conflict could not be resolved. The authors came to realize that such partnerships must be defined in advance, and that the ongoing research agenda of each member involved must be understood and respected.

5. Lack of Shared Information/Collaboration

In some instances, the authors had to contend with the refusal of some groups, institutions, and organizations to share information or engage in collaborative efforts. This unwillingness of outside entities to partner with or commit to provide ongoing support to the community after research projects were completed led to feelings of anger, frustration, and discontent. The authors perceived that for many of the outside researchers, data collection was the primary concern, and that there was little intention to contribute to ongoing service-delivery needs.

At times when out-of-state researchers had money to pay participants, but local researchers had not acquired such funds, the lack of cooperation may even have compromised the ability of local researchers to collect data. For example, at one of the FEMA parks where area faculty had volunteered services for months, residents may have self-selected out of the interviews or surveys where they were not paid, electing instead to speak with those who could give them Wal-Mart gift cards. This may have affected the sample adversely for generalizing and made continued recruitment more difficult.

6. Maintaining Sensitivity to the Needs of Survivors (Victims as Respondents)

The authors wanted to ensure that they did not allow research to take precedence over the need to provide services. They wanted to engage in service-oriented research that in some way provided practical answers to questions of vital importance. Their primary goal was to assist and find ways to use knowledge gained to promote the effective delivery of services. Along these same lines, it was vital to ensure that the

research conducted upheld the highest standards of ethical considerations and was both fair and useful to participants. This goal was all the more important in light of the vulnerable positions in which many of the people who served as research participants found themselves.

As a result of being displaced, many survivors were in temporary housing, including trailer communities. Many experienced depression, anxiety, and other forms of psychological distress and had to deal with issues of uncertainty about their futures. While in the midst of all of these difficulties, survivors were bombarded with requests to be participants in research studies. The challenge for faculty was to find ways to be sensitive to the needs and challenges faced by this population while engaging in their research projects. This included being aware of participants' research burnout, ensuring that no study was exploitative, and promoting ethical standards while interacting with and collecting data about participants. These ethical standards included the ability to give informed consent, ensuring participants had the mental and/or physical capacity to make decisions, an analysis of the potential risks and benefits to participants, and the commitment to be aware of and eliminate any implied pressure from researchers to participate (Kilpatrick, 2004; Knack, Chen, Williams, & Jensen-Campbell, 2006).

Familiarity with research participants through frequent service delivery made the transition from person to service provider to researcher more fluid and personable. This helped reduce role divisions and facilitated "small talk," more often than not leading to interviews being conducted on trailer steps or in the laundry room than in university offices.

7. Outside Influences to Minimize Results and Remarks

Shortly after collecting data for one of the research projects mentioned earlier, those researchers were contacted by numerous newspapers and other organizations interested in the study. As a result of this interest, the researchers granted several interviews and shared some of the preliminary findings of the study. While most of the feedback received was very positive, not everyone shared those feelings. For example, at least one agency did not find the

results to be very flattering, and the researchers were contacted by a representative of the agency. The representative expressed displeasure with the results of the study and suggested that the researchers retract their reported findings. However, the agency withdrew its request once it was explained that these findings were derived directly from responses of those who participated in the study and were not the opinions of the researchers.

RECOMMENDATIONS

Based on the authors' experiences, the following recommendations for engaging in research on disaster situations are provided:

1. Be strategic about partnerships and collaborations.

Successful collaborations require that all roles and responsibilities be clearly defined and mutually beneficial. Goals and specific tasks must be clearly stated and agreed upon. Also, engaging in continuous dialogue is essential to ensure that the ongoing research agenda of each scholar, community practitioner, and others is understood, being satisfactorily met, and respected. These tasks can be particularly difficult to accomplish in the midst of a disaster.

2. Build disaster research agendas on areas of expertise.

Disaster research is a multi-faceted field. Be creative in identifying and developing useful, practical studies that relate to your own areas of interest. Social workers are encouraged to remain focused on their research trajectories with the added variable of disaster. This creates a body of work that is connected to their research agenda. At the same time, be creative in obtaining necessary funding from a diversity of sources.

3. Determine the feasibility of research projects.

One unique element of research on disaster situations is that they occur in the midst of chaos. Therefore, there are numerous constraints relative to time, funding, and access to additional resources. It is important that faculty be reasonable when making decisions about the feasibility of participating in specific projects. Making realistic assessments about other personal and

professional obligations, interest in the proposed projects, and the level of knowledge/experience in the area should all be considered.

4. Meet immediate human needs before considering research interests.

Do not allow research to take precedence over the need to provide services.

Related to community services, applied research is research in which the knowledge gained is used to promote the effective delivery of services. It is vital that disaster-related research, especially research involving those affected, guarantee commitments to the welfare of individuals and communities and that this take precedence over research interests. This is especially true for human service professions like social worker where the first responsibility is to assist in meeting human needs, alleviate suffering, and improve societal conditions. Moreover, disaster-related research specifically needs to be made available to and be useful for end-user communities (i.e., usable by those affected by the disaster).

5. Use current partnerships/relationships/collaborations where possible.

Utilizing pre-established partnerships to engage in disaster research has several advantages. Trust is already established. This eliminates the need to engage in building rapport because it already exists. As a result, lines of communication are already open and roles may be pre-defined. Also, knowledge of one another's strengths and weaknesses is already established, which may increase the likelihood of success. Finally, future collaborative efforts may be possible since experiences are being built around common interests and concerns.

6. Be flexible, adaptable, and able to improvise.

The nature of work within disaster areas is fraught with unpredictability and change. There may be a need to establish relationships with people who are traumatized; organizations and service providers may be in flux or inaccessible; and there are likely to be fluctuations in terms of needs and resources. Issues of instability and uncertainty often arise. Possibilities are likely to shift, dissipate, and disappear and new ones appear. To successfully engage in research in

this context requires the ability to adapt and improvise.

7. Respond to the needs of communities and practitioners.

There is an ongoing need to make research relevant and useful to end-users (those affected by the disaster) and to bridge the gap between research, policy, and practice (Russel, Rodriguez, & Wachtendorf, 2004). Therefore, research on disaster situations should respond to the needs of both practitioners and communities within the disaster area. This is especially important for social work with its professional charge to promote social and economic justice. In some instances, as was the case with Hurricanes Katrina and Rita, at-risk populations were more adversely affected by the natural and man-made disasters, and they served as the primary research subjects because of their extreme condition and experiences. As such, researchers should commit to engaging these populations in the initial research decision-making process, as well as making research findings and results readily available to them.

Conclusions

University faculty are faced with multiple and often competing roles and responsibilities, including training the next generation of professionals, conducting research, and competing for funding. While this balance is always difficult, the potential conflicts among the roles of serving both the community and the university are exacerbated when disaster strikes. In the authors' experiences, challenges to effective research after natural disasters ranged from the governmental and institutional to the psychological and intellectual. The breakdown of delivery systems and infrastructure, including the influx of displaced students, put increased strain on both institutional and personal resources and energy. At the same time, despite an enticing flood of funding opportunities, it was difficult to assess the feasibility of research projects and the value of collaborations, ultimately preventing adequate funding from reaching affected areas.

However, along with these challenges came unrivaled opportunities to improve the lives of those affected and to contribute to academic knowledge, to make research and practice congruent, and to forge productive ties to the

community and to faculty across the city, state, and country.

Disaster-related research by definition emerges from catastrophe and tragedy, confusion, and chaos. While understanding the obstacles of such a research environment in advance cannot prevent the challenges associated with disaster-related research, it can help prepare researchers for the difficulties and opportunities ahead. Although beyond the scope of this article, it is also important for researchers interested in this field of study to be aware of a variety of methodological approaches appropriate for conducting research in disaster situations (Norris, 2006; Stallings, 2002; Stallings, 2007) including alternative survey methodologies (Henderson et al., 2009), as well as ethical issues in disaster-related research (Barron Ausbrooks, Barrett, & Martinez-Cosio, 2009; Kilpatrick, 2004). The authors hope that this article will build awareness and preparedness among researchers faced with the unique set of conflicting responsibilities faced by faculty and community partners in the midst of a disaster.

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This scene from Biloxi, Mississippi, shows how complete was the devastation of the hardest-hit sites, putting a halt to normal living for months and complicating field research. (U.S. Army photo)