The Role of Parks and Recreation in Tornado Response: A Qualitative Exploration

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Abstract

The purpose of this study is to explore the stories of parks and recreation employees during times of great natural disaster. Joplin, MO and Moore, OK have experienced devastating tornadoes. This study describes before, during and after the events that changed the landscape of these communities through the lens of the parks and recreation directors and their employees. The Moore and Joplin parks and recreation departments were major players in planning, immediate response, and community rebuilding for natural disasters. This study considers communities after the event; what changes within the department have been made, and what suggestions they have for other communities were discussed. Qualitative methods were utilized. Semi-structured interviews were conducted. Responses were recorded and transcribed. Ancillary, first-hand materials such as photographs, videos and personal journals were also provided by the study participants in order to provide depth and richness to the data. The final step of the study consisted of placing the data into salient themes using open-coding methodology. Trustworthiness was ensured through the following qualitative devices: data triangulation, persistent engagement, prolonged engagement, confirmability, and the use of a researcher’s journal. Eight overall themes were discovered. Three themes revealed the human experience of surviving a tornado: “Family”, “Pride in Resiliency”, and “Lasting Pain”. Three themes described the experience of being a Park and Recreation Practitioner during a natural disaster: “Power of Volunteers”, “Practitioner as First Responder”, and “Post-Disaster Facility Improvement”. One theme bridged the Human Experience and being a Parks and Recreation Practitioner: “Return to Normalcy”.

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Introduction

Parks and recreation professionals are tasked with a wide variety of duties that often go beyond the day-to-day operations of recreation departments. While the need for quality parks facilities and enriching programs is great, parks and recreation professionals are often tasked with greater and more immediate needs when there is a disaster. Across the United States, communities are faced with a wide variety of natural disasters; foreseen and unforeseen, minimal and catastrophic, and heartbreaking and empowering.

Tornadoes can occur in any state, in any country, on any continent in the world. That being said, there are certain locations that are more predisposed to tornadic activity. According to meteorologists, the mid and southern sections of the United States of America produce the most tornadoes annually in the world. With a predisposition for tornado damage, it is widely known that communities in the mid and southern U.S. must prepare for these events in terms of safety and disaster relief should a tornado hit. What is not widely known, however, is the crucial role that parks and recreation agencies play in times of tornado relief. The purpose of this study is to examine the role of parks and recreation agencies in times of natural disaster and to make recommendations for future academic and practical applications.

Literature Review

Often overlooked as front-line disaster relief agencies, parks and recreation departments are in prime position to offer needed community aide following a natural disaster. In other words, “out of necessity, parks and recreation agencies at all levels may be expected to provide support to communities and or higher levels or government during disasters” (Whitworth, 2006, p. 43). The relief comes from both organizational capacity as well as the individual qualifications of the park and recreation professionals. According to Pannell (2013), the parks and recreation professional is uniquely prepared to address natural disasters due to a combination of hard skills that most assuredly include first-responder training, paired with deep community knowledge of infrastructure, facilities, and social networks. Drabczyk & Schaumleffel (2006) reinforce this idea of the power of parks and recreation duality by describing that practitioners are critically important during emergencies and natural disasters because of their roles as first responders and volunteer managers. This crossroads of hard and soft skills make the parks and recreation professional truly invaluable to a community following a natural disaster.

A study produced by Grimm, Hulse, & Schmidt (2012) gave an even stronger reason to support the power of parks and recreation professionals in disaster relief. Grimm and friends looked at stress among employees during emergencies. Their study involved the creation of a scale measuring stress during emergency response. Unsurprisingly, the emergency response scale found less stress among emergency workers than non-emergency workers during times of disaster. In other words, employees trained in emergency response (such as parks and recreation professionals) tend to have less stress during times of emergency than those without such training.

Beyond the skill-set of the park and recreation employee, is the opportunity for the parks and recreation professional to be a key component in the holistic response to a natural disaster. According to Estes & McChesney (2002) parks and recreation professionals are accustomed to raising funds and awareness for community issues, and a natural disaster is a worthy cause for which to raise needed funds. Estes & McChesney go on to describe the need for communities to once again regain a sense of identity and pride. An easy way to achieve this is through swift opening of parks and recreation facilities and programs. Once pools and parks are open again, a community can truly begin to heal. This return to normalcy was studied in post-hurricane Katrina New Orleans in which parks were examined for their capacity for social capital. “Beyond their potentially direct role in improving post-disaster mental health, parks also may promote social interaction and strengthen neighborhood social ties” (Rung, Broyles, Mowen, Gustat, & Sothern, 2011, p. 385). This can be described as a return to normalcy, at least in one aspect of the community. These two acts round out the response to a disaster beyond the immediate needs of the community.
The last piece of literature explored considered the importance of community during disasters. Nolte, Martin, & Boenigk (2012) explored the effectiveness of community relationships during the Haiti earthquake effort. Although not specific to tornadoes, the study is easily transferable to natural disasters in general. While providing earthquake relief in Haiti, collaborations between large and small organizations was found to be more effective when leadership and equity were highly valued during the overall relief effort. In other words, organizational qualities of strong leadership and the perception of equality among the many relief agencies and volunteers were found to be strong predictors of disaster relief effectiveness.

Herzog (2007) describes a theoretical framework for public agencies in disaster administration. The framework outlines a sequential series of ordered steps that should be taken by public agencies. The steps are: planning, mitigation, management, response, and recovery. Herzog describes this series of steps as a framework for public administrators. Planning involves the forecasting of potential disasters and possible methods of reduction or elimination, migration deals with the ebb and flow of residents during the actual disaster, mitigation describes the process of reducing harm and loss, management deals with the many moving parts that go into a coordinated relief effort, response is actually implementing them, and finally, the recovery stage involves the aftermath of the disaster.

This study will use two case studies to examine the role recreation plays in the actual response to tornado natural disasters that occurred in Missouri and Oklahoma.

Methodology

In order to explore the role that parks and recreation departments/professionals play during and after natural disaster, qualitative methodology was implemented. In this case, a tornado was the independent variable and parks and recreation department’s/individual’s response or experience to it was the dependent variable. Rather than look to a quantifiable survey instrument, qualitative exploration provides a more appropriate and visceral approach to the study. With that in mind, research questions were developed:

R1: What themes were found regarding parks and recreation professionals responding to tornadoes?
R2: What can a parks and recreation department do to better prepare for a natural disaster?
R3: What roles do parks and recreation play in community response to natural disaster?

Participants

Moore, Oklahoma and Joplin, Missouri were selected for the study. Both cities had experienced a level 5 tornado (Enhanced Fujita Scale of tornados (EF Scale: low 1-5 high) within three years of gathering data. Using purposive sampling techniques, participants were selected by the Parks and Recreation Directors, both had consented to participate in the study. They were asked to select five to ten employees who worked for them at the time of the tornados. IRB approval was obtained prior to data collection.

Data collection

Using a semi-structured interview technique, at least five members of the parks and recreation staff from the two departments were given the same ten questions with the opportunity for the interviewers to elaborate and explore as was needed. All responses were digitally recorded for the purpose of later transcription verbatim. Questions were selected based on the overall research questions and included such items as: personal story of the tornado, role as a parks and recreation employee, what was successful, what could have been done better, advice for other professionals, etc.)
In addition to the interviews, tours of tornado zones, specifically parks and recreation facilities, were given. Photos, videos, and journals were shared with the researchers in order to provide depth and richness to the data.

**Data analysis and Findings**

At the conclusion of the data gathering, grounded theory (Yin 2011) methodology was utilized in the data analysis. Grounded theory describes the process of ‘coding’ qualitative data. By hand, the researchers analyzed key terms, common phrases, and consistent words to create salient themes, or “open codes”. These codes would eventually be used as the larger themes of the study. Once saturation of open codes was achieved, through the analysis of all data, subthemes would need to be identified. These subthemes would take all responses under a larger theme and begin to further break down the meaning of the data. With the themes and subthemes in place, meaning could begin to be derived and explored.

Unlike quantitative research that uses reliability and validity in its instrument, qualitative research calls for trustworthiness. In fact, qualitative research does not truly use an instrument, rather a qualitative protocol of interviews and data collection is administered (Yin 2011). In the case of this study five elements of trustworthiness were utilized: data triangulation, persistent engagement, prolonged engagement, confirmability, and the researcher’s journal.

- **Data triangulation**: data triangulation refers to multiple sources of varied data while exploring a study. In the case of tornadoes and parks and recreation, interviews with staff were triangulated with photos, employee journals, videos. All ancillary data were provided by study participants.
- **Persistent engagement**: while quantitative research calls for large samples of participants, qualitative research does not always need the large sample sizes. That being said, using two separate departments and interviewing at least five employees, each provided a large sample size for this type of research.
- **Prolonged engagement**: prolonged engagement refers to the actual time spent with each participant. The semi-structured interviews lasted between 20 minutes – 3 hours in length; much longer than a typical survey-type instrument. This prolonged interview technique allows for deep and rich data responses.
- **Confirmability**: Although each interview was recorded and transcribed, in order to insure consistency, two researchers reviewed each interview transcription for accuracy.
- **Researchers’ Journal**: Due to the sensitive nature of qualitative research, some data could not be captured on microphone. Rather, the researchers took notes during the duration of the study. Factors such as participants openly crying were observed and noted, as well as visual data that could only be captured during facility tours.

The data revealed interesting findings between the two different parks and recreation departments. In all, seven themes were identified. But interestingly, the researchers initially expected to find much more in the way of practical and professional insight, what emerged was a profound and visceral description of the human experience of surviving a tornado. These are the findings that emerged:

**Theme: Parks and recreation professional experience of tornado response**

Participants described the actual process of addressing the community response to a tornado. Such items as: logistics, organizational roles, and strategic planning were discussed.

**Sub-theme: The power of volunteers**

Each community relied heavily on volunteers in the rebuilding process, which is vital to any parks and recreation professional to consider. But more interestingly, volunteerism and community groups borne out of tornado relief continue to meet and serve the community one and two years after the
tornadoes. The group SERVE MOORE, a faith-based volunteer outreach was established out of the tornado response.

“We helped ‘SERVE MOORE’, took the lead on volunteer efforts...we had thousands of people come out”. “W” Moore, OK
“We had volunteers calling us: nurses, doctors from all over Tulsa, Springfield, down in Arkansas calling us because they wanted to know where to go”. “P” Joplin, MO

**Sub-theme: Improved facilities post tornado**

Participants described that although park and facilities were destroyed during tornadoes, the rebuilt facilities were almost always of better quality than the previous iterations. Furthermore, both Moore and Joplin were the recipients of large donations in terms of grant money as well as reality television outreach programs. Joplin completely renovated a destroyed park complete with a poignant memorial to the lives lost in the tornado. The one aspect that could not be replaced however was mature trees in the parks. Figure 1 (provided by participant) shows before and after aerial pictures of an especially hard-hit park in Joplin. The renovations include: new playground equipment, improves aquatic facilities, and a memorial to victims of the tornado.

“Park Hill has benefited more than Cunningham Park has in the tornado because it had nothing and now it’s huge, so yeah I think they (the parks) definitely did benefit from it (the tornado)”. “P” Joplin, MO
“The pool there is better than ever” “P” Joplin, MO

**Sub-theme: Parks and recreation professional as a first responder**
Immediately following the storms, the parks and recreation departments in both locations were mobilized to respond to the disasters. Moore and Joplin both converted parks and recreation facilities into emergency response centers. The centers were predominantly staffed by the American Red Cross. Facilities were complete with triage, supplies, and even makeshift morgues. Figure 2 (provided by participant) shows not only a destroyed park, but also a badly damaged hospital. This damage resulted in a critical need for the Joplin Civic Center to become the hub for emergency response. Many employees served as first responders immediately following the tornado under the direct supervision and direction of the American Red Cross. Employees would attend to injured residents as well as go house-to-house looking for victims.

“We did search and rescue, we went from house to house, apartment to apartment, trying to find survivors for a while...It was very strange because I’ve never been a first responder or has any training for that either”. (“S” Joplin, MO)

“I drove a dump truck that day for the first time in my life which was a little scary.” (“W” Moore, OK)

Sub-theme: A return to normalcy

Departmentally, parks and recreation agencies made a strong effort to offer programming as soon as possible in order to provide residents with a sense of normalcy following the tornado. The departments strived to offer programs to aid in the healing of the communities. Through programs, community members were able to remove themselves from the traumatic experiences of the storms. Such programs as Independence Day fireworks, youth sports, and opening pools were critical to this effort.
“Everybody was so focused and all they were talking about was the tornado, it just seemed so gloomy and full of despair; just being around park and recreation professionals we provide quality of life and leisure and fun things and want people to smile”. (“P” Joplin, MO)

“The sooner you can get your staff organized, get everybody on the same page, the sooner you can help the community; which is what you are there for”. (“W” Moore, OK)

**Theme: Human experience of tornado survival**

When asked to describe their individual experience of the tornado, all participants first described their personal story before telling their professional story. They explained where they were when the sirens went off, how they took shelter, and how they were called to help in the immediate relief effort. In Moore, the staff was already at the community center but in Joplin it hit on a Sunday afternoon. The staff went into immediate action some before they were called and others as soon as they were called. In Joplin, staff knew that they were the ones that were needed to open the center as it was the first place people would come.

**Sub-theme: Pride in resiliency**

A subtheme emerged from both locations in the form of a pride in resiliency. Both communities took strong pride in the idea that they made it through a tornado (or many tornadoes) and continue to survive and rebuild.

“Joplin is phenomenal. People did not just sit around and complain and ‘woe is me’, they pulled together and just started cleaning up and getting things back in order”. (“P” Joplin, MO)

In Moore, volunteers continued to show up without calling and families would just start cleaning up the debris.

**Sub-theme: Lasting pain**

This subtheme was much more present in Joplin, MO as opposed to Moore, OK. While both communities faced tremendous loss, Joplin has a profound loss of life totaling over 144. Most Joplin participants cried during their stories, while most in Moore did not. Joplin respondents also faced lasting pain in terms of emotional trauma for themselves and their families. One respondent faced difficulty with a teenage child after the tornado: lack of communication, broken trust, truancy, and suffering grades. While another lost sleep and had recurring nightmares about the storm and the aftermath.

“Don’t want to go through it ever again, that was brutal...I did not think I was going to cry again, but obviously it’s still there”. (“P” Joplin, MO)

“I am still haunted by the memory of a mother calling out for her son”. (“C” Joplin, MO)

**Sub-theme: Importance of family**

Unsurprisingly, participants would describe the immediate worry about family members following the storms. Each community lost power, communication, as well as viable transportation routes. Some participants did not hear from family members until several hours following the tornado.
“I was Just worried about my wife and child” (‘W’ Moore, OK)  
“I started checking to make sure my family was okay, but the phone lines weren’t working, so I ran across town to check on my grandparents. (“S” Joplin, MO)

**Sub-theme: A return to normalcy**

Like the subtheme under the professional realm, individuals identified the need to return to a place of mental normalcy. While pain still lasts, the return to normalcy quite often took participants an entire year or more to achieve.

All themes are represented visually in figure 3. The figure shows the experiences from both the practitioner and the human viewpoint, with one theme bridging the two.

![Diagram](image)

**Figure 3**

### Discussion

Although the findings of a professional and a human experience of a tornado were not predicted, they are not surprising. The initial focus of the study was to evaluate disaster response and preparedness from the administrative viewpoint; primarily focusing on management, polices, and procedure. However, as the stories unfolded, a much more personal picture was painted. In other words, while the researcher’s initial focus was to explore tornadoes in a practical parks and recreation sense, it is truly impossible to remove the human element from a qualitative study in which participants have faced disaster first-hand. In addition to capturing the human experience, the responses provided highlighted strong insight into the role of a parks and recreation professional. This critical insight can and should be shared to other professionals in the field in order to better prepare and equip departments for future disasters.
Limitations and future research

The study featured insight from two departments which had faced a catastrophic tornado. While much of the information for disaster preparation can be generalized, one should consider that each type of natural disaster is unique and has specific and appropriate preparations. Furthermore, the experiences of the relatively small group of individuals are not necessarily the same as others who may face similar situations. Future research could explore parks and recreation agencies that have faced other types of disasters and compare/contrast disaster relief. Future research should also consider the importance of the emotional toll taken to individuals serving as first-responders to natural disasters. While many parks and recreation professionals are trained in first-aid, little-to-no training or counseling is given to those same people regarding how a disaster may affect their mental health.

References


