



Australian Disaster Resilience
Conference 2019 papers



**The lived experience of
four disasters – insights into
community urban resilience
experiences**

Kristin Gabriel, Amanda Tukaj and Alice Simpson-Young
Resilient Sydney



connection · empowerment · respect · wisdom

aidr.org.au/adrc

 AIDRnews  AIDR_news  aidr #ADRC19

The Lived Experience of Four Disasters – Insights into Community Urban Resilience Experiences

Presented at ADRC Conference, June 2019

Presenter: Kristin Gabriel, Resilient Sydney

Research authors: Professor David Schlosberg, Dr Luke Craven, Hannah Della Bosca, Beck Dawson and Kristin Gabriel

ADRC paper prepared by: Amanda Tukaj and Alice Simpson-Young

Introduction

It is well established that the physical impacts of shock events will increasingly interact with demographic and population shifts within modern cities to exacerbate existing community vulnerabilities. Increasing Sydney's capacity to effectively prepare for and respond to such events in the future requires inclusive and nuanced engagement with the ways in which these types of shock events are currently experienced. A consideration of the lived experience of residents and service providers in the development of policy interventions will more effectively minimise disruption and reduce trauma and suffering within communities.

Three major themes emerge from urban resilience studies. Firstly, the impact of a shock event depends on where, when, and to whom it occurs. Therefore the context in which the event takes place is directly connected to the lived experiences of those impacted.

Secondly, the prevalence of qualitative research methodologies that rely on expert perspectives and technical data sets means the variability of citizen experience is rarely captured in resilience or emergency management policy.

Thirdly, the social impacts and disruptions arising from climate change are under-acknowledged in urban policy and planning initiatives.

This research explored the lived experiences of four disaster events to address the fact that disaster resilience and emergency management studies often fail to reflect the community perspective. The research presents a case for use of the System Effects methodology to provide innovative and actionable insights into the community impact of disaster events, and makes recommendations for policy, program, and resourcing interventions.

This paper begins by outlining the four shock disaster events chosen as the focus of the research, followed by the methodological approach and frameworks used. Event-specific findings are highlighted, followed by the themes and findings found consistently across all events. The paper concludes by outlining three recommendations that, if adopted by government agencies and other organisations, will minimise disruption and reduce shock event related trauma and suffering within communities.

Four Disaster Events

This study used the System Effects methodology as well as focus groups, to identify the impacts, barriers and enablers experienced by residents and emergency and non-emergency service providers in relation to the 2016/17 heatwave in Penrith, 2013 Blue Mountains bushfires, the 2016 East Coast Low in the Northern Beaches, , and the 2014 Martin Place Siege.

The 2016/2017 Penrith heatwave was characterised by an unprecedented streak of 26 days of 30°C plus weather, with 11 days exceeding 35°C. Penrith Lakes recorded their highest summer temperature – 46.9°C on February 11th. These temperatures led to energy surges and resulted in blackouts. The heat worsened pollution levels in Sydney, causing NSW Health to issue a warning that residents with respiratory problems – particularly children with asthma – stay indoors during the hot daylight hours.

During the summer of 2013, three separate fires originated in Lithgow, Springwood and Mount Victoria in the Blue Mountains. These bushfires destroyed 248 properties, damaged another 133, and burnt over 65,000 hectares of mostly national parkland. Smoke impacted much of the state, with the Blue Mountains fires particularly affecting the Sydney Metropolitan area. The State government declared the bushfire areas a natural disaster zone, with the Blue Mountains Council stating that the bushfires were the worst disaster in Blue Mountains history.

The 2016 East Coast Low on the Northern Beaches brought gale force winds, heavy rain, and intense storm surges, leading to flooding and widespread coastal erosion. Advanced warning systems meant the East Coast Low storm was well documented and residents received advanced notice, however the flooding of Narrabeen Lagoon triggered resident evacuations. In addition, severe beach erosion of up to 50 meters caused much commercial and residential property damage along the coast.

Finally, the 2014 Martin Place Siege was selected as the fourth shock event. A gunman took 18 people hostage during a 16-hour stand-off with police at the Lindt Cafe in Martin Place, Sydney. Large scale building evacuations took place in city blocks within the area following a bomb threat made by the gunman. The siege ended after police stormed the café. Two hostages, Tori Johnson and Katrina Dawson, as well as the gunman himself, were killed in the process. Three hostages and a police officer were injured.

Methodology

Sydney residents and service providers were invited to attend a three-hour focus group held within the local government area of each of the target events. Residents were typically from the LGA in which the shock event occurred, with the exception of the Martin Place Siege.

The research employed the System Effects methodology within the focus groups. It is a mixed method framework that engages participants in a mental mapping exercise to capture their individual experience. It then aggregates those experiences to identify dominant patterns of impact and response across diverse participants, group and event types.

Each focus group produced two sets of research data through participant maps and small group discussions. Focus groups began with a brief project introduction and ‘getting to know you’ exercise, followed by the main participatory mapping exercise. The mapping exercise lasted approximately an hour and resulted in three distinct maps: an impact map detailing all the ways in which the participant was impacted; a barrier map detailing all the factors that made the participant’s experience of the event harder; and an enabler map detailing all the factors that made the participant’s experience of the event easier. This data was then digitised, coded, and aggregated.

Event Specific Findings

In the case of the Penrith heatwave, the resident experience of heat was characterised first and foremost by personal emotion. In the individual maps created by participants, terms such as anxiety, stress, and frustration were used, with participants describing changes in mood, decreased feelings

of personal capability, and an increased rate of conflict in professional and personal interactions, as well as between tenants and their landlords. A decrease in personal health, disruptions in daily routines, and pre-existing financial capacity influenced the residents' experience of heat. The physical characteristics of the heatwave can be seen to impact social relationships as well; while in some cases it increased resident time spent in commercial space, in most cases the event resulted in decreased social engagement.

Penrith service providers revealed the heatwave impacted their professional life in practical and emotional ways. Participants experienced their personal work routines differently in the heatwave event, with the emotional responses and changed behaviours of clients causing increasing and more emotionally-laden workloads.

These results were similar to resident and service provider responses to the Blue Mountains bushfires. There was a consistent blurring of lines between personal and professional as work impacted on personal life, but professional networks enabled personal resilience. The bushfire experience of service providers in the Blue Mountains was shaped by the long-term establishment of informal social networks that underscored professional communications and resource management.

The resident experience of the 2013 bushfire was characterised by intense personal emotion, material loss and practical processes surrounding that loss, including evacuation mobility, pets, and communication from and between service providers and the public. This strengthened pre-existing social networks comprised of family, friends, neighbours, and community ties. As such, the physical shock event can be seen to highlight and support social cohesion, though residents also expressed a fear of the loss of community, and place, with the next fire event.

For the Northern Beaches service provider focus group, the experience of the 2014 East Coast Low was shaped by an organisational context that merged professional and personal responses. At an individual level, we see not only an underlying awareness of the political and organisational significance of the council response, but also the implications of performance on personal job security, professional reputation and career advancement. Formal strategies of response and long-term professional networks are central to accounts of the experience, with reference not only to the quality of interagency relationships but the clarity of intra-agency roles and relationships as well.

A lack of clear communication between emergency service providers and non-emergency service providers characterised participant experiences of the Martin Place siege. Participants highlighted a reliance on mainstream media for information and updates on the siege, with many reporting media coverage formed the basis of large scale strategies - for example office evacuations. The emotional experience of the siege was emphasised, not only during the event but with some service providers relating long-term changes to their comfort in, and relationship to Martin Place.

The experience of Muslim residents during and in the aftermath of the Martin Place siege was also characterised by stress, trauma, and alienation – complicated by an interplay between the social behaviours and perceptions of the local, known community and the wider city and national Australian community. Islamic community representations in mainstream and social media in relation to issues of security and threat impacted Muslim residents' feelings around belonging, place, and community, as well as practical concerns of physical safety in response to social interactions. The complexity of the social impacts arising from this event, particularly in relation to family, demonstrates the dualistic nature of some variables as both barriers and enablers.

Overall Trends and Themes

The research found resident groups experienced a range social responses to shock events. At both the individual and community level social cohesion developed as a result of the physical impact of bushfire in the Blue Mountains, whilst social withdrawal arose as a result of the physical impact of heat in Penrith, and as a result of the social impact of Martin Place.

Furthermore, it is clear the emotional response to events has emerged as the central defining characteristic of both resident and service provider experiences of shock event impact. While the nature of the emotional impact varies with each event and group, stress, anxiety, fear, grief, and trauma need to be more fully brought in to planning and policy as these factors tend to underpin, interact with, and at times exacerbate, a range of other shock impacts. It is also important to note social support networks were consistently cited in both resident and service provider groups as the central enabling factor for survival and recovery.

However within service provider experiences we see managing personal and professional aspects of shock events at an individual scale caused internal discord and added to emotional stress. Service provider experiences are strongly characterised by the nature of their organisational culture. In the Northern Beaches, participant experiences featured frequent reference to formal structures and high-level resources. Blue Mountain service provider experiences were characterised by personal and communal structures, as well as grassroots resource coordination. Martin Place service providers related a fragmented and somewhat individualistic organisational response, reflecting the absence of formal emergency response training and inclusion for this group.

Discussion

The research illustrates that resilient communities are socially cohesive, and emotional impacts are under-represented in existing resilience approaches. The research demonstrates a need to:

- Incorporate more sophisticated emotional support systems into shock event preparation, response and recovery strategies;
- Prioritise initiatives that can reduce the trauma and suffering experienced at the household, neighbourhood and community scale in response to shock events; and
- Embed emotional management awareness at the household, neighbour, and community level into resilience strategies.

The findings highlight the gap between diverse community experiences, captured here through resident and service provider input, and existing policy approaches. This was particularly apparent around issues of heat in Penrith, and the contrasting perspectives of the Local Emergency Management Committee and other emergency service providers, versus the perspectives of Penrith residents and non-emergency service providers working in heat-impacted community services. The initial workshop conducted with the LEMC ultimately failed due to their refusal to participate in the System Effects participatory mapping process and discussion, which resulted in a second attempt at data collection with a new group. The failed group is a particularly stark example of the gap in experience that often exists between service providers and community members, and of the value of conducting research that engages directly with members of impacted communities.

Service provider feedback suggests a need for personal learning opportunities to reflect on what worked and what didn't at the organisational and regional level in the aftermath of an event. Such initiatives could not only improve organisational responses, but also address the more personal, emotional, and political challenges of such events at the individual level. This could take the form of

individual, intra-agency and/or interagency debrief sessions that focus on and encourage organisational feedback, including reflections on informal coping mechanisms. This acknowledges the relationship between procedural utility in maximising organisational efficiency and the therapeutic benefit of reflective processes for individuals. The recommendation is for a holistic review of the emergency responder experience, not just a reflection on the efficacy of operational systems.

Recommendations

Three recommendations specific to emergency management agencies emerged through this research that, if adopted, will minimise disruption and reduce shock event related trauma and suffering within communities.

1. Programmatic Responses and Impact Mitigation

Embed post disaster reflection and trauma management for communities and service providers to identify and educate on the impacts of shock events and ways of mitigating them in the future. Emotional and social well-being are central to resilience.

2. Engagement Processes

Create a toolkit for councils and other organisations to adapt and apply the System Effects methodology in disaster and recovery contexts, as it provides a rich evidence base about systemic barriers to resilience and potential leverage points within that system. Furthermore, it engages users' lived experience through a framework which helps to design more effective interventions.

3. Regulation and Legislative Responses

Implement lifeline provisions similar to those that exist under the Lifeline NZ Civil Defence Emergency Management Act 2002. Lifeline utilities (providers of core services such as power, water, sewer, food logistics, health and telecommunications) are vital to the delivery of services to the community for life safety and for city and economy continuity. Continuity of services reduces community trauma and suffering and enables communities to better self-manage shock events. Mechanisms such as the Lifelines Groups in NZ are vital for exchanging information about risk management processes, readiness, and response arrangements to disaster events to improve life safety and reduce trauma.

Conclusion

This research is a significant contribution to the traditional emergency management process and marks a reorientation in resilience thinking from a hazard-centric management approach to a community-centric and experiential model.