

Recovery workers who have also been personally affected by disasters: Exploring the perspective of people who have dual experiences of disaster recovery

Kate Brady¹,
Lisa Gibbs¹,
Louise Harms²

¹ Melbourne School of Population and Global Health, University of Melbourne, Australia.

² Department of Social Work, University of Melbourne, Australia.

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Author correspondence:

Kate Brady,
Melbourne School of Population and Global Health,
University of Melbourne,
Australia.

Email: Kate.brady@unimelb.edu.au

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Abstract

People who are employed in disaster recovery roles while simultaneously personally recovering from the impacts of the same disaster hold a unique perspective into the dimensions of recovery. However, very little has been captured about the experience of this cohort. A qualitative study was undertaken with participants who had previously experienced disaster and wrote a letter to themselves about what was helpful or unhelpful to recovery. This paper presents emergent findings from a small sub-sample of participants who were both recovery workers and personally recovering from the impacts of a disaster. These recovery workers who had been personally impacted by the disaster event: 1) experienced a misalignment between their personal and professional experiences of recovery; 2) had their personal experiences of recovery reframed by exposure to others impacted as part of their professional experience; and 3) initially prioritised their professional roles, but reached a point where their personal recovery needs took priority. Self-determination theory is presented as a potentially useful way to understand the experiences of people who have dual experiences of personal and professional involvement in disaster recovery.

Keywords: Disaster recovery, recovery workers, emergency management, disaster, recovery

Disasters are complex social phenomena whereby a hazard intersects with a human population, wreaking a wide range of disruptions and impacts. There is broad agreement that disasters are increasing in severity, frequency, intensity, and scale globally, and this trajectory is predicted to get worse (Glasser, 2019; Intergovernmental Panel on Climate Change, 2022). Individuals and communities often require a myriad of supports and services to address the wide range of impacts in the days, months, and years after a disaster. Disaster recovery is often characterised as a stage in the traditional emergency management cycle (prevention, preparedness, response, and recovery). In this paper, the term “disaster recovery” refers to a lengthy, complex, multifaceted social process following a disaster event, with no assured outcomes. Recovery can be conceptualised as a dynamic spectrum of possibilities from full restoration to pre-disaster status through to complete change (Brady, 2020). Locally-led recovery efforts are recognised as being generally more effective and sustainable than recovery efforts led by “outsiders” (Cretney, 2016). Contemporary disaster recovery arrangements in Australia and New Zealand and disaster recovery guidelines highlight the importance of efforts being locally led, despite challenges executing these arrangements (Australian Institute of Disaster Resilience, 2018; Inspector General Emergency Management, 2021; Ministry of Civil Defence & Emergency Management, 2019).

Many of the people who work (paid or voluntarily) in the wide variety of recovery roles needed following a disaster will be members of the same disaster-affected communities who have been personally impacted by the disaster themselves (Sakuma et al., 2015). These roles can be in a wide range of sectors such as construction, logistics, health, law, education, media, community services, governance, and private enterprise. These people may find themselves in dual recovery roles – as recovery workers and as people personally recovering from the disaster. Managing the stressors associated with each role simultaneously has been acknowledged as a challenge of community-led recovery after disasters (Hay et al., 2021; Inspector General Emergency Management, 2021).

Disaster recovery research is still a growing field (Jordan & Javernick-Will, 2013), given the increase in frequency and severity of disasters globally and acknowledgement of the long-term impacts on affected populations (Alesch et al., 2009). A paucity of research examines the impacts of working in disaster recovery, and very little work explores the impacts on people who work in disaster recovery while also being personally affected. This includes limited research using existing theoretical frameworks to explain the experiences of recovery workers.

Background

Disaster recovery research, policy, and practice are multi-disciplinary. The types of foundational assumptions made about recovery depend on the discipline and approach of the authors (Eyre, 2006; Jordan & Javernick-Will, 2013). In academic literature, the term disaster recovery is rarely defined, but authors tend to refer (either implicitly or explicitly) to recovery as either restoration to a pre-disaster status or change to a new state, with a descriptive focus that is often discipline centric (Jordan & Javernick-Will, 2013).

Recovery has been described as the most under-researched area of disasters (Phillips, 2009; Rubin, 2009). It is often characterised as being a gruelling, exhausting, and complex time, best measured in years rather than weeks or months (Cox & Perry, 2011; Sword-Daniels et al., 2016; Whittle et al., 2012). The positive impacts of social connections (Aldrich, 2011, 2012; Bryant et al., 2017, 2014), community-led decision making (Alesch et al., 2009; Cretney, 2016), and empowerment (Eyre & Dix, 2014) have been identified as helpful factors contributing to disaster recovery. Conversely, disruptions to important social connections (Green et al., 1990; Richardson et al., 2016) and overly burdensome, bureaucratic, and top-down recovery processes (Alesch et al., 2009; Easthope, 2018) have been identified as hindrances to strong recovery.

Locally-led disaster recovery. Locally-led disaster recovery initiatives and community involvement in recovery planning are seen as key characteristics of successful recovery efforts (Alesch et al., 2009; Cretney, 2016). One of the six principles of Australian national emergency management guidelines regarding recovery planning recommends using “community-led approaches”, stating “successful recovery is community-centred, responsive and flexible, engaging with community and supporting them to move forward” (Australian Institute of Disaster Resilience, 2018, p. 11).

Positive approaches that have been identified include drawing on local knowledge and expertise, reflecting cultural attributes of the impacted community, harnessing pre-disaster networks and relationships (Cretney, 2016; Kenney & Phibbs, 2015), ensuring buy in and trust from community members (Wilson, 2009), emphasising local empowerment and processes that facilitate deliberative democracy (Garnett & Moore, 2010; Wilson, 2009), and improving sustainability of efforts (Cretney, 2016).

Significant barriers to implementation of community-led disaster recovery practices are often observed, despite recognition of the importance of community-led recovery and the emphasis in emergency management guidelines and doctrine (Inspector General Emergency Management, 2021; Leadbeater, 2013). This has been variably attributed to the top-down approaches of political systems and emergency management practice (Easthope, 2018; Smith & Wenger, 2007), the difficulty for non-emergency management personnel or people not in an official position of power to be included in decision-making processes (Kenney & Phibbs, 2015; Weber & Messias, 2012; Wilson, 2009), and practical challenges in post-disaster environments where a perceived requirement exists for immediacy at a time when there are many needs, stressors, and impacts (Easthope, 2018; Leadbeater, 2013). Where community recovery initiatives are locally led, there may be an increased likelihood that people who have been impacted by the disaster events will also be in formal and informal recovery roles.

Impacts to disaster recovery workers. The term “disaster recovery workers” refers to people in a wide range of occupations in post-disaster settings, in paid and voluntary roles. Most research examining the impacts to disaster workers looks at first responders only. Much of the research looking at those involved beyond the initial response has been heavily focussed on psychopathology and physical symptoms related to hazard exposure.

Following the terrorism events in the United States of America on September 11, 2001, a number of studies examined impacts to people working in recovery. These studies found that recovery workers experienced a significant burden of mental and physical health complaints disproportionate to the broader community. The documented physical health complications included an increase in prevalence of asthma, gastro-oesophageal reflux, and respiratory disorders over time and compared to the general population (Herbert et al., 2006; Wisnivesky et al., 2011), with a high

co-morbidity between physical and mental health symptoms (Wisnivesky et al., 2011). The prevalence of psychopathology such as post-traumatic stress disorder (PTSD) and other mental health and emotional problems was found to be significantly higher in workers involved in disaster recovery efforts than in the general population (Stellman et al., 2008; Wisnivesky et al., 2011), with one study aligning the prevalence rates of psychopathology in World Trade Centre recovery workers to returning North American veterans from Afghanistan (Stellman et al., 2008). Risk factors identified for psychopathology in these workers include role commencement dates close to the disaster event, being an unaffiliated volunteer (Perrin et al., 2007), loss of family members and friends in the disaster, disruptions to work, family, and social life (Stellman et al., 2008), severity of disaster exposure (Wisnivesky et al., 2011), past trauma (Cukor et al., 2011; Ehring et al., 2011), work-related stressors, low social supports, and being a woman (Ehring et al., 2011). People who were in roles significantly different to their pre-disaster occupations, including performing their normal tasks in different circumstances or environments (for example, engineers, truck drivers, sanitation workers, and carpenters), were also found to be at higher-than-normal risk of developing psychopathology (Cukor et al., 2011; Johnson et al., 2005; Perrin et al., 2007). However, secondary traumatic stress was also found to be prevalent in unusually high levels in social workers supporting people impacted by disasters (Adams et al., 2008; Naturale, 2007), indicating that the nature of disaster recovery work may be distressing even for those trained to work with people impacted by trauma.

A study examining the probable rates of PTSD in local recovery health workers in Japan following the Great Eastern Japanese Earthquake in 2011 indicated lower rates of disorder when compared to rates following the events of September 11. The authors suggested that this may be due to differences in characteristics of the disaster events and cultural differences in approaches to coping with adversity and responding to disasters (Sakuma et al., 2020). A study led by the same research team noted that additional stressors existed for local recovery workers, who may struggle to balance the pressures of living and working in a disaster-affected environment (Sakuma et al., 2015).

Workplace-related factors have also been identified as both adding to and mitigating stressors for recovery workers. Case studies published about experiences of locally-based social workers supporting recovery from the Canterbury earthquakes in New Zealand identified

the challenges of workers having to manage their own exposure to the disaster event and subsequent stressors while supporting others. Additional challenges included reduced access to supervision and inadequate resourcing (Hay et al., 2021). Work-related factors identified as likely to cause additional stressors for municipal, construction, and health recovery workers in Japan included a lack of rest, additional duties, increased workloads, staff shortages, and poor communications (Sakuma et al., 2015). A study looking at burnout and PTSD in response and recovery workers following the 2010 Haiti earthquakes identified that training and autonomy at work were important in reducing and moderating PTSD symptoms. This research emphasised the importance of positive work environments with role autonomy, training for both technical and “soft” skills, offers of support and supervision, clear delineations between home and work life, and the use of humour in post-disaster settings to mitigate burnout in workers (Kroll et al., 2021).

A study examining the way recovery workers in Australia connect and cope with the nature of their work identified recovery workers as having psychological, physiological, and spiritual (secular and religious) responses to the impact of their work (Eriksen, 2019). Eriksen (2019) described recovery workers as often having a deep, visceral connection to their work which may put them at higher risk of fatigue and burn-out.

In her 2013 New Zealand Winston Churchill Memorial Trust Fellowship report exploring the experiences of community recovery workers who had also been impacted by a disaster, Wills (2013) outlined the conundrum facing local recovery workers and those who employ and support them. She identified that community members who had been impacted by the disaster needed to step up as part of community-led recovery efforts but highlighted that this came at a gruelling and exhausting time for those involved, often resulting in an impossible load of burdens to juggle for those both working in recovery and experiencing the impacts of the disaster. Wills (who had personally been in this position following the 2010-2011 Canterbury earthquakes) noted that while there is much existing guidance for managing stress in emergency management workers, it is almost exclusively targeted at first responders and foreign aid workers. Recommendations from this fellowship for organisations engaging recovery workers who are personally impacted by disasters included making deliberate efforts to facilitate connection between peers, providing training and professional development, lightening unnecessary workloads (e.g., by ensuring back-end organisational

systems were suitable), and systematising support for recovery workers. Wills (2013) also noted that for all of the emphasis on community-led recovery in emergency management doctrine, recovery workers are still assumed to come from “outside” the community and there is a gap in guidance for those who find themselves as both helpers and in need of help.

Motivation and well-being for recovery workers.

Self-determination theory (SDT) is one psychological theory that may offer insight into how recovery workers experience and integrate their work. Over decades, psychologists Richard Ryan and Edward Deci, with others, have developed SDT to explain motivation and well-being (Deci & Ryan, 2002). The central tenet of SDT is that all humans have a set of psychological needs which they naturally, instinctively, and continuously strive to fulfil. Ryan and Deci categorise these basic needs as competence, relatedness, and autonomy, and they describe them as needs which individuals continue to strive to attain and maintain. SDT posits that individuals’ well-being is enhanced when these needs are satisfied (Deci & Ryan, 2002, 2012; Ryan & Deci, 2000; Weinstein & Ryan, 2010). In SDT, humans are considered to be driven to develop their sense of self through both their internal psychological development and connection to others (Deci & Ryan, 2002). While Deci and Ryan consider this drive for development and well-being innate, they do not consider the ability to engage in activities and actions that enhance this as automatic or taken for granted. Rather, they suggest that there are a number of environmental factors (which they refer to as social contextual factors) which either encourage these innate tendencies to thrive or, conversely, thwart them (Deci & Ryan, 2002).

The existing literature points to both the meaningful nature of the roles for many recovery workers and also the increased risk of poor well-being outcomes that recovery workers may face. There remains a gap in the existing literature exploring the experiences of disaster recovery workers beyond the prevalence of psychopathology. This paper contributes to the gap in knowledge regarding the experience of recovery workers who have also been personally impacted by disasters.

This paper draws on research undertaken as part of a doctoral thesis, where the primary aim of the larger study was to examine what people who had been impacted by a disaster found helpful and unhelpful in the aftermath. This paper reports on the emergent themes specifically relating to the sub-sample of participants who were both personally and professionally involved with

disaster recovery. Descriptions of the broader sample and discussions of the doctoral thesis are outside the scope of this paper.

Method

Theoretical Framework

This research was approached from a constructivist perspective, using an interpretation that individuals are situated within a cultural and social context and construct meaning as part of an ongoing dynamic process between internal and external factors (Crotty, 1998).

Study Design

A qualitative approach was taken, and a number of ethical and pragmatic considerations influenced the design of the study. Disasters are, by their nature, potentially traumatic events which can impact all facets of life for those affected and create chaotic, disorienting environments with significant secondary stressors. Sensitivity in study design for topics which are potentially distressing is broadly acknowledged as important (Dyregrov, 2004; Gibbs et al., 2018). Some considerations specific to the study design of this project included: 1) a broad geographic spread of participants; 2) researcher positionality as a senior disaster recovery practitioner; 3) ensuring that a broad range of impacts could be explored by participants, rather than pre-identifying topics of interest; and 4) consideration of research fatigue in disaster-affected communities.

A novel approach to data collection was developed in an attempt to address these ethical and pragmatic research considerations. Participants who had experienced a disaster event at least two years prior were invited to write a letter to themselves addressing the single question “What did you find most helpful and unhelpful after the disaster/s you experienced?” They were then asked to send the letter to the researcher as an email, voice recording, or by postal mail. A second stage of the research regarding participant experience of the research was then undertaken by electronic survey. Discussion of this phase of the research is outside the scope of this paper.

Selection Criteria

Individuals who had experienced a disaster event at least two years prior were eligible to participate in the research. Participants were required to be over 18 years of age, living in Australia or New Zealand, and able to participate in English.

Recruitment Process

A combination of sampling approaches was used to recruit participants for the first phase of the research. A purposive criterion approach was used, by approaching people with known lived experiences of disasters. Noting that this is a contested term, purposive criterion approach is used here to reference a sampling approach where individuals who are especially knowledgeable or have experience with particular phenomenon and meet set criteria are invited to participate (Palinkas et al., 2015; Palys, 2008). A snowball sampling approach was used by asking key informants (including leaders from disaster-affected communities, people with known lived experience of disasters, and recovery workers) to share information about the project with their networks. Convenience sampling was also used by promoting the research project through social media.

A website with information about the research project was developed. The information was presented in written text and in video format on the website. The researcher sent emails containing brief information about the project and a link to the website to community leaders, organisations, and key informants within disaster-affected communities. Many of these people were known to the researchers through their professional work or were recommended by key informants. Some of these people then sent the information to their contacts. Additionally, study information postcards were distributed at some disaster-related community events and provided to community leaders upon request.

Analysis Approach

A constructivist grounded theory approach to analysis was used, with particular reference to the work of Charmaz (2011, 2014). This approach openly acknowledges that subjectivity is inherent in data analysis and inevitably guided by researcher positionality. This was considered suitable based on the researchers' professional exposure to disaster-affected communities. Data analysis commenced at the time the first letter was received and was conducted concurrently with data collection.

A line-by-line coding approach with a focus on participants' actions was initially undertaken. As more letters were received, newer letters were analysed using line-by-line coding and by testing the more focused codes which had emerged from the earlier letters received. A process of memo writing to further develop the ideas emergent in the coding was then undertaken. Charmaz (2008) notes that while memos are sometimes regarded as a procedural step between coding and draft writing

in grounded theory research, memos can be much more meaningful to researchers making sense of their data, giving the opportunity to learn more about the data and develop theory, rather than a mere descriptive summary of the codes identified. The findings presented in this paper emerged through an inductive approach to coding and refining themes. From there, links to self-determination theory were explored in subsequent analysis.

Reporting

No names of participants (real or pseudonym) or codes were used to refer to participants and concerted efforts were made to remove description markers where possible in participant quotes. While it is acknowledged that context may be reduced through this approach, this was weighed against the other considerations relating to anonymity and reporting, including potential mistaken identity and de-humanisation of participants through codes (Saunders et al., 2015). A further consideration was the anonymisation of location (Clark, 2006) and disaster hazards. Attempts were made to remove identifiers around location and hazard event.

Ethics Approval

This study was approved by the University of Melbourne Human Research Ethics Committee (ID: 1543703.1).

Results

Sample Characteristics

Twenty people impacted by a range of disasters in Australia and New Zealand participated in the first stage of the study by submitting a letter.

This article focuses on a sub-sample of participants - four individuals who had been personally impacted by disaster events and were also then employed as recovery workers. This sub-group was not specifically targeted in recruitment, but emerged as a cohort with an interesting perspective in their letters that was specific to their dual experiences of personal and professional involvement in disaster recovery. These participants had been impacted by rapid onset disasters in Australia and New Zealand approximately five to seven years prior to their participation. Three participants described their experience of recovery work as a mostly powerful, positive, and empowering experience. For the other participant, this was not the case, and the professional experience was described as mostly negative, disempowering, frustrating, and isolating. For three participants in this sub-group, these recovery roles

were completely new jobs in organisations with which they had not been previously employed, while for one participant the recovery-focused role was a variation of their previous (non-disaster) employment in the same organisation.

Misalignment Between Personal and Professional Lives

All four participants described a misalignment between their personal and professional experiences of recovery. The three participants who described an overall positive professional experience referred to their work as incredibly intense, powerful, and meaningful. One recovery worker recounted the tone and pace of the work to themselves in their letter:

There is so much to do you barely have time to stop to go to the toilet. Your work feels alive and full of meaning.

These participants recounted feeling that they were able to take meaningful action to support the broader recovery efforts and had agency in this domain of their lives, despite the intensity and volume of the work. Their descriptions of the work in their letters are characterised by a sense of propelling urgency and frenetic energy. These participants explained their motivation to toil so tirelessly as stemming from the value and importance they placed on the work and an immense sense of reward. One participant described their experience in their recovery role as feeling valued and empowered in a way they had not previously experienced:

I found the entire thing very empowering. I was appreciated in my work for bringing a particular skill set ... at least for a short period of time you are recognised for your work, people value it and you are thanked. I feel like I was able to come into my own during that time. People were able to see capacities that I was able to bring, like leadership, even though they had been there before, but they were recognised during it.

Another recovery worker summed up the intensity of their experience: "Working in recovery almost broke me, but it was also the best thing ever." Despite identifying that they felt out of their depth at times, these three participants who had mostly positive professional experiences felt supported by a collegiate team of co-workers who were going through similar experiences. For the most part, they felt that the people around them at work "got it", as described by this recovery worker:

...you [and your colleagues] mostly share similar feelings, 'we're building the plane while we're flying

it!'. Most of the time you'll feel like you are in it together, that you are part of something good. You are supported by, and are a supporter of, your team and others working in recovery and the wider community.

This sense of camaraderie at work was observed by the participants who had positive experiences, though one commented that this was diminished when their organisation decided to split roles into "business as usual" and "disaster recovery" focused teams. They noted that this was a turning point in their organisation and the shared sense of purpose significantly reduced following this split.

These accounts of the strong sense of autonomy, agency, and meaningful contribution was contrasted by the way these three participants reflected on their personal lives, where they described often feeling out of control and defeated in relation to disaster recovery. For one of the participants, this sense of loss of control in their personal life manifested through the swift, dramatic changes which took place in their surrounding environment, stemming not only from the physical destruction wreaked by the disaster hazard but also the decisions from authorities regarding reconstruction. Significant infrastructure and housing damage and subsequent housing shortages meant that friends had to relocate, and places of significance either had been destroyed or were no longer accessible. The sense of frustration and loss of control is apparent as they recounted the story to themselves in their letter:

Your previous life was made up of routines that reflected all the enjoyable parts of your life. Change occurs quickly and without your permission. You respond by pushing this part of your life to the side. Here you have little agency over the effects of the [disaster event].

For another participant, the impacts in their personal life were amplified by their relationship with their partner who became abusive after the disaster. At work, they felt like they had autonomy and power, but at home this feeling of control was absent:

It was totally a temptation to hide in my work. Work became a refuge. It was the one place in my life where I felt vaguely capable and in control. I could be the 'me' that I wanted to be at work. I felt more capable in that environment. In the next two years, work became a place where I was succeeding and everything else was falling apart.

The fourth participant with dual recovery experiences described their professional role as an overall negative experience. Despite this difference with other participants, they also identified the professional part of their life as misaligned from the personal part. While this misalignment did not stem from the same contrast of autonomy and power in their professional role as experienced by the other three participants, they described an experience of being disempowered in their personal life as a result of the formal recovery processes implemented in their community:

... you will no longer have control over what you do, who you speak to and how you feel. Your property will not feel like your own, your life will not feel like your own. You won't be asked what you want; you will be told what you need.

This participant then went on to identify how their professional role stifled their personal recovery. They perceived their professional role as a conflict to participating in the broader recovery efforts in the community where they lived or to seek assistance for their own impacts:

You will forget that you are a local. You won't speak up at meetings because you are being paid to listen not speak as a local. You will be disadvantaged with your recovery as you will feel that it's a 'conflict of interest' to ask for help.

This sense of powerlessness and isolation was further exacerbated by a sense of not being able to adequately support their loved ones who were also struggling from the impacts of the disaster. Despite the difference in the experience of working in recovery, all four participants described a misalignment between their personal and professional experiences of recovery.

The Professional Experience of Recovery Influenced the Personal Experience of Recovery

The four participants raised a number of points about how both the narrative of recovery in the professional realm and the exposure to a range of recovery experiences through their work roles altered the way they framed recovery in their personal lives. One participant reflected on the gap between the recovery narratives used in the professional realm compared to their personal experiences. The dominant recovery narrative used in their work – that community pulls together and neighbours help neighbours – did not ring true of their own experience as an impacted person. They reflected

that this disparity caused them to struggle to position themselves as a recovering person:

I was too busy working to fill up our water buckets at the water tanker so I didn't have those chats [to neighbours]. I was too busy working in it to be living it. And the working in it became my life. Was my work place my community? We so often differentiate our audiences by communities, but I genuinely don't think I fell into any of the segmented audiences – and if I didn't, who else didn't?

Another participant described this juxtaposition between the professional narrative and their personal experience simply by writing:

It's different outside of work... it feels like recovery doesn't make as much sense outside of that context.

All four participants observed that their professional role exposed them to a range of other people's experiences, which they may not have been privy to otherwise. This included people from socio-economic and ethnic groups different to their own. When reflecting on this process, one of the participants stated:

Our whole [house] repair process was gruelling, but we were the lucky ones. [At work] you saw all these burdens and complexities that others had, and you come home and it's genuinely shitty, but it also feels trivial.

Two of the participants specifically noted that this exposure to the broader impacts of the disaster caused them to reassess their personal experiences.

The Personal Experience Takes a Backseat to the Professional Experience... Until it Doesn't

All four participants described how all-consuming their professional recovery roles were. For the three participants who had a mostly positive experience at work, there came a point where they preferred to focus on work because of a sense of progress, reward, and recognition that was largely absent in their personal experience. In a letter from their "future self", one of the participants advised themselves to try to avoid this gap:

Start thinking of your life holistically again. Try not to separate out your work and home life to such a degree, deriving too much meaning and pleasure from one over the other. At times it will feel like this approach is okay, or justifiable given the situation, but be honest with yourself, don't make excuses. You will have to deal with the misalignment at some point. Recovery isn't something you are only helping others to do.

All participants with dual experiences described reaching a point where they could no longer sustain the misalignment between their professional and personal lives. All four participants made a decision to leave their professional roles, coming to the decision in different ways:

And then you will come to the point where you need to say no – that your time in the ‘recovery team’ is over. You will leave, and you will try to return to your ‘normal’ job and your normal life.

Interestingly, three of the four participants chose to relocate from their communities after finishing their roles, and the fourth also seriously considered moving away. Those that moved reflected on how the change of environment to a non-disaster affected location was a positive experience that allowed them to focus and process their personal experience of recovery:

... it helps to move away for a period, to live where everything isn't touched by the event. Where street life and nightlife occur without rubble and road works. But be patient about it. Regarding this point, you can look forward to the fact I think you get this right. You listened to yourself, your personal needs, and balanced these with the incredible experiences and career opportunities that were offered.

The participant who did not relocate (the same person who did not have a positive work experience) contemplated moving away as a way to manage their personal experience. Their attempts to reclaim their pre-disaster life didn't work as hoped:

... the people in that world won't understand. They will have no idea what you've been through, they will have no idea how you feel and they will not have the capacity to help you. You see people are starting to get to the end of 'helping' and you will be realising that you have left it too late... You will feel differently about your community too. You will struggle to go to social events and you will isolate yourself from the community. You will struggle with the physical scars of where you live and you will struggle with things that are built around you. You will think about moving away, and you will feel unsettled. Life will be different for you where you live.

Ultimately, this participant did not relocate, but eventually accessed professional assistance to help their personal recovery.

The intensity and ferocity of the pace of recovery work, and the misalignment between their personal and

professional experiences of recovery, seemed to only be sustainable for a limited period of time before all of these participants were motivated to make a dramatic change to their work roles in order to prioritise their personal lives. The similarity of the experiences described by the participants points to a number of aspects which require further examination: First, the intensity and all-consuming nature of working in the post-disaster environment; second, the misalignment of personal and professional experiences of recovery which seemed to be ultimately unsustainable; and third, the dramatic changes to both the personal and professional areas of their lives that recovery workers undertook when this misalignment became unsustainable.

Discussion

Recovery workers who are also personally impacted by the same disaster have a unique perspective, with interesting insights into disaster recovery. The importance of having locally-led disaster recovery has been recognised in literature and policy but also presents a challenge for those engaged in supporting others while also personally affected. The experiences and support needs of the people who have a dual experience of personal and professional involvement in disaster recovery are important to understand, considering the likelihood for recovery workers to be exposed to work-related stressors (Ehring et al., 2011; Wills, 2013), secondary trauma (Adams et al., 2008; Naturale, 2007), and the intensity of the post-disaster environment (Cox & Perry, 2011; Leadbeater, 2013; Whittle et al., 2012). One of the most significant components of the themes raised by these participants is the misalignment between their personal and professional experiences of disaster recovery, and how this impacted their sense of well-being. All of the participants in this sub-sample spoke of the intensity and volume of their workload but some also reported a strong sense of agency, purpose, and connectedness with others around them, which was largely absent in their personal life after the disaster.

While limited research is published about the experiences of recovery workers, we identified one especially resonant case that had similarities to the participants in our study. In their work on the 2007 Hull floods in the United Kingdom, Whittle and colleagues (2012) presented the story of a participant with dual roles who identified an uncannily similar trajectory to the recovery workers in this study. Marilyn (not her real name) was the headteacher of a school heavily impacted by these floods and whose own home was also flooded. She played

a central role in supporting the staff and student body who had almost all been directly impacted. In her diary entries, Marilyn describes the intensity and importance of her work, which is prioritised at the expense of her personal recovery, until she eventually retires (earlier than planned) due to the experience (Whittle et al., 2012).

Self-determination theory (SDT), as described by Ryan and Deci may provide a useful theoretical framework to better understand the experiences described by these participants and to identify supports that could a) reduce personal and professional misalignment of recovery, and b) improve the well-being for people in dual recovery roles. SDT is underpinned by the premise that all humans have a set of psychological needs that they continuously strive to fulfil and maintain. These psychological needs are categorised as competence, relatedness, and autonomy.

Recovery workers who were also personally impacted by disasters identified frustrations in their post-disaster personal lives, characterised by a loss of control, disrupted social connections, and limited ability to make changes to restore their lives. That is, they experienced a reduced sense of competence, relatedness, and autonomy, resonant with existing literature relating to disaster recovery hindrances (Norris & Kaniasty, 1996; Whittle et al., 2012). Where their work experience was positive, it was characterised by components that Ryan and Deci identify as central to meeting the needs of well-being. In other words, these workers were in roles that afforded them a sense of competency, autonomy, and relatedness. For the participant who experienced a negative work experience, they described a reduction in their sense of competence, relatedness, and autonomy, largely driven by “outsiders” who did not understand the nature of the work and demands of the role, the environment in which they were working, and the disconnection between their professional and personal experience. This sense of damage to relatedness continued even when they left the professional recovery role, affecting the participant's relationship with neighbours, friends, family, and colleagues. The framework of SDT is a useful way to consider the misalignment between personal and professional experiences of recovery as identified by participants and may serve as a useful framework for further research in this area.

Implications

The challenges and experiences identified by this sub-sample of participants with dual experiences of recovery has implications for the way locally-based recovery

workers are engaged and supported. Additionally, these findings have implications for the way external agencies and organisations working in disaster-affected communities interact with locally-based recovery workers. Those “outsiders” working to support recovery efforts should be particularly mindful of the dual burdens being negotiated by locally-based recovery workers, especially when they are in a position to influence these workers' experiences. This may include flexibility in work arrangements, additional support to reduce workload to assist those workers to balance home and professional recovery work, and explicitly considering how these dual roles may affect local recovery workers' ability to fully participate at work and within their communities. Professional supervision, access to communities of practice, and support with a focus on enhancing competency, relatedness, and autonomy may assist these workers to recognise and negotiate the difficult terrains of dual roles in recovery. More broadly, these preliminary findings support existing research and policy promoting community-led recovery approaches which enhance a sense of competency, relatedness, and autonomy at a time where much in the lives of those affected by disaster may be feeling out of their control.

Strengths, Limitations, and Future Opportunities

One of the strengths of this paper is that the findings emerged from a larger study that included a range of perspectives from people who experienced different hazards in different locations. The smaller sample size was well suited to the analysis approach undertaken and allowed for a deep and nuanced interpretation of the rich data provided by participants. While this paper draws on the experiences of a small sub-sample of participants, the findings and recommendations for application are resonant with existing work following disaster events in New Zealand, Japan, and Haiti (Kroll et al., 2021; Sakuma et al., 2015; Wills, 2013).

Due to pragmatic decisions in the research design, eligibility criteria excluded people without sufficient confidence to participate in English. The researcher notes this limitation and hopes in future projects there would be capacity for a linguistically-diverse research team, or funding for interpretation and translation, so these barriers could be overcome.

These findings that emerged from a sub-sample of participants should be considered preliminary. However, the link to an established theory and literature is promising and supports the potential for the findings to have a broader application beyond the sample. For

example, future research with this group of workers could focus on mechanisms which foster a sense of cogency between personal and professional experience, and approaches which support recovery workers to have high levels of competence, relatedness, and autonomy.

SDT presents a useful lens to explore motivations for helping behaviour following disasters, and potential barriers to satisfying psychological needs and feelings of well-being (Deci & Ryan, 2002). The psychological domains of SDT (competence, relatedness, and autonomy) are resonant with issues commonly identified in post-disaster settings in relation to the role of social connections, power in decision making and community led action (Aldrich, 2011, 2012; Bryant et al., 2017, 2014; Cretney, 2016; Eyre & Dix, 2014; Leadbeater, 2013; Norris & Kaniasty, 1996).

Conclusion

People who have dual experiences in disaster recovery, through both professional and personal involvement, have a unique insight into the dimensions of this setting. Very little is known about this cohort from a research perspective. The limited existing literature indicates that these people carry a significant burden and may be more susceptible to psychopathology, physical health complaints, and stress related to both living and working in the post-disaster environment (an environment known for its chaotic, gruelling nature and compounding stressors). Given the predictions of increased frequency and severity of disasters, and a push for locally-led recovery efforts in emergency management guidelines, it can be reasonably predicted that this cohort will grow.

This emergent theme from a sub-sample of participants in a broader study offers interesting insights into the experiences of people who hold a dual role in disaster recovery. This study presents findings that people who hold these dual roles may: 1) experience a misalignment between their personal and professional experiences of recovery, 2) have their personal experiences of recovery reframed by exposure to others impacted as part of their professional experience, and 3) initially prioritise their professional roles but reach a point where their personal recovery needs to take priority over their professional role. Recovery workers who also have personal experience of the disaster play an important role in broader disaster recovery efforts and may experience their work as overwhelming or empowering, or both. The findings indicate a clear need for further enquiry into the experiences of people in these roles and how they can be

best supported through the relentless recovery process. Self-determination theory may offer a helpful framework for future research to understand how competence, relatedness, and autonomy are differentially affected in the dual roles of recovery workers who are also personally affected by the impacts of disasters.

References

- Adams, R. E., Figley, C. R., & Boscarino, J. A. (2008). The compassion fatigue scale: Its use with social workers following urban disaster. *Research on Social Work Practice, 18*(3), 238–250. <https://doi.org/10.1177%2F1049731507310190>
- Aldrich, D. P. (2011). Ties that bond, ties that build: Social capital and governments in post disaster recovery. *Studies in Emergent Order, 4*, 58–68.
- Aldrich, D. P. (2012). *Building resilience: Social capital in post-disaster recovery*. University of Chicago Press.
- Alesch, D. J., Arendt, L. A., & Holly, J. N. (2009). *Managing for long-term community recovery in the aftermath of disaster*. Public Entity Risk Institute.
- Australian Institute of Disaster Resilience. (2018). *Community Recovery Handbook*. <https://knowledge.aidr.org.au/media/5634/community-recovery-handbook.pdf>
- Brady, K. (2020). *What do people who have been affected by a disaster consider to be helpful and unhelpful in their recovery?* [University of Melbourne]. <https://minerva-access.unimelb.edu.au/handle/11343/237498>
- Bryant, R. A., Gibbs, L., Gallagher, H. C., Pattison, P., Lusher, D., MacDougall, C., Harms, L., & Richardson, J. F. (2017). Longitudinal study of changing psychological outcomes following the Victorian Black Saturday bushfires. *Australian & New Zealand Journal of Psychiatry, 52*(6), 542–551. <https://doi.org/10.1177/0004867417714337>
- Bryant, R. A., Waters, E., Gibbs, L., Gallagher, H. C., Pattison, P., Lusher, D., MacDougall, C., Harms, L., Block, K., Snowdon, E., & Sinnott, V. (2014). Psychological outcomes following the Victorian Black Saturday bushfires. *Australian & New Zealand Journal of Psychiatry, 48*(7), 634–643. <https://doi.org/10.1177/0004867414534476>
- Charmaz, K. (2008). Grounded theory as an emergent method. In S. N. Hesse-Biber & P. Leavy (Eds.), *Handbook of emergent methods* (pp. 155–172). The Guilford Press.
- Charmaz, K. (2011). Grounded theory methods in social justice research. In N. Denzin & Y. S. Lincoln (Eds.), *The SAGE handbook of qualitative research* (pp. 359–377). SAGE Publications.
- Charmaz, K. (2014). *Constructing grounded theory*. SAGE Publications.
- Clark, A. (2006). *NCRM Working Paper Series: Anonymising research data*. ESRC National Centre for Research Methods.
- Cox, R. S., & Perry, K.-M. E. (2011). Like a fish out of water: Reconsidering disaster recovery and the role of place and social capital in community disaster resilience. *American Journal of Community Psychology, 48*, 395–411. <https://doi.org/10.1007/s10464-011-9427-0>
- Cretney, R. M. (2016). Local responses to disaster: The value of community led post disaster response action in a resilience framework. *Disaster Prevention and Management, 25*(1), 27–40. <https://doi.org/10.1108/DPM-02-2015-0043>

- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Allen and Unwin.
- Cukor, J., Wyka, K., Mello, B., Olden, M., Jayasinghe, N., Roberts, J., Giosan, C., Crane, M., & Difede, J. (2011). The longitudinal course of PTSD among disaster workers deployed to the World Trade Center following the attacks of September 11th. *Journal of Traumatic Stress, 24*(5), 506–514. <https://doi.org/10.1002/jts.20672>
- Deci, E., & Ryan, R. (2002). Overview of self-determination theory: An organismic dialectical perspective. In E. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3–33). University of Rochester Press.
- Deci, E., & Ryan, R. (2012). Motivation, personality, and development within embedded social contexts: An overview of self-determination theory. In R. Ryan (Ed.), *The Oxford handbook of human motivation*. Oxford University Press.
- Dyregrov, K. (2004). Bereaved parents' experience of research participation. *Social Science & Medicine, 58*(2), 391–400. [https://doi.org/10.1016/s0277-9536\(03\)00205-3](https://doi.org/10.1016/s0277-9536(03)00205-3)
- Easthope, L. (2018). *The recovery myth: Plans and situated realities of post-disaster response*. Springer.
- Ehring, T., Razik, S., & Emmelkamp, P. M. (2011). Prevalence and predictors of posttraumatic stress disorder, anxiety, depression, and burnout in Pakistani earthquake recovery workers. *Psychiatry Research, 185*(1–2). <https://doi.org/10.1016/j.psychres.2009.10.018>
- Eriksen, C. (2019). Coping, caring and believing: The embodied work of disaster recovery workers. *Emotion, Space and Society, 32*, 100592. <https://doi.org/10.1016/j.emospa.2019.100592>
- Eyre, A. (2006). *Literature and best practice review and assessment: Identifying peoples needs in major emergencies and best practice in humanitarian response*. UK Department for Culture, Media and Sport.
- Eyre, A., & Dix, P. (2014). *Collective conviction: The story of disaster action*. Liverpool University Press.
- Garnett, J. D., & Moore, M. (2010). Enhancing disaster recovery: Lessons from exemplary international disaster management practices. *Journal of Homeland Security and Emergency Management, 7*(1). <https://doi.org/10.2202/1547-7355.1711>
- Gibbs, L., Molyneaux, R., Whiteley, S., Block, K., Harms, L., Bryant, Richard. A., Forbes, D., Gallagher, H. C., MacDougall, C., & Ireton, G. (2018). Distress and satisfaction with research participation: Impact on retention in longitudinal disaster research. *International Journal of Disaster Risk Reduction, 27*, 68–74. <https://doi.org/10.1016/j.ijdr.2017.09.038>
- Glasser, R. (2019). *Special report: Preparing for the era of disasters*. Australian Strategic Policy Institute. www.preventionweb.net/publications/view/64126
- Green, B., Lindy, J., Grace, M., Glesar, G., Leonard, A. C., Korol, M., & Winget, C. (1990). Buffalo Creek survivors in the second decade: Stability of stress symptoms. *American Journal of Orthopsychiatry, 60*(1), 43–54. <https://doi.org/10.1037/h0079168>
- Hay, K., Pascoe, K. M., & McCafferty, L. (2021). Qualitative research: Social worker experiences in disaster management: Case studies from Aotearoa New Zealand. *Aotearoa New Zealand Social Work, 33*(1), 17–28. <https://doi.org/10.11157/anzswj-vol33iss1id820>
- Herbert, R., Moline, J., Skloot, G., Metzger, K., Baron, S., Luft, B., Markowitz, S., Udasin, I., Harrison, D., Stein, D., & Todd, A. (2006). The World Trade Center disaster and the health of workers: Five-year assessment of a unique medical screening program. *Environmental Health Perspectives, 114*(12), 1853–1858. <https://doi.org/10.1289/ehp.9592>
- Inspector General Emergency Management. (2021). *Inquiry into the 2019–20 Victorian fire season: Phase 2 progress and effectiveness of Victoria's immediate relief and recovery arrangements*. www.igem.vic.gov.au/fire-season-inquiry/inquiry-reports/inquiry-into-the-2019-20-victorian-fire-season-phase-2-report
- Intergovernmental Panel on Climate Change. (2022). Summary for policymakers. In H.-O. Pörtner, D. Roberts, E. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, & A. Okem (Eds.), *Climate Change 2022: Impacts, adaptation, and vulnerability. contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 3–36). Cambridge University Press.
- Johnson, S. B., Langlieb, A. M., Teret, S. P., Gross, R., Schwab, M., Massa, J., Ashwell, L., & Geyh, A. S. (2005). Rethinking first response: Effects of the clean up and recovery effort on workers at the World Trade Center disaster site. *Journal of Occupational and Environmental Medicine, 47*(4), 386–391. <https://doi.org/10.1097/01.jom.0000158722.57980.4a>
- Jordan, E., & Javernick-Will, A. (2013). Indicators of community recovery: Content analysis and Delphi approach. *Natural Hazards Review, 14*(1), 21–28. [https://doi.org/10.1061/\(ASCE\)NH.1527-6996.0000087](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000087)
- Kenney, C. M., & Phibbs, S. (2015). A Māori love story: Community-led disaster management in response to the Ōtautahi (Christchurch) earthquakes as a framework for action. *International Journal of Disaster Risk Reduction, 14*, 46–55. <https://doi.org/10.1016/j.ijdr.2014.12.010>
- Kroll, A., Remington, C. L., Awasthi, P., & Ganapati, N. E. (2021). Mitigating the negative effects of emotional labor: A study of disaster response and recovery workers after the 2010 Haiti earthquake. *Governance, 34*(1), 87–106. <https://doi.org/10.1111/gove.12476>
- Leadbeater, A. (2013). Community leadership in disaster recovery: A case study. *Australian Journal of Emergency Management, 28*(3), 41–45.
- Ministry of Civil Defence & Emergency Management. (2019). *National disaster resilience strategy / Rautaki ā-Motu Manawaroa Aituā*. New Zealand Government.
- Naturale, A. (2007). Secondary traumatic stress in social workers responding to disasters: Reports from the field. *Clinical Social Work Journal, 35*(3), 173–181. <https://doi.org/10.1007/s10615-007-0089-1>
- Norris, F. H., & Kaniasty, K. (1996). Received and perceived social support in times of stress: A test of the social support deterioration deterrence model. *Journal of Personality and Social Psychology, 71*(3), 498. <https://doi.org/10.1037//0022-3514.71.3.498>
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(5), 533–544. <https://doi.org/10.1007/s10488-013-0528-y>
- Palys, T. (2008). Purposive sampling. In L. M. Given (Ed.), *The SAGE encyclopedia of qualitative research methods*. SAGE Publications.
- Perrin, M. A., DiGrande, L., Wheeler, K., Thorpe, L., Farfel, M., & Brackbill, R. (2007). Differences in PTSD prevalence and associated risk factors among World Trade Center disaster rescue and recovery workers. *American Journal*

- of Psychiatry*, 164(9), 1385–1394. <https://doi.org/10.1176/appi.ajp.2007.06101645>
- Phillips, B. D. (2009). *Disaster recovery*. Taylor and Francis.
- Richardson, J. F., Baker, E., Gallagher, H. C., Gibbs, L., Block, K., Lusher, D., Kellett, C., MacDougall, C., Harms, L., & Smith, M. (2016). Separation and reunification in disasters. In A. Awotona (Ed.), *Planning for community-based disaster resilience worldwide: Learning from case studies in six continents* (pp. 379–394). Routledge.
- Rubin, C. B. (2009). Long term recovery from disasters—The neglected component of emergency management. *Journal of Homeland Security and Emergency Management*, 6(1). <https://doi.org/10.2202/1547-7355.1616>
- Ryan, R., & Deci, E. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54–67. <https://doi.org/10.1006/ceps.1999.1020>
- Sakuma, A., Takahashi, Y., Ueda, I., Sato, H., Katsura, M., Abe, M., Nagao, A., Suzuki, Y., Kakizaki, M., & Tsuji, I. (2015). Post-traumatic stress disorder and depression prevalence and associated risk factors among local disaster relief and reconstruction workers fourteen months after the Great East Japan Earthquake: A cross-sectional study. *BMC Psychiatry*, 15(1), 1–13. <https://doi.org/10.1186/s12888-015-0440-y>
- Sakuma, A., Ueda, I., Shoji, W., Tomita, H., Matsuoka, H., & Matsumoto, K. (2020). Trajectories for post-traumatic stress disorder symptoms among local disaster recovery workers following the Great East Japan Earthquake: Group-based trajectory modeling. *Journal of Affective Disorders*, 274, 742–751. <https://doi.org/10.1016/j.jad.2020.05.152>
- Saunders, B., Kitzinger, J., & Kitzinger, C. (2015). Anonymising interview data: Challenges and compromise in practice. *Qualitative Research*, 15(5), 616–632. <https://doi.org/10.1177/1468794114550439>
- Smith, G. P., & Wenger, D. (2007). Sustainable disaster recovery: Operationalizing an existing agenda. In H. Rodríguez, W. Donner, & J. E. Trainor (Eds.), *Handbook of disaster research* (pp. 234–257). Springer.
- Stellman, J., Smith, R., Katz, C., Sharma, V., Charney, D., Herbert, R., Moline, J., Luft, B., Markowitz, S., Udasin, I., & Harrison, D. (2008). Enduring mental health morbidity and social function impairment in World Trade Center rescue, recovery, and cleanup workers: The psychological dimension of an environmental health disaster. *Environmental Health Perspectives*, 116(9), 1248–1253. <https://doi.org/10.1289/ehp.11164>
- Sword-Daniels, V. L., Twigg, J., Rossetto, T., & Johnston, D. M. (2016). Unpacking long-term disaster recovery processes: A case study of the healthcare system in Montserrat, West Indies. *International Journal of Mass Emergencies & Disasters*, 34(1), 113–142. <https://doi.org/10.1177/028072701603400106>
- Weinstein, N., & Ryan, R. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology*, 98(2), 222–244. <https://doi.org/10.1037/a0016984>
- Whittle, R., Walker, M., Medd, W., & Mort, M. (2012). Flood of emotions: Emotional work and long-term disaster recovery. *Emotion, Space and Society*, 5(1), 60–69. <https://doi.org/10.1016/j.emospa.2011.08.002>
- Wills, J. (2013). *Supporting the supporters in disaster recovery* [NZ Churchill Fellowship Report]. <https://supportingthesupporters.org/images/SupportingthesupportersJWILLS.pdf>
- Wilson, P. A. (2009). Deliberative planning for disaster recovery: Re-membering New Orleans. *Journal of Public Deliberation*, 5(1), 1. <https://doi.org/10.16997/jdd.80>
- Wisnivesky, J., Teitelbaum, S., Todd, A., Boffetta, P., Crane, M., Crowley, L., De la Hoz, R., Dellenbaugh, C., Harrison, D., Herbert, R., & Kim, H. (2011). Persistence of multiple illnesses in World Trade Center rescue and recovery workers: A cohort study. *The Lancet*, 378(9794), 888–897. [https://doi.org/10.1016/s0140-6736\(11\)61180-x](https://doi.org/10.1016/s0140-6736(11)61180-x)