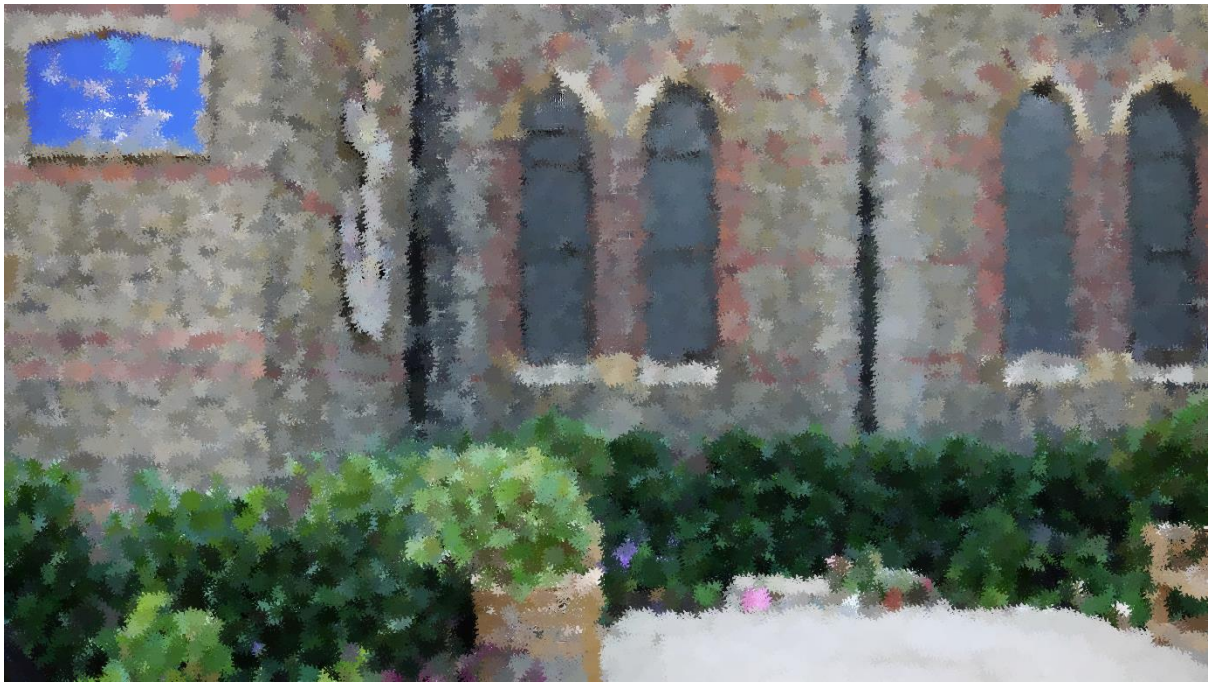
Lessons for the Grenfell Tower Fire Disaster Recovery: Learning from previous disasters



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Introduction

"If there is an emergency to respond to, there is something to recover from"
Kate Brady, Best Practice in Psychosocial Recovery[1]

The Grenfell Tower fire in North Kensington, on 14 June 2017, was a major disaster resulting in significant loss of life, with bereavement, displacement and trauma experienced by many, both residents of Grenfell Tower and in the wider community. In the light of this unprecedented event, a public inquiry into the cause of the fire and the immediate response officially opened on September 14, 2017 and is currently ongoing.

This paper is part of A Journey of Community Recovery: Supporting health & wellbeing for the communities impacted by the Grenfell Fire Disaster; a public health led needs assessment aiming to:

- To give an initial picture of the impact of the Grenfell Tower fire on those affected
- To advise the relevant public bodies (primarily the Council, the NHS and central government) on the foundations of an effective recovery
- To inform the development of a long-term recovery strategy
- Acting as a reference point for all those wanting to assess and shape the journey of recovery, now and in the future

Every disaster is unique; the way it unfolds; the human impact, the geography, the social and political context in which it occurs. There has been no disaster in the UK quite like the Grenfell Tower Fire disaster, though other tragedies, (such as the Hillsborough disaster, Aberfan disaster, the Lockerbie bombing, the Lakanal House fire, the 7 July 2005 London bombings, or some of the devastating floods that have impacted different communities) do share important characteristics with it. Likewise, internationally, tragedies rooted in major hurricanes such as Katrina, the Deepwater Horizon oil spill, the Lac-Mégantic rail disaster in Quebec, Canada, the Christchurch earthquake in New Zealand, the September 11 attacks and others

[1] Eyre, A., & Brady, K. (2013). Addressing psychosocial and community recovery in emergency management. *International Journal of Emergency Services*, *2*(1), 60-72.

have shown the ways in which communities deal with the aftermath and find a way to recover.

Whilst every disaster is unique, and every journey of recovery is distinct in its character, a disaster recovery literature has emerged in recent years, which draws lessons from these events and tries to answer certain questions. What are the common threads of how disasters affect people and communities? Why do they affect different people in different ways? What does the journey of recovery look like? What does the evidence suggest are the ingredients of the most effective recoveries?

This evidence review is predicated on the belief that the common experiences of people who have been through disasters contain lessons, which can provide a valuable foundation to inform, and foster discussion about, what may support recovery for communities impacted by the Grenfell Tower fire. Evidence-based approaches are about taking that learning and applying it meaningfully to a particular context. The diverse nature of disasters means that the literature on recovery is itself broad. This review has tried to focus on those lessons from previous disasters, which appear most relevant to the Grenfell recovery. Every detail of the response can and should attempt to take advantage of learning from the experiences of others who have gone before. For example, in preparing to take the bereaved families from Grenfell Tower back to visit the place where their loved ones died, the local NHS mental health team learnt about the journeys of the bereaved and survivors of the Utoya attacks in Norway in 2011 to understand their experience and inform preparations. This review does not go into every detail of recovery but does engage with the broad themes, which emerge from the literature.

While some evidence to inform recovery comes from this literature, there is also a wider evidence base on promoting health and wellbeing, which is relevant. For example, the Marmot Review of Health Inequalities sets out the foundation of the social determinants of health and its evidence base has great relevance to any

recovery[2]. NICE (National Institute for Clinical Excellence) set out the best evidence for clinical interventions such as treatment of post-traumatic stress disorder. This evidence base evolves as well. For example, the current NICE guidance on prevention and treatment of PTSD was published in 2005. However these are in the process of being updated and will be published later this year.[3] These evidence bases are not reiterated here; however, they are an important ingredient of any approach.

Based on past disasters and evidence, we know that many people have incredible capacities for resilience and that places that have been devastated find a way to recover. For some individuals, families and communities this recovery journey can last many years, be very hard and painful. For different people what influences the nature of that recovery will be determined by different factors.

In recovery from disaster, there are many agencies with responsibilities. In the UK, the local authority has a legal responsibility for recovery as set out in the Emergency Response and Recovery Guidance that sits alongside the Civil Contingencies Act 2004. At the same time many organisations including the local authority, but also the NHS, schools, police and indeed any organisation in the community will have a range of challenges which the disaster has caused or exacerbated, but which are rooted in their day-to-day responsibilities to meet the needs of the public. Alongside these, many others, from organisations to individuals, will become involved, driven by the impact the disaster has had on them and their commitment to help those affected. That involvement may take many forms; this can be from support for one person, to becoming involved with organisations and networks focussing on different aspects of the disaster response. This evidence review should inform the response of statutory organisations, but it is potentially also relevant to people involved at any level.

[2] Marmot, M. G., Allen, J., Goldblatt, P., Boyce, T., McNeish, D., Grady, M., & Geddes, I. (2010). Fair society, healthy lives: Strategic review of health inequalities in England post-2010.
[3] www.nice.org.uk/guidance/indevelopment/gid-ng10013

Recovery, Resilience and Community

In the literature three concepts stand out as central in many post-disaster thinking; recovery, resilience and community.

At minimum, recovery is generally understood to refer to a community returning to the state it was in prior to the disaster occurring, with the infrastructure and human impact addressed as best possible and done so sufficiently that people can live safely in the area and rebuild their lives. The recovery literature, however, suggests those areas that have been through disaster rarely return to the "normal" state, which preceded disaster; such places are changed forever. The literature also recognises that recovery is a journey that does not necessarily have an end, and that the experience of the individuals affected will differ greatly.[4]

Beyond this minimal view there is an argument that recovery should also address as much as possible those conditions which put the community at risk in the first place; putting foundations in place to give the community greater resilience.[5] The development of safe stadiums in the aftermath of the Hillsborough disaster is an example of this.

A further view of recovery is about the necessity to grasp the opportunity to "build back better" or "invent the future". As Williams and Yang Liu have written:

"Disasters provide opportunities to change patterns of development, new resources to support those changes, and incentives to become more resilient and sustainable, reducing losses in future disasters. Policy inertia is broken, new voices are heard, constituencies are mobilized, champions emerge, and new development tools are brought to bear."[6]

[4] McColl, G. J., & Burkle, F. M. (2012). The new normal: Twelve months of resiliency and recovery in Christchurch. *Disaster medicine and public health preparedness*, *6*(1), 33-43.
[5] Ingram, J. C., Franco, G., Rumbaitis-del Rio, C., & Khazai, B. (2006). Post-disaster recovery dilemmas: challenges in balancing short-term and long-term needs for vulnerability reduction. *Environmental Science & Policy*, *9*(7-8), 607-613.
[6] Waugh, William L., and Cathy Yang Liu. "Disasters, the whole community, and development as capacity building." In *Disaster and development*, pp. 167-179. Springer, Cham, 2014.

The idea of a moral imperative for change following a disaster carries a lot of weight. The change to Manchester City Centre after the 1996 IRA bomb is one such example.

A second concept, resilience, refers to individual or collective capacity to withstand adversity, and to be able to bounce back. In the context of disaster, resilience often refers to an area's capacity to deal with the initial consequences of a disaster; the physical, social and organisational preparedness of a place for adversity. In the context of recovery, resilience may mean collective capacity (through institutions, individuals and groups), to provide the necessary support to each other as the journey of recovery proceeds.[7] Resilience is important both initially and in the longer term, as the focus of wider public attention moves and the resources available in the immediate aftermath diminish.

Lastly, the concept of community is strong within recovery literature.[8] Community is frequently used as a synonym for a geographical area or physical space in which people have been affected, but it often means more than this; places where prior to the disaster there are social bonds which connect people. These bonds exist to different degrees in any place and the experience of disaster and desire for a better future can heighten or supplement them. The use of community in this way can encourage a presumption of homogeneity (for example, of attitudes, culture, beliefs, and interests) that does not exist; people operate with multiple identities often relating to many different communities: of place, culture, interest, religion etc. Community and resilience are frequently linked in the disaster literature. Aldrich and Meyer describe it as follows:

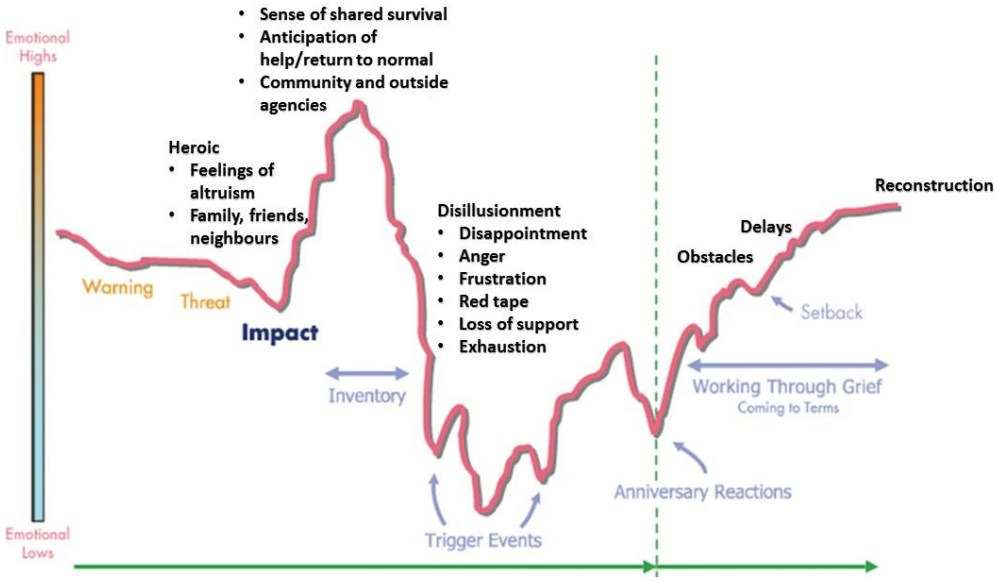
"Community resilience describes the collective ability of a neighbourhood or geographically defined area to deal with stressors and efficiently resume the rhythms of daily life." [9]

[7] Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American journal of community psychology*, *41*(1-2), 127-150.
[8] Patterson, O., Weil, F., & Patel, K. (2010). The role of community in disaster response: conceptual models. *Population Research and Policy Review*, *29*(2), 127-141.
[9] Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist*, *59*(2), 254-269.

The recovery trajectory

One approach frequently cited in the literature, is the psycho-social recovery trajectory that suggests how a typical recovery journey is experienced.[10] The widely used and adapted Zunin and Myers model below illustrates this. As with any model, not every journey follows the precise pattern, and time lines may differ quite considerably from one disaster to another.

The Trajectory of Recovery



Source: adapted from Phases of Disaster, Zunin & Myers (1992)

While disasters are often unpredictable in nature, there are often either warning signs or concerns about the present risk or vulnerability. This is the 'Pre-disaster Phase'.

After the initial impact of the disaster comes the 'Heroic Phase'. This is a time when need is acute, people are energised to help, with an immediate focus on saving each other and property. The community comes together to help deal with the aftermath. This can extend from one week to several months after a disaster. There is evidence from past disasters that this hopeful feeling focuses on the fact that help will continue to be available and that things will return to normal soon.

[10] Britt, E., Carter, J., Conradson, D., Scott, A., Vargo, J., & Moss, H. (2012). Resilience framework and guidelines for practice.

After this is the 'Disillusionment Phase', the period when people begin to realise how long the recovery is going to take. The length and severity of this phase will depend on the extent of loss, as well as the resources available. It can often last several years. People will feel overwhelmed, fatigued, stressed with feelings of frustration, anger and exhaustion. It will be the beginning of looking to return any property, identifying appropriate memorialisation, inquests, inquiries, potential legal trials as well as the development of different networks.[11]

Then there is the reconstruction phase, the journey of recovery begins as resettling, rebuilding and adapting to the "new normal" begins. Even in this stage, however, not all people are "recovered"; for many people the experience of grief, trauma and the wider impacts of the disaster will be with them for many years, in some ways forever.

This trajectory will occur in different ways for different people and vary for different aspects of the recovery. The model pictured is not a smooth line, reflecting both more positive and negative moments at any stage; even as the journey of reconstruction takes hold there are many moments of setback. These setbacks may be connected with trigger events, such as anniversaries, legal proceedings and more community-specific issues, and will feel different for different people. *Disaster Action*, for example, write about the stage after the first anniversary:

> "It is often assumed by others that with the passage of time those who have survived and/or been bereaved by disaster should 'recover' in neat phases, return to 'normal' and be able to put 'closure' on their experience. Such assumptions and comments often feel inappropriate and unhelpful to those with first-hand experience of disaster, reflecting the views and expectations of others rather than how it really feels."
>
> http://www.disasteraction.org.uk/leaflets/beyond_the_first_anniversary/

[11] Eyre, Anne (2006) Literature and best practice review and assessment: identifying people's needs in major emergencies and best practice in humanitarian response. Department for Culture, Media and Sport, 2006.

Immediate and secondary impacts

The disaster literature talks about the primary, or immediate impacts of a disaster, and the subsequent, secondary impacts that ripple out as the initial effects begin to influence other aspects of people's lives.

The Immediate Impacts

The Grenfell disaster had a number of known immediate impacts. First, there was significant loss of life, bereavement, and experience of trauma. With so many deaths in a tight-knit community with extensive family relationships, ethnic and religious ties, and school age children, the experience of bereavement has been widespread.

Trauma, Grief and Bereavement

Witnessing a disaster unfolding over hours, powerless to help those in the Tower, left very deep wounds for many people. The area has many large tower blocks and the fire was seen by many, either from their homes or from the surrounding streets by those who came to try and assist. The shell of the Tower remains many months after the fire, a daily reminder to those living and working locally of that night.

Grief

Grief is a natural response to bereavement. While the pain may never entirely disappear, it usually becomes more bearable with time as people adjust psychologically to their loss. Support can be helpful during the process of adjustment, but formal psychological therapy is not usually necessary. Support can come from friends, from faith leaders, from informal supporters such as neighbours and members of the bereaved' social circle, or from low-key grief counselling. However a proportion of people will fail to adjust even after a period of some months and some will show a prolonged grief response which interferes with everyday life. This is identified in DSM5, the classification system for mental health problems,

as Complex Bereavement Disorder but elsewhere as Complicated Grief or Prolonged Grief Disorder. Here we refer to it as Complicated Grief.[12]

Although recently defined, complicated grief is not a new condition. It does not fit easily into the framework of other mental health disorders perhaps because grief is a distinct emotion in its own right. However there are a number of treatments for Complicated Grief which can prove effective in helping adjustment and resumption of everyday life.[13]

Around 10% of people who are bereaved are estimated to experience complicated grief.[14] However the rate is likely to be higher in women and in those with pre-existing mental and physical health problems or PTSD as a result of the incident which caused the bereavement[15]. Social support seems to be protective and loneliness, unsurprisingly, increases risk. Prolonged grief is more likely to occur in incidents caused by human beings (as opposed to natural disasters or disease). Anger directed at those blamed for causing the event seems to increase the risk.

Whether grief is natural or becomes something more persistent it is difficult to adjust fully to loss while there is still a lack of resolution around the death. There are multiple factors which suggest that complicated grief is likely to be more prevalent amongst those bereaved by the Grenfell fire than is the case amongst the bereaved generally.

Complicated grief is not the only sequel to bereavement. About 15% of people who have been bereaved are clinically depressed at one year. There is considerable overlap with complicated grief since many, but not all, people with complicated grief are depressed. That number halves in the following year. However, the circumstances and nature of the relationship are likely to be important in determining whether clinical depression occurs.

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[12] See for example https://www.cruse.org.uk/complicated-grief

[13] Rosner, R., Pfoh, G., & Kotoučová, M. (2011). Treatment of complicated grief. *European Journal of Psychotraumatology*, *2*(1), 7995.

[14] Boelen, P. A., & Smid, G. E. (2017). Disturbed grief: Prolonged grief disorder and persistent complex bereavement disorder. *BMJ*, *357*, j2016.

[1515] Kristensen, P., Weisæth, L., & Heir, T. (2012). Bereavement and mental health after sudden and violent losses: a review. *Psychiatry: Interpersonal & Biological Processes*, *75*(1), 76-97.

For instance loss of a partner is not simply distressing in its own right, the loss of a companion to share pleasurable events with can have a negative impact on mood in its own right. Finally, the absence of depression does not imply that the bereaved person is happy, subclinical symptoms of low mood are present in perhaps twice the number of those diagnosed with depression.

There is some evidence to suggest that death rates rise amongst bereaved spouses, particularly men, in the short to medium term.[16] The reason for this remains unclear.

Children present a particular issue. Children are often highly socially connected through their schools. The impact of death of a friend on children has been much less studied than death of a parent.

Experiencing traumatic events

In recent years, there has been significantly greater awareness of the psychological impacts of experiencing traumatic events. One aspect of this has been that the everyday language of "experiencing traumatic events", "being traumatised" and suffering from "post-traumatic stress disorder" can become conflated. The latter is a diagnosable condition according to a set of criteria, with an evidence-based set of treatments.[17] Many people may experience symptoms relating to a traumatic experience without a diagnosis of PTSD. Some people experience post-traumatic stress disorder and others do not. Our understanding of why this is so is still developing, along with our understanding of the scale of impact, and how this varies by types of event and other vulnerabilities. The NHS estimates that 1 in 3 people suffer from PTSD when exposed to a traumatic event.[18] However, Grenfell tragedy may have atypical characteristics.

Bonnano's work based on data from people who experienced 9/11, the Oklahoma City bombing and the Los Angeles riots, describes four different

[16] For example Kaprio, J., Koskenvuo, M., & Rita, H. (1987). Mortality after bereavement: a prospective study of 95,647 widowed persons. *American Journal of Public Health*, *77*(3), 283-287.
[17] www.ptsd.va.gov/professional/PTSD-overview/dsm5_criteria_ptsd.asp
[18] https://www.nhs.uk/conditions/post-traumatic-stress-disorder-ptsd/

paths of trauma.[19] Many people are resilient to the impact of the traumatic event they experience. They will suffer in the immediate aftermath but will quickly recover. A second group are described as experiencing a path of recovery. For them the impact of the experience will be more prolonged but then they will start to get better. This is why treatment guidance for PTSD recommends a period of 'watchful waiting' before treatment, so as not to interfere with peoples existing capacity to recover spontaneously.[20] Some experience chronic trauma; their symptoms in the immediate aftermath persist for a significantly extended period. A fourth group experience delayed trauma, with the heightened impact emerging later, some period after the event. Bonnano's analysis is consistent with the NHS estimates that the majority of people exposed are resilient to PTSD, and that a significant minority will experience prolonged impact. He argues that potentially 5-10% experience a delayed traumatic experience though these are typically people with quite acute symptoms in the immediate aftermath.

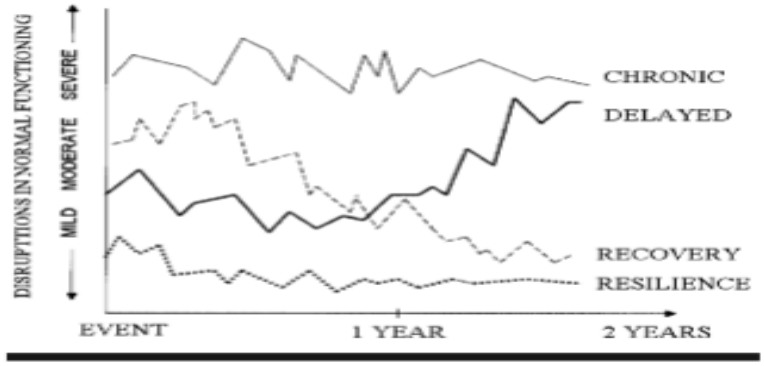
A 33-year follow up of survivors of the Aberfan Colliery disaster showed significantly higher levels of PTSD among adults who had been children in the school that was impacted compared to others locally.[21] Although knowledge of trauma, treatments and support have improved in the intervening years, PTSD was not recognised as a phenomenon when the Aberfan disaster occurred, this highlights the potential long term impact. In Lac Megantec, the mental health impact of the disaster was underestimated initially and in subsequent years the numbers found to be experience psychological distress have continued to rise.[22]

Following the Manchester and London Bridge terrorist attacks of 2017, the NHS developed Incident Support Pathways for adults and children setting

[19] Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual review of clinical psychology*, *7*, 511-535.
[20] NICE (2005) Guidance on Post-traumatic stress disorder: management
[21] Morgan, L., Scourfield, J., Williams, D., Jasper, A., & Lewis, G. (2003). The Aberfan disaster: 33-year follow-up of survivors. *The British journal of psychiatry*, *182*(6), 532-536.
[22] Généreux, M and maltais, D (2017 Three Years After the Tragedy: How the Le Granit Community is Coping, VISION Sante Publiquw, Universite de Quebec

out the evidence based approaches to supporting populations impacted by traumatic events.[23]

Prototypical Patterns of Disruption in normal functioning across time following interpersonal loss or potentially traumatic events



Source Bonnano (2011)

In everyday language, resilience can sometimes sound like a judgement, a facet of a functioning personality or referring to "super-copers", and therefore lack of resilience as some sort of individual deficit. In the context of the post-disaster literature, however, it is simply a description of someone who, when exposed to the same adversity that badly affects another individual, remains well. Rather than being a feature of a certain personality type, resilience and, conversely, suffering, appear rooted in a number of risk- and protective factors. [24]

Some of these are linked to stable aspects of people's personality, such as perceived control, lack of negative feelings, positive emotions and ability to cope. Significant evidence also shows that women are at greater risk than men in the aftermath of a traumatic event, while being older and having more education are protective characteristics. How close people are to the disaster is associated with greater risk, and experience of past distress is a significant risk factor. Being able to call on social support is associated with resilience, as are financial resources. The population of North Kensington, with a relatively high proportion of people with poor mental health and previous exposure to traumatic events (for example,

[23]http://healthylondon.org/hlparchive/sites/default/files/London_incident_support_pathway_for_adults.pdf

[24] Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. *Trauma, Violence, & Abuse*, *6*(3), 195-216.

those who are refugees, fleeing violence and persecution) was at significantly higher than average risk from trauma at the time of the fire.[25] Conversely, the strength of social connections in the community may be acting as a protective factor during exposure to trauma.

Homelessness and dislocation

Large numbers of people lost their homes in the fire, while others were unable to return to them. This was particularly challenging given the context of concurrent trauma and bereavement. With the loss of their homes and possessions, people also lost important sources of emotional support and the safety of a home environment in which to work through their trauma and grief. Instead of being able to focus on their emotional needs, those displaced have had to deal with practical matters of housing, finances and a wide range of administrative issues (such as losing key documents). The experience of living in temporary accommodation is highly challenging and hotels bring a particular challenge with privacy, the inability to normalise life with things like cooking meals, the struggle to self-care through basic things such as exercise and a healthy diet, the distance from school, GP, other support networks and employment. The impact may be particularly acute for children and families. Evidence from the UK floods of 2007 is that evacuation from home was significantly associated with psychosocial distress, independent of other factors.[26]

Loss of trust in authorities

Many people experienced the loss of trust in public authorities in the aftermath of the Grenfell Tower fire tragedy. As Vale and Campanella write

[25] Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual review of clinical psychology*, *7*, 511-535.

[26] Paranjothy, S., Gallacher, J., Amlôt, R., Rubin, G. J., Page, L., Baxter, T & Palmer, S. R. (2011). Psychosocial impact of the summer 2007 floods in England. *BMC public health*, *11*(1), 145; Carroll, B., Morbey, H., Balogh, R., & Araoz, G. (2009). Flooded homes, broken bonds, the meaning of home, psychological processes and their impact on psychological health in a disaster. *Health & Place*, *15*(2), 540-547.

in their book on how modern cities recover from disaster *"in the aftermath of disaster the very legitimacy of government is at stake"*[27].

This may be particularly true when Government is considered implicated in failing to prevent the tragedy initially on top of the inadequacies widely felt in the authorities' response, as has previously been in the case in other "technological" disasters, where alongside breakdown in trust, there is often widespread anger and blame.[28] The circumstances which led to the disaster are being examined in great detail by the coroner, public inquiry and criminal investigations however it is clear that trust in the local authority was immediately significantly diminished. Given the responsibilities that authorities have for many aspects of recovery this distrust creates a challenging environment for recovery.

Community cohesion and action

Against these challenges what is often seen post-tragedy and was evident in the Grenfell context, is the great capacity for support and mutual aid generated from within the community. From the night of the fire onwards, local residents came together to try to support each other. For some the support structured around both faith based and secular community organisations with strong roots locally. Other support was simply set up on the back of the capacity, energy and commitment of local people to be there for each other.

Secondary Impacts

The secondary impacts of the disaster can be widespread, with the trauma and dislocation of the experience, and the emergency response in itself precipitating a range of consequences that affect people in many different

[27] Vale, L. J., & Campanella, T. J. (2005). *The resilient city: How modern cities recover from disaster*. Oxford University Press.
[28] Solomon, M. J., & Thompson, J. (1995). Anger and blame in three technological disasters. *Stress and Health*, *11*(1), 199-206.

ways. The factors below are interrelated, with challenges in one area, impacting on another aspect of life. [29]

In Collective Conviction, the story of Disaster Action, which draws on the experience of 28 disasters over 40 years, the authors demonstrate the immense long-term impact on the bereaved close family. Alongside dealing with loss, and supporting their family, there are issues to do with funerals and return of possessions; dealing with legal issues including coronial processes; the search for answers, understanding and justice; compensation and memorialisation. The authors discuss how in all of these process the institutions, services and bureaucracies that work with the bereaved can approach the interactions with more or less compassion, sensitivity, empowerment and transparency. The authors suggest that this has improved over the years with a greater understanding and respect for the rights of the bereaved but underline how important this is.[30]

Mental Health & Wellbeing

Alongside the trauma and loss that many people experience post disasters like the Grenfell tragedy, a wide range of additional stressors emerge that, add to the psychological toll on individuals; the dislocation of homelessness; the disruption to family life; the frustrations of reconstruction and recovery; the long and arduous quest for legal redress. In this context, many risk factors for depression and anxiety are present, and repeated studies have shown a higher prevalence of these in populations post disaster. This has

[29] Bonanno, G. A., Brewin, C. R., Kaniasty, K., & Greca, A. M. L. (2010). Weighing the costs of disaster: Consequences, risks, and resilience in individuals, families, and communities. *Psychological Science in the Public Interest*, *11*(1), 1-49.
[30] Eyre, A and Dix, P (2014) Collective Conviction: The story of Disaster Action, Liverpool University Press

included for children and young people[31] and adults, in both the short and long term follow up studies.[32]

The increases in psychological distress in post disaster contexts may be expected to be associated with higher rates of suicide. Much of the evidence however does not support this. A major review by Krug and colleagues looking at a large number of disasters over a 4-year period in the US showed no significant increase in suicide[33]. More recently a study of the impact on suicide the devastating 2009 L'Aquila earthquake in Italy in which over 300 people died, showed a reduction in suicide from pre-earthquake levels. The authors point to the nature of the individual and community response to trauma, as a possible protective factor against suicide even in a context of great distress. [34]

At a community level, the heightened social connections and focus on mutual aid and support may be protective. Studies have however shown more consistently an increase in suicidal thoughts or ideation post disaster. These findings should not warrant complacency in this area and acute mental distress should still be closely watched for.

Physical health

Physical health can be at risk in a number of ways in the aftermath of a disaster, other than the most obvious risk from exposure to harm directly in

[31] Kar, N., & Bastia, B. K. (2006). Post-traumatic stress disorder, depression and generalised anxiety disorder in adolescents after a natural disaster: a study of comorbidity. *Clinical Practice and Epidemiology in Mental Health*, *2*(1), 17; Bolton, D., O'Ryan, D., Udwin, O., Boyle, S., & Yule, W. (2000). The long-term psychological effects of a disaster experienced in adolescence: II: General psychopathology. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, *41*(4), 513-523; Reijneveld, S. A., Crone, M. R., Verhulst, F. C., & Verloove-Vanhorick, S. P. (2003). The effect of a severe disaster on the mental health of adolescents: a controlled study. *The Lancet*, *362*(9385), 691-696.

[32] Galea, S., Ahern, J., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., & Vlahov, D. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. *New England Journal of Medicine*, *346*(13), 982-987. Green, B. L., Lindy, J. D., Grace, M. C., Gleser, G. C., 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.

[33] Krug, E.G., Kresnow, M.J., Peddicord, J.P., Dahlberg, L.L., Powell, K.E., Crosby, A.E., & Annest, J.L. (1999). Retraction: Suicide after natural disasters. New England Journal of Medicine, 340, 148–149.

[34] Stratta, P., & Rossi, A. (2013). Suicide in the aftermath of the L'Aquila (Italy) earthquake. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *34*(2), 142.

the incident. The dislocation of disaster can mean people are less likely to be living close to trusted sources of help such as their local GP, pharmacies or if they are vulnerable the social networks that are important to them. If they are in temporary accommodation, they may struggle to maintain a good diet for health; and this disruption may inhibit the physical activity, which is important to their health. There is evidence of increased levels of smoking or drinking as well as a coping strategy to deal with stress.[35] Alongside this, self-care for people with long-term conditions such as diabetes may suffer in this context. [36]

Alongside this, there is a link between the experience of trauma and physical health. A large-scale review of health following a large number of disasters identified a very widespread experience of medically unexplained symptoms among disaster survivors. Studies found a significant relationship between experience of PTSD and medically unexplained symptoms.[37] Another review on the links between PTSD and physical health showed higher incidence of pain, cardio-respiratory symptoms and Gastro-intestinal complaints for those who have experienced trauma.[38] The connections between PTSD and physical health are only starting to be understood. Emerging thinking links the neurochemical changes associated with PTSD with impacts on physical health. However, increased level of service provision and help seeking may also contribute to increased levels of diagnosis. Notwithstanding the cause, increases both unexplained medical symptoms and a range of physical health challenges are expected over time.

[35] Vlahov, D., Galea, S., Resnick, H., Ahern, J., Boscarino, J. A., Bucuvalas, M., ... & Kilpatrick, D. (2002). Increased use of cigarettes, alcohol, and marijuana among Manhattan, New York, residents after the September 11th terrorist attacks. *American journal of epidemiology*, *155*(11), 988-996.

[36] Fonseca, V. A., Smith, H., Kuhadiya, N., Leger, S. M., Yau, C. L., Reynolds, K., ... & John-Kalarickal, J. (2009). Impact of a natural disaster on diabetes: exacerbation of disparities and long-term consequences. *Diabetes Care*.

[37] van den Berg, B., Grievink, L., Yzermans, J., & Lebret, E. (2005). Medically unexplained physical symptoms in the aftermath of disasters. *Epidemiologic Reviews*, *27*(1), 92-106.

[38] Pacella, Maria L., Bryce Hruska, and Douglas L. Delahanty. "The physical health consequences of PTSD and PTSD symptoms: a meta-analytic review." *Journal of anxiety disorders* 27, no. 1 (2013): 33-46.

Family relationships

Families are of huge importance as a protective factor for individuals post disaster. The impact of such events can cause a family to pull together to offer much needed support. However, the 'ripple effect' following a disaster can mean that families' relationships can come under severe stress. Often there are cases of communication breakdown, PTSD affecting normal routines, a loss of income, loss of home and loss of sense of place, a search for new employment, and for some moving away from wider social networks of support. In a large qualitative study of what mattered to children in the aftermath of the Christchurch earthquakes, family relationships were by far the most important factor.[39]

Cohan and Cole identified that following Hurricane Hugo there were increases in divorce, but also marriage and birth rates, highlighting both the strengthening and challenging context of disaster for families.[40]

There is some evidence for increases in the incidence of domestic violence in communities experiencing a disaster.[41] After Hurricane Katrina, a study found that, among the women in Mississippi who were displaced from their homes, domestic violence rates increased dramatically.[42] These associations may be rooted in any number of cause relating to mental distress, anger, absence of control, disruption of family roles and increased alcohol and substance misuse.

[39] Freeman, C., Nairn, K., & Gollop, M. (2015). Disaster impact and recovery: what children and young people can tell us. *Kōtuitui: New Zealand Journal of Social Sciences Online*, *10*(2), 103-115.
[40] Cohan, C. L., & Cole, S. W. (2002). Life course transitions and natural disaster: marriage, birth, and divorce following Hurricane Hugo. *Journal of Family Psychology*, *16*(1), 14.
[41] Palinkas, L., Downs, M., Petterson, J., & Russell, J. (1993). Social, cultural, and psychological impacts of the Exxon Valdez oil spill. Human Organization, 52(1), 1-13.
[42] Anastario, M., Shehab, N., & Lawry, L. (2009). Increased gender-based violence among women internally displaced in Mississippi 2 years post–Hurricane Katrina. Disaster medicine and public health preparedness, 3(1), 18-26.

Children's development and education[43]

Abramson and others have argued that children's mental health and wellbeing should be a "bellwether" indicator for the progress of a recovery, as they are likely to be impacted by such a variety of both direct and indirect stresses in a disaster's aftermath.[44] For example where families are struggling it is inevitable that children will be struggling too. Children may well have been exposed to the trauma and grief themselves. As mentioned earlier, children are potentially more vulnerable to PTSD than adults are and this itself may have significant impacts for their health and wellbeing and in turn affect outcomes such as school attendance and performance. Children suffering from trauma may find it hard to sleep, and hard to concentrate in class. But children, as well as directly impacted, are also strongly influenced by their wider environment. The evidence in any context of the impact of parental mental health on children's wellbeing is strong. Similarly, the school or pre-school environment which is such an important part of children's lives can also be affected, with other children, and staff personally impacted by the tragedy. Research conducted with children and young people affected by the flooding in Lancashire shows that it was not so much the flood itself that had an impact on young people, but what came afterwards, that was hardest for the children to deal with[45]. Research post Hurricane Katrina showed the impact increased the risk of low attainment, behavioural difficulties and school exclusion for displaced children.[46]

[43] Furr, J. M., Comer, J. S., Edmunds, J. M., & Kendall, P. C. (2010). Disasters and youth: a meta-analytic examination of posttraumatic stress. *Journal of consulting and clinical psychology*, *78*(6), 765.

[44] Abramson, D. M., Park, Y. S., Stehling-Ariza, T., & Redlener, I. (2010). Children as bellwethers of recovery: dysfunctional systems and the effects of parents, households, and neighborhoods on serious emotional disturbance in children after Hurricane Katrina. *Disaster Medicine and Public Health Preparedness*, *4*(S1), S17-S27.

[45] Walker, M., Whittle, R., Medd, W., Burningham, K., Moran-Ellis, J., & Tapsell, S. (2010). Children and Young People'after the rain has gone'–learning lessons for flood recovery and resilience: Hull Children's Flood Project Final Report.

[46] Ward, M. E., Shelley, K., Kaase, K., & Pane, J. F. (2008). Hurricane Katrina: A longitudinal study of the achievement and behavior of displaced students. *Journal of Education for Students Placed at Risk*, *13*(2-3), 297-317.

Livelihoods

There many ways in which in the aftermath of a disaster peoples' livelihoods can be impacted. People may be unable to go to work due to health reasons, or because they have caring responsibilities for others. Displacement could affect some people's access to work. Others may find that the demands on them as survivors, either logistical if displaced, or in supporting people in their community, make it hard to go into work. People who have businesses in the impact area may also be impacted. Being out of work also has a 'scarring' effect, that means once you have left work it is harder to get back in, so even those who receive disaster related funds which may assist them for a period of time, may find that getting back into work when necessary is much harder. One review of many post disaster studies suggested that this impact could last between 10 weeks and 32 months post disaster.[47] In a study of lessons learnt after Hillsborough, Newburn identified that employers were generally sympathetic to the need for compassionate leave in the immediate aftermath of the disaster, but that this dissipated as time moved on.[48] Another study in Mississippi, indicated that prolonged financial stressors can affect the onset and duration of PTSD, and therefore any post-disaster interventions that aim to improve these stressors may positively influence the onset and course of PTSD. [49]

Community cohesion

In many ways disasters bring people positively together, being a catalyst for a further sense of community out of shared experience, desire to connect with others, importance of looking after one another, and common desire to work towards shared goals whether that is about seeking justice around the cause of the disaster or informing reconstruction and recovery. Coming

[47] Lock, S., Rubin, G. J., Murray, V., Rogers, M. B., Amlôt, R., & Williams, R. (2012). Secondary stressors and extreme events and disasters: a systematic review of primary research from 2010-2011. *PLoS currents*, *4*.
[48] Newburn, T. (1996). Some lessons from Hillsborough.
[49].Galea, S, Trac My, Norris F, Coffey SF (2008) Financial and social circumstances and the incidence and course of PTSD in Mississippi during the first two years after Hurricane Katrina in Journal of Trauma Stress. 2008 Aug; 21(4): 357–368.

together is a very common reaction to disaster and is a hugely important protective factor for individual wellbeing.[50]

However there are aspects of disaster response which can contribute to adverse community wellbeing. This disruption to community life of a disaster with consequent contested issues around legal redress, compensation and visions for the future can lead to community discord. In the wake of the Deepwater Horizon Oil Spill, one study focussed on the impact of compensation schemes following disasters. While these are often entirely legitimate in compensating for significant loss, and often beneficial to recipients in overcoming what would otherwise be significant financial challenges Mayer and others argued that aspects of the process (perceived unevenness, randomness and uncertainty) caused conflict as people saw inequity in the process. Ironically the close-knit community nature of the community impacted, which provided the protective social capital, also compounded the risk as knowledge or supposed knowledge of some peoples' situations fuelled the concerns of others.[51]

[50] Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. *American Behavioral Scientist*, *59*(2), 254-269.
[51] Mayer, B., Running, K., & Bergstrand, K. (2015, June). Compensation and Community Corrosion: perceived inequalities, Social Comparisons, and competition following the Deepwater Horizon Oil spill. In *Sociological Forum* (Vol. 30, No. 2, pp. 369-390).

Supporting effective recovery

In reflecting on the primary and potential secondary impacts of the Grenfell Tower Fire disaster, this section sets out what the evidence suggests may be important ingredients of supporting effective recovery.

The evidence base is clear that the journey of recovery is a long one. Policy makers and leaders across Government and institutions that are part of the recovery will benefit from recognising this and ensuring that the level of commitment in both focus and resources is maintained over a considerable period of time, even as the nature of the approach evolves hopefully in line with the trajectory of recovery. As discussed earlier the authors of Collective Conviction emphasise the importance of the institutions, services and bureaucracies involved in recovery approaching the work with compassion, sensitivity, empowerment and transparency.

Support for those who are bereaved

Bishop James Jones has recommended the adoption of a Charter for Families Bereaved through Public Tragedy, which addresses the values that should underpin how institutions seek to engage with, and support, bereaved families through the multitude of processes they will experience in the years following a disaster.[52] Collective Conviction outlines the practical steps that authorities can take to support bereaved families over the long term. Disaster Action emphasises that the best help is empowering, assisting families to help themselves.

Charter for Families Bereaved through Public Tragedy

In adopting this charter I commit to ensuring that [this public body] learns the lessons of the Hillsborough disaster and its aftermath, so that the perspective of the bereaved families is not lost. I commit to [this public body] becoming an organisation which strives to:

[52] The Right Reverend James Jones KBEHC (2017) 'The patronising disposition of unaccountable power' A report to ensure the pain and suffering of the Hillsborough families is not repeated

1. In the event of a public tragedy, activate its emergency plan and deploy its resources to rescue victims, to support the bereaved and to protect the vulnerable.

2. Place the public interest above our own reputation.

3. Approach forms of public scrutiny – including public inquiries and inquests – with candour, in an open, honest and transparent way, making full disclosure of relevant documents, material and facts. Our objective is to assist the search for the truth. We accept that we should learn from the findings of external scrutiny and from past mistakes.

4. Avoid seeking to defend the indefensible or to dismiss or disparage those who may have suffered where we have fallen short.

5. Ensure all members of staff treat members of the public and each other with mutual respect and with courtesy. Where we fall short, we should apologise straightforwardly and genuinely.

6. Recognise that we are accountable and open to challenge. We will ensure that processes are in place to allow

Community led recovery

Individual and community social capital networks provide access to various resources in disaster situations, including information, aid, financial resources, and child care along with emotional and psychological support.

> "While disaster situations may typically call forth images of trained professionals and formal rescue operations, scholarship has shown that informal ties, particularly neighbours, regularly serve as actual first responders."
>
> Aldrich, D. P., & Meyer, M. A. (2015). Social capital and community resilience. American Behavioral Scientist, 59(2), 254-269

One of the critical foundations of recovery is the ties that connect people, supporting each other to address the practical and emotional challenges they face. Some communities (including communities within) benefit from strong ties prior to disaster that enable them to mobilise and support each other in the aftermath; others have weaker ties, and all affected populations will have people who are more isolated and feel less connected.

The demands on local people in the aftermath of recovery far exceed those of everyday life. For authorities, one challenge is to recognise the power of community-based responses, including work which may be invisible to authorities' official response. Much important work occurs informally in the daily contact between caring individuals, but much also takes place in emergent or rooted community organisations providing spaces for people to convene, to reach out to the more isolated, and to provide more formal support. Recovery thinking suggests that this work needs to be valued by authorities; it is greatly valued by community members as rooted in community and if supported can endure for the long term.[53]

Abramson and colleagues', focusing on numerous disasters in the US and internationally, define community resilience as:

> "the enduring capacity of geographically, politically or affinity-bound communities to define and account for their vulnerabilities to disaster and develop capabilities to prevent, withstand, or mitigate for a traumatic event."
>
> Abramson, D. M., Grattan, L. M., Mayer, B., Colten, C. E., Arosemena, F. A., Bedimo-Rung, A., & Lichtveld, M. (2015). The resilience activation framework: a conceptual model of how access to social resources promotes adaptation and rapid recovery in post-disaster settings. The journal of behavioral health services & research, 42(1), 42-57.

They argue that the strength of a community's capacity for resilience is contingent on access to different forms of capital where:

- human capital refers to the skills, health and capacities of people in the community
- financial capital refers to the financial resources the community can draw upon
- social capital refers to the ties that bind people in the community to each other, and those that bridge to those outside the community in helpful ways
- political capital refers to the ability of the community to assert its priorities effectively with policy makers

[53] Whittaker, J., McLennan, B., & Handmer, J. (2015). A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges. *International journal of disaster risk reduction*, *13*, 358-368.

A wide variety of community institutions can be supportive of the recovery process. Schools clearly have a role to play in supporting children and young people to settle in education post disaster. As Kantor and Abramson argue, because of the significant role they play in local life, and their strong connection with parents as well as children, schools can be a key ingredient of a community's overall recovery.[54]

For example, In New Zealand, the Ministry of Education prioritised Greater Christchurch to access a range of programmes developed in response to the prime minister's youth mental health initiative, alongside priority access to other programmes in response to the earthquakes. In addition, there was a collaborative development of schools based mental health team to respond to a variety of children and family needs as a direct response of the earthquake.[55]

In the USA, the implementation of a school-based trauma-specific mental health programme in New York City following the terrorist attacks on September 11, 2001 aimed to serve children most at risk for developing mental health problems as a result of physical proximity (e.g., evacuation from schools surrounding the World Trade Centre) to the trauma.

Support leadership capacity

"*Ordinary citizens who volunteer their time, knowledge, skills and resources to help others in times of crisis represent an immense resource for emergency and disaster management*."

Whittaker, Joshua, Blythe McLennan, and John Handmer. "A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges." *International journal of disaster risk reduction* 13 (2015): 358-368.

Many people take on vital roles of informal support for one another, while others volunteer as part of formal voluntary or emergent organisations. Those who are already active in such a capacity may find themselves working well beyond their normal hours and boundaries in response to a

[54] Kanter, R. K., & Abramson, D. (2014). School interventions after the Joplin tornado. *Prehospital and disaster medicine*, *29*(2), 214-217.
[55] www.tepou.co.nz/news/school-mental-health-team-initiative/875

disaster. Whitaker and others argue that disaster recovery planning too often focuses on the professional response, insufficiently valuing the role community members play.

Understanding diversity in recovery

Although there is considerable discussion of the impact of social vulnerabilities within the recovery literature there is less discussion of the impact of cultural differences.

The interactions of aspects of culture and identity, alongside a myriad of individual experiences, shape different ways in which people respond to disaster, seek help and build a vision of future. Marlowe and Lou's study of the Ethiopian, Afghan and Butanese communities affected by the Christchurch earthquake highlight both the strength of those communities in providing mutual aid to each other, given the right spaces and resources, but also the challenges (particularly for those most recent arrivals and those with least English) in accessing support and services.[56] [57]

The experience of differential effects resulting from cultural differences is clearly relevant to the Grenfell disaster; few such localised events can have impacted more diverse populations. People affected include migrants from many parts of the world, both those who have lived in North Kensington for many decades and more recent arrivals, including settled refugees and people with uncertain immigration status whose ties and connections to the area are more fragile. Many of those affected by the disaster have limited English language skills. There have also been large numbers of Muslim people impacted.

[56]Marlowe, J., & Lou, L. (2013). The Canterbury earthquakes and refugee communities. *Aotearoa New Zealand Social Work*, *25*(2), 58; Marlowe, J. (2015). Belonging and disaster recovery: Refugee-background communities and the Canterbury earthquakes. *British Journal of Social Work*, *45*(suppl_1), i188-i204; Uekusa, S., & Matthewman, S. (2017). Vulnerable and resilient? Immigrants and refugees in the 2010–2011 Canterbury and Tohoku disasters. *International Journal of Disaster Risk Reduction*, *22*, 355-361

Recovery for many people is interconnected with religious belief and/or notions of justice, and for some people, religion can be an overarching framework for recovery. Religion, rituals and remembrance may play a fundamental role for those affected by disaster. It is important to acknowledge and address the meaning of decisions surrounding commemoration and the relationship between these and recovery for those directly affected.

It is widely recognised that, what is often referred to as, cultural competence should be at the heart of all approaches to provide services of all kinds, and this is no less so in a disaster context. Betancourt and others define cultural competence as

> "*understanding the importance of social and cultural influences on patients' health beliefs and behaviors; considering how these factors interact at multiple levels of the health care delivery system (e.g., at the level of structural processes of care or clinical decision-making); and, finally, devising interventions that take these issues into account to assure quality health care delivery to diverse patient populations*."
>
> Betancourt, J. R., Green, A. R., Carrillo, J. E., & Owusu Ananeh-Firempong, I. I. (2016). Defining cultural competence: a practical framework for addressing racial/ethnic disparities in health and health care. Public health reports.

Memorialisation

Appropriate, community owned memorialisation is a vital part of a recovery process. Memorialisation ensures that bereaved and other effected people believe their loved ones have been honoured, their pain has been recognised and gives a places for them to mourn. Any memorial must be sensitive to the range of social, religious and political issues surrounding the disaster. The bereaved should be at the heart of memorialisation processes.58

One element of the Christchurch recovery in New Zealand following the Earthquake has been the focus on memorialisation and green space. An initiative called 'Healthy Christchurch' has led on creating six gardens of 'beauty and peace' that transformed some of the demolition sites across Christchurch. These tranquil spaces are for use for family and community use, with spaces designed for both and has in partnership with the city's different ethnic communities to include their traditions, cultures and spiritual beliefs.

In flood areas in USA, new playgrounds brought an education component to the area - allowing science teachers to include storm water management, landscape architecture and rain gardens in their curriculum. Researchers have also studied post-disaster memorials across the USA, including one created after Hurricane Sandy. The tree-like sculpture in an area called the Rockaways, called Sea Song where residents contributed salvaged and hand-made materials, messages and mementos to its base and in its crevices, often with prayers and messages of hope. The sculpture draws on the idea of "prayer trees" found in various cultures around the world where trees are specially chosen within a village or town where people express their hopes and prayers by attaching scraps of fabric or other objects to the tree. The tree thus becomes a significant collection of the hopes and aspirations of the community.

[58] Eyre, A. (2006). Literature and best practice review and assessment: identifying people's needs in major emergencies and best practice in humanitarian response. Department for Culture, Media and Sport.

In Aberfan, in Wales, part of the appeal fund was used to construct a formal memorial in the shape of a cross bearing the names of the victims at the place where some of them were buried in a mass funeral. They constructed a garden of remembrance on the site where the junior school once stood, its layout reflecting the original layout of the classrooms that had been there.

Local governance focussed on recovery

As the UK Government's guidance on recovery states

> "*The management of recovery is best approached from a community development perspective. It is most effective when conducted at the local level with the active participation of the affected community and a strong reliance on local capacities and expertise. Recovery is not just a matter for the statutory agencies - the private sector, the voluntary sector and the wider community will play a crucial role*."
>
> Cabinet Office (2013) Emergency Response and Recovery *Non statutory guidance accompanying the Civil Contingencies Act 2004*.

There are several reasons why communities should be at the heart of recovery. They naturally mirror why local people should be at the heart of decision-making about their area and lives at any time, however they have a particular resonance in a disaster recovery context. Firstly, it recognises that the affected population always are at the centre of recovery even when their work is not acknowledged by the state. As discussed above, much of the work of disaster recovery begins with community members and carries on below the radar of the state's response. Secondly, it is a straightforward recognition of community members right to be involved; it is after all their community and their lives. Thirdly, it speaks pragmatically to the recognition that the most effective responses need to be owned by the community, if they are going to invest in them, themselves. It recognises that often in recovery situations trust in authority is relatively low. People are no longer willing to accept the authorities' "expertise" for what recovery looks like. Lastly, it is central to the sustainability recognising that over time resources

will become less and one of the lasting resources is the strength of local civil society.[59]

Supporting a psychosocially resilient community

The combination of the initial trauma and bereavement with the risk factors for depression and anxiety, which are frequently present in many aspects of the aftermath of the disaster, mean that the mental health and wellbeing impacts of a disaster can continue long into the future. It is vital to ensure that there is capacity in the system to provide specialist support where required. Beyond this, a public mental health approach is required to try to ensure that:

- public campaigns and messages promote offers of support and anti-stigma messaging and are done with a diversity of approaches to speak to different members of the community and foster an environment that is sensitive to mental health.
- the central role of community institutions such as schools, local community and faith organisations, and employers in supporting mental wellbeing is recognised. These need to be supported to have a good understanding about how poor mental health may impact on those they work with, and where necessary are given the tools to support this. [60]
- Frontline staff working for statutory organisations, voluntary and community groups are supported to understand the potential mental health needs of people in the community, to be able to support them appropriately, refer where necessary, and get support for their own wellbeing.

[59] Van Krieken, T., Kulatunga, U., & Pathirage, C. (2017, September). Importance of community participation in disaster recovery. In *13th IPGRC 2017 Full Conference Proceedings* (pp. 860-869). University of Salford.
[60] Mutch, C. (2015). The role of schools in disaster settings: Learning from the 2010–2011 New Zealand earthquakes. *International Journal of Educational Development*, *41*, 283-291.

Monitoring the long term impact

While there is significant investment in post-disaster recovery programmes, there is little- known of their effectiveness. What is evident is that there needs to be a more consistent evaluation of post-disaster recovery.[61] The lack of evaluations is a significant concern for post-disaster recovery efforts, especially when ensuring efficient allocation of resources to achieve good outcomes. There is also often no clear end-point for disaster recovery interventions, which brings certain challenges when designing evaluations. One such way to address this would be to take the lead from the Christchurch earthquake examples, which suggest that an appropriate way to manage this is to monitor recovery at regular intervals over a 10-year period. The Canterbury Earthquake Recovery Authority (CERA) designed the Canterbury Wellbeing Index to monitor wellbeing and track the progress of social recovery from the 2010/11 earthquakes and continues to enable monitoring of such areas as housing affordability and availability, uptake of psychosocial services, educational achievement, population movement, labour market movement, and health. The ongoing self -reporting survey has provided a valuable indication of community wellbeing over time, as the recovery progresses and the data is invaluable to ensure appropriately informed decision-making and to provide the community and other sectors with a broad indication of how the population are tracking in their recovery.

[61] Ryan, R., Wortley, L., & Ní Shé, E. (2016). Evaluations of post-disaster recovery: A review of practice material. Evidence Base, 2016(4): 1-33; Dufty, D 2013. Evaluating Emergency Management after an Event: Gaps and Suggestions. Australian Journal of Emergency Management 28, 4.

Conclusions

The recovery literature is vast and does not provide precise recipes. This review has sought to draw out key lessons that appear particular pertinent to the post Grenfell Tower fire tragedy context. Recovery is, by nature, a complex, non-linear problem involving multiple and unpredictable dependencies and relationships. The difficulty of addressing many of the practical challenges raised by disasters and the political and legal dimensions mean no single set of particular policies and actions are straightforwardly implementable with predictable results. [62] Such complex situations are best tackled by the application of a set of principles, which drive considered action.

Important elements of the recovery process, linked to justice and accountability are outside of the direct role of many actors active in the recovery process, however it vital to recognise their great importance to many peoples' journey of recovery.

The literature suggests the following may be appropriate to the current context. These will be explored more fully in the overall needs assessment.

The evidence is clear that the journey of recovery will be a long one, and even as circumstances may begin to improve their will many setbacks and for different people, very different journeys of recovery depending on their situation. Key actors in the recovery process, and in particular Governments, central and local, statutory agencies and funders require long-term commitment to recovery to support as effective a recovery as possible. Alongside resources, people and institutions with power to effect change should be committed to compassion, sensitivity, empowerment and transparency

- Many people affected by the disaster are likely to be highly resilient, but there will be long-term psychological impact for a significant minority over many years. Some of the risk factors for long-term

[62] Blackman, D., Nakanishi, H., & Benson, A. M. (2017). Disaster resilience as a complex problem: Why linearity is not applicable for long-term recovery. *Technological Forecasting and Social Change*, *121*, 89-98.

psychological distress are probably quite prevalent in the community of North Kensington. This is will impact both the scale and nature of the long-term recovery.

- Physical health can be impacted in a multitude of ways and should be effectively supported and monitored. This includes the link between trauma, psychological distress and physical health outcomes means there is a high likelihood of increased physical health need presenting in the future in the affected population.
- The psychological impact of disaster comes not just from the event itself, but from waves of trauma involved in dealing with the dislocation and consequences of recovery. Key agencies with responsibility for recovery should try hard to minimise these adverse consequences.
- The ripples of impact are likely to effect different aspects of people's lives, including relationships, educational experiences, and employment. Part of the recovery is providing the appropriate support to minimise the harmful impact on children's education, help all affected maintain work, and ensure permanent housing.
- The strength of community ties is one of the most potent protective factors, both for individual wellbeing and community recovery, but recovery can generate community conflict and every effort should be taken to minimise this risk. Statutory actors in the recovery should seek to support those institutions that build and support that community capacity. Where people are displaced away from existing community ties there should be consideration of how to maintain existing or foster new networks.
- Capitalising on the power of the community and civil society to drive recovery relies on ensuring that their capacity for actions is catalysed by investing in:
    - human capital: the skills, health, and capabilities of those leading and convening within communities
    - financial capital: the resources people have to actively contribute to community rebuilding

  - social capital: the resources that support people coming together such as physical spaces to convene, and networks of mutual aid and collaboration
  - political capital: the opportunity for local people to have a meaningful voice in decision making, and feel there voice is heard and impactful.

  While the first three are a question of resources, the latter is about challenging existing patterns of governance and decision making and involving the affected population in a far greater way.

- Recognising where particular vulnerabilities exist and ensuring that resources are targeted at these individuals is important to that those with the greatest ongoing needs are supported.
- Those commissioning or providing services should understand how peoples' different identities and needs will shape their experience of the disaster, and the ways in which they seek and use support.
- It is of vital importance to support community driven processes of memorialisation.
- The challenges for those working at the frontline will be significant over the long term. Supporting a varied workforce, paid and unpaid, across sectors, who are faced with challenging circumstances, secondary trauma, and community anger and frustration will be important to maintaining the resilience and skill to offer that ongoing support to the community.

Much of the disaster recovery literature has a focus on either people or place. Where disasters have a particular geographical impact, the rebuilding of the social fabric and support for the community is often tied to the future of that place. Other research focusses more on people, in particular those who survived the disaster and those who lost close family members. The Grenfell Tower Fire disaster is a tragedy of both people and place and as the evidence in this review is consider further in terms of specific priorities going forward, considering the lessons learnt through both those lenses will be important.