Psychosocial Recovery from Disasters: A Framework Informed by Evidence

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Following the Canterbury earthquakes, The Joint Centre for Disaster Research (JCDR), a Massey University and Geological and Nuclear Science (GNS Science) collaboration, formed a Psychosocial Recovery Advisory Group to help support organisations involved in the recovery process. This advisory group reviews and summarises evidence-based research findings for those who make requests for such information. Extensive experience within the group adds a practitioner perspective to this advice. This article discusses the definition of psychosocial recovery used by the group to date, and the group's view that psychosocial recovery involves easing psychological difficulties for individuals, families/whānau and communities, as well as building and bolstering social and psychological well-being. The authors draw on a brief discussion of this literature to make practical suggestions for psychosocial recovery.

The earthquakes in Canterbury during 2010 and 2011 have created unprecedented demands on agencies tasked with disaster recovery. An earthquake sequence of this nature and extent in Canterbury was unanticipated, and the multiple agencies involved needed to rapidly coordinate their response and recovery planning. The earthquake in Canterbury on 22 February 2011 highlighted an acute need to garner a breadth of New Zealand and international disaster recovery expertise to help inform the many facets of a rapidly developing recovery context.

The Joint Centre for Disaster Research (JCDR) is a collaboration between Massey University and GNS Science. Acting on a request from the Ministry of Social Development (MSD), JCDR rapidly formed an advisory group of specialists with experience researching and working in psychosocial recovery from disasters (see Appendix). The advisory group represents a range of diverse specialties and experience based around the discipline of psychology. The group's expertise has been applied to providing a range of advice to key agencies involved after the earthquakes in Canterbury.

In addition to drawing on extended professional experience in the psychosocial field, the advisory group has based their advice on empirical evidence to provide timely but quality advice. This evidence highlights the need to provide many levels of intervention, ranging from the general provision of basic living requirements to specialised interventions for a small proportion of the population suffering from the impact of individual trauma and related difficulties.

All advice focussed on a psychosocial approach to post-disaster recovery. This approach to recovery aims to ease physical and psychological difficulties for individuals, families/whānau and communities, as well as building and bolstering social and psychological well-being (Ministry of Health, 2007). This entails addressing vulnerabilities as well as looking for and enhancing the strengths of affected individuals and communities. The broad nature of psychosocial recovery goals demands collaboration between an extensive range of professionals such as psychologists, sociologists, economists and urban designers.

The group's own working definition of psychosocial recovery is set out in an annex to our terms of reference and is discussed within the current article. The definition was written to focus the efforts of our advisory group, and does not claim to encompass all potential aspects of psychosocial recovery. The definition does include aspects of mental health needs and psychological support, alongside communities' capacity to respond and adapt in the face of adversity. The group's definition of psychosocial recovery also focuses on the importance of community participation and engagement within recovery governance. Such participation and engagement has important effects on a population's recovery, resilience, and adaptive capacity.

Although it is tempting to regard 'recovery' as a simple process, some consideration needs to be given to the intended meaning of this term and other language used around it. The term recovery is often embedded in a model of repair and restoration to a pre-injury or pre-illness state. Accordingly, individuals may consider that successful recovery is achieved only if they return to how they were prior to the disaster (i.e., 'returning to normal'). This interpretation of recovery is neither possible nor desirable after a major disaster, and so it is useful for agencies to clarify their intended use of the term 'recovery'. This will help agencies to focus the attention of individuals and society on coping positively with a disaster, progressing toward a situation that has psychosocially and physically changed, rather than focusing on trying to return to a pre-earthquake state.

Advisory group collaborations have highlighted practical components of a strength-based approach to recovery. These components include assisting goal setting and problem-solving, social support, appreciating cultural and spiritual practices and community diversity, and the importance of coordination and integration. This advisory group's role is ongoing, as part of providing for these components. We hope to remain engaged with the Canterbury recovery through further advice and the considered design of collaborative research projects. Our advisory group also hopes to advocate for the resourcing of integrated monitoring and evaluation, which, like other aspects of longer-term planning, could be easily neglected within the ongoing challenges of recovery in the Canterbury region.

Characteristics of Our Psychosocial Recovery Advisory Group

The diversity of experience and knowledge within the group is both an advantage and a challenge. This group's diverse knowledge of psychosocial recovery is essential as, this is a complex area. Having a group capable of marshalling a wider breadth of evidence-based information is a distinct advantage to practitioners and policy-makers in the broader psychosocial recovery domain. The advisory group can take advantage of extensive international links and involvement in other disasters both within and outside New Zealand, to inform best practice in recovery from the Canterbury earthquakes.

The group has focused on maintaining an ability to co-operate and collaborate effectively, building strength from the diversity of member backgrounds and approaches. A recovery process is a vast activity where different perspectives and conflicting needs operate simultaneously. In a disaster recovery situation these conflicting demands and interests can result in the breakdown of effective communication and lead to ineffective dynamics. The advisory group has found a *modus vivendi* of functioning together to produce documents and support for clients, despite having diverse interests and frameworks. A clear demarcation of roles and processes within the group along with flexibility when responding to

demands is a factor in developing this efficiency. This example of effective collaboration reflects what efforts can be made in the wider disaster recovery arena.

Activities and interventions

In a major disaster, recovery processes can be initially overwhelming and can threaten to outstrip resources available to meet this challenge. Often agencies in the field find that so much of their time is taken up with response and recovery efforts that they have little time to examine the empirical evidence base or to analyse whether what they are doing is effective. Many frontline organisations in Canterbury had also to contend with working in makeshift offices and with some staff negatively affected by the disaster. An advisory group which can take time to research and reflect, to take a step back from operations to examine and search for pertinent material, can be a positive element in disaster recovery settings.

To date, the group has worked with numerous key agencies including MSD, the Ministry of Education, the Prime Minister's Chief Science Advisor, and the Christchurch Earthquake Recovery Authority (CERA). The group has responded to requests by researching and providing empirical information on specific aspects of psychosocial recovery processes and the style and scope of interventions. Examples of specific advice are detailed in Table 1.

▼**Table 1***:* Examples of Psychosocial Recovery Advisory Group advice given to date.

Agency	Description	Outcome
MSD	Commentary on Draft National Planning Framework for the Psycho-Social Response	Incorporated
,,	Discussion of monitoring and evaluation framework for psychosocial recovery	Ongoing involvement
CERA	Contributions to Sir Peter Gluckman briefing on psychosocial recovery	Incorporated
,,	Feedback on Draft Recovery Strategy	Delivered
CDHB	Review of potential social and economic costs of not supporting psychosocial recovery	Internal distribution
Umbrella Health	Commentary on Trauma Release Exercises	Delivered

Our advisory group can play a positive role in recovery, beyond the initial planning stages. Research can improve knowledge on current situations and refine future approaches. The Canterbury earthquakes disaster has provided a rare, if unwelcome, opportunity to improve and enhance existing knowledge of the recovery process in order to better prepare for any future disaster situations. Members of the advisory group are helping develop relevant research along with Canterbury colleagues.

Defining and Promoting Psychosocial Recovery

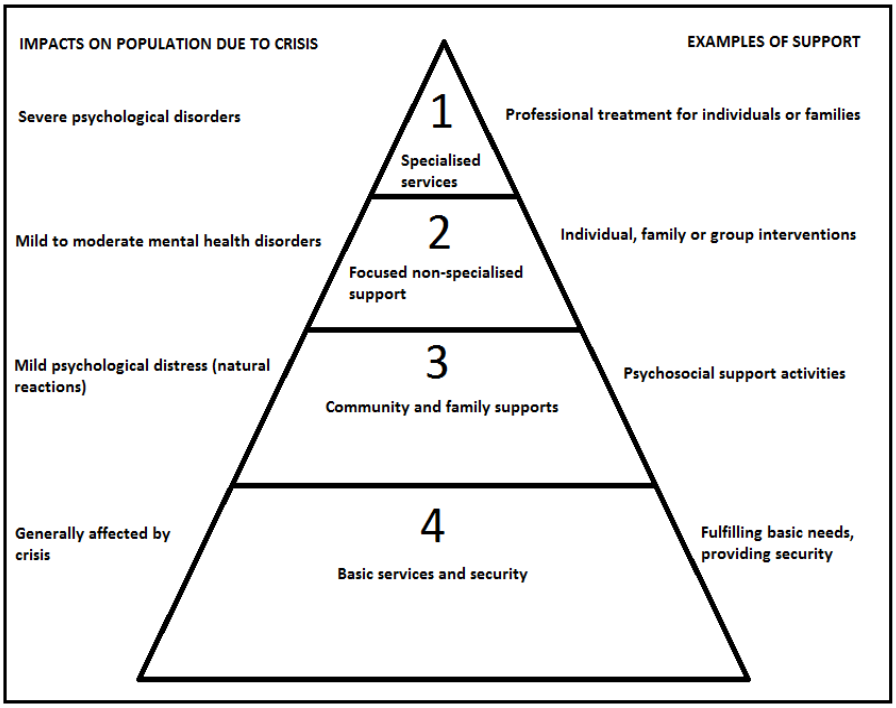
The advisory group collates and summarises a range of empirical material. This has allowed the group to compile an evolving annex to the group's terms of reference. The psychosocial definition encapsulated by this document envisages recovery as encompassing cultural, psychological, social, economic, and physical (including housing, infrastructure and physical health) dimensions that are part of the regeneration of a community which has experienced adversity. The group's full terms of reference and annex have been made available to key agencies contributing to psychosocial recovery in Canterbury. The definition provided by the annex has also helped provide the following summary of psychosocial recovery literature.

Individual and family recovery

When planning for interventions, psychosocial recovery needs to be considered at the level of individuals, families/whānau and small groups as well as communities. Individual and group needs evolve within the recovery cycle. Different groups and individuals within affected communities can experience the disaster in a range of ways. In addressing the need for psychological support, a range of research findings suggest most of the population will have reactions to a disaster. Evidence reviewed by Bonanno, Brewin, Kaniasty, and La Greca (2010), Hobfoll, Watson, Bell, Bryant, Brymer, Friedman, et al. (2007), and McNally, Bryant, and Ehlers (2003) shows these reactions will settle down and that most people will probably experience a relatively stable pattern of healthy functioning in time, given appropriate resources and support. These resources and supports need to be planned for alongside, and concurrently to, more specialised care.

Research from Tedeschi and Calhoun (2004), and Joseph and Linley (2005) have provided evidence that a proportion of the affected population will demonstrate a capacity for post-adversity growth. Initially this group may show stress symptoms and will probably benefit, along with the rest of the population living through a disaster, from basic psychosocial support. Likewise, in some cases they may benefit from more specialised mental health care.

A range of intervention levels are detailed in Figure 1. The psychosocial recovery process will need to include general support, more focused psychosocial activities and specialised psychological / psychiatric interventions. While in the immediate aftermath, many of the affected population will need only basic psychosocial support, analysis of comparable events suggests that only a small proportion of the population will need some additional psychosocial intervention through community-led, agency-supported activities designed to meet their unique needs (Bonanno et al., 2010; Bryant, 2007; Galea, Nandi & Vlahov, 2005; Galea, Tracy, Norris & Coffey, 2008; Galea, Vlahov, Resnick, Ahern, & Susser, 2003).



▶**Figure 1***:* Pyramid of post-disaster psychosocial needs. Adapted from *Psychosocial Interventions* by the International Federation Reference Centre for Psychosocial Support, 2009, *p.* 34.

A much smaller proportion of this affected population may eventually need more specialized mental health care (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Kornør, Winje, Ekeberg, Weisæth, Kirkehei, Johansen et al., 2008; McNally et al., 2003; National Institute for Health and Clinical Excellence, 2005). Although some people do show symptoms of Acute Stress Reaction and Post-Traumatic Stress, others may have clinical levels of depression, anxiety or behavioural disorders. Some people with pre-existing problems of mental health may find their symptoms exacerbated. Whether directly or indirectly involved, mental health service providers need to be appropriately trained in post-disaster reactions and appropriate evidence-based interventions.

Often psychological distress in the affected population becomes evident in the post-immediate phase of the disaster recovery cycle. The recommended attitude of watchful waiting should pick up some of the most vulnerable within the community although a proactive approach to care is often necessary. People may be distressed but still hesitate to consult. 'Door knocking' is one example of pro-active outreach, as has been exemplified by local Iwi in the Canterbury area. Another example of outreach is sensitization and basic training on common reactions and ways of coping for local GPs and teachers, who are in the front line of meeting the affected population. Such training should remain mindful that such front-line staff may also be part of the affected population (National Institute for Health and Clinical Excellence, 2005).

It is worth resourcing non-specialist psychosocial supports such as psychological first aid (PFA) and community facilitators from the immediate response phase onwards. This can help to a) reduce the risk of normal stress reactions evolving into potentially debilitating reactions; b) identify and assist those needing more specialized support; and c) give added support and human resources to local mental health and psychosocial support structures who may be overwhelmed by demands (Boscarino, Adams, & Figley, 2005; Bryant, 2007; Everly & Flynn, 2006; Jones, Roberts & Greenberg, 2003; Raphael, 1986). Community mapping is another way to identify vulnerable populations, and to focus supportive actions.

Although the efficacy of PFA has yet to be extensively examined, several authors have made positive comments about this approach. Raphael (1986, p. 283) states that psychological first aid is: "basic, non-intrusive pragmatic care with a focus on listening but not forcing talk; assessing needs and ensuring that basic needs are met; encouraging but not forcing company from significant others; and protecting from further harm." Within the Canterbury region, an important effort was made to train local human resources and other providers in PFA. Such training could be provided in anticipation of events to build ready disaster preparedness.

As psychological and social consequences for the affected population may be impacted by disruptions to or loss of livelihood, psychosocial support planning can benefit from including the assessment of business continuity planning and can advocate for continuity planning to be incorporated into national readiness planning. Getting people back to work can increase their sense of perceived control and so makes a positive contribution to psychosocial recovery (Hobfoll et al., 2007). The value of employment adds to needs for organizational resilience, meaning business continuity planning can have important social and economic implications for psychosocial recovery.

In defining who the affected population is, the needs of affected communities and of responders and frontline staff should be taken into consideration. Advisory group members' experience suggests the needs of those working on the frontline are often not recognised as part of a psychosocial recovery effort until these groups experience marked distress. Early support to frontline personnel can strengthen the recovery effort. Respite, rotation, training, peer support and supervision have been able to increase frontline effectiveness, not only in the immediate response phase, but over the longer course of recovery (Palm, Polusny, & Follette, 2004; Paton, Violanti, Johnston, Burke, Clarke, & Keenan, 2008). Frontline support should be planned from the immediate

to the long term, including psychological supports, ongoing monitoring, and appropriate job design (including respite and back-ups). Regardless of role, each person who works with or comes into contact with people affected by a disaster can influence the recovery and well-being of those they interact with. Those providing services must be appropriately trained, supported and have access to regular supportive supervision, where problems are addressed and individual worker capacity is strengthened and secondary consultation is made as required. Leadership teams also need to be included in such considerations.

Supporting adaptation to a changed reality

Although the post-disaster recovery has been described within the advisory group as community (re)development under extraordinary pressures, it is anticipated that recovery in the Canterbury region will be a complex process and will occur over many years. At the time of writing, due to on-going major aftershocks, the recovery process is taking place within the context of a chronic stressor that continues to affect the population. Immediate response to individual distress and community disruption is vital. However, the manner in which recovery processes are started and supported in the long term will influence whether positive or negative outcomes are experienced over time and in the long term.

The desired outcome of the psychosocial recovery process is to encourage a well-functioning community and to foster individual resilience and well-being. Resilience has numerous definitions and this paper will not attempt a definitive overview of these.

However, a few short definitions help frame resilience as part of a disaster recovery process. Norris, Stevens, Pfefferbaum, Wyche and Pfefferbaum (2008) defined resilience as "A process linking a set of adaptive capacities to a positive trajectory of functioning and adaptation after a disturbance" (p.131). Resilience has also been conceptualised more as an ability or process than as an outcome (Brown & Kulig, 1996; Pfefferbaum, DeVoe, Stuber, Schiff, Klein, & Fairbrother, 2005). Paton and Johnston (2001) state that resilience, at a practical level, then involves developing the capacity of people, communities and societies to anticipate, cope with, adapt to and develop from hazard consequences. Most authors include the capacity of individuals to quickly cope, adapt and recommence adaptive functioning as an example of resilience.

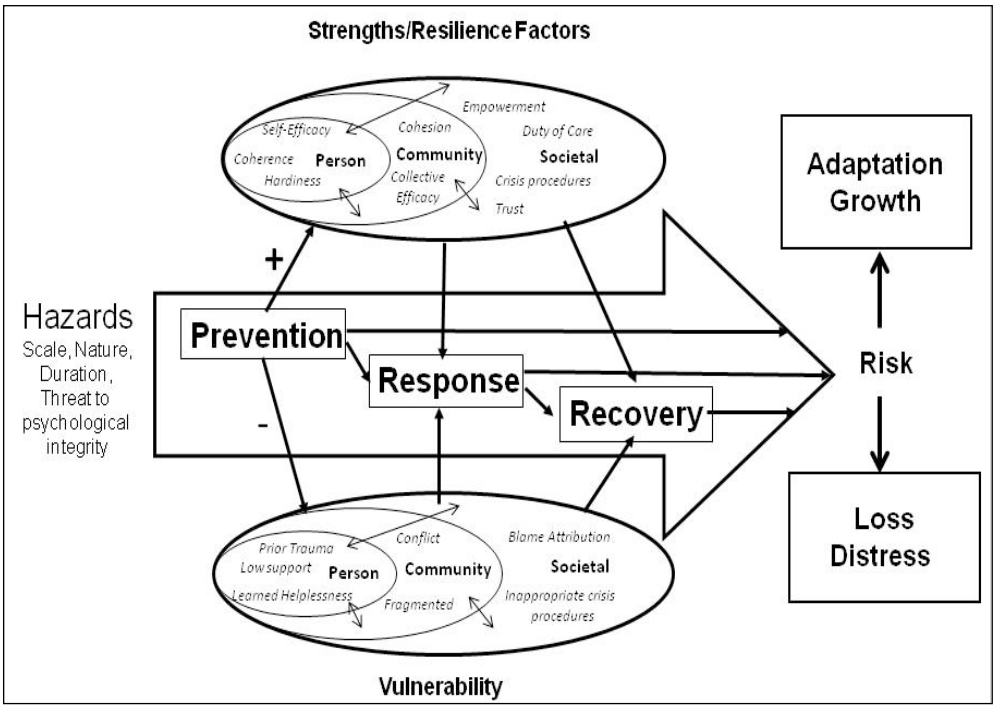
The holistic nature and complexity of the recovery process can be illustrated by the following diagram, from Paton (in press). A holistic recovery process in the Canterbury situation is one which needs to address diverse reactions, within numerous and varied communities living in a chronic situation of ongoing substantial aftershocks. Interventions and processes of engagement therefore need to be adapted both in place and over time.

Figure 2 draws a distinction between resilience and adaptive capacity. This model advocates for the concept of *adaptation* within response, recovery and rebuilding. It was developed with the express intent of assessing the degree to which agencies meet needs for community empowerment when dealing with challenging and atypical circumstances (Paton & Johnston, 2006).

Paton and Johnston (2006, p. 7-8) discuss how:

…resilience is often used in a manner synonymous with the notion of 'bouncing back'…and implies a capability to return to a previous state. This usage, however, captures neither the reality of disaster experience nor its full implications. Even if people wanted to return to a previous state, changes to the physical, social and psychological reality of societal life emanating from the disaster can make this untenable.

That is, the post-disaster reality, irrespective of whether it reflects the direct consequences of disaster or the recovery and rebuilding activities undertaken, will present community members with a new reality that may



▶ **Figure 2**: Interaction between hazards, resilience and vulnerability factors influences risk of growth or loss. From Paton, (in press).

differ in several fundamental ways from that prevailing pre-disaster.

It is the changed reality (whether from the disaster itself or the societal reaction to it) that people must adapt to.

This suggests management of psychosocial recovery, in the broadest sense, is charged with assisting people to deal with immediate psychosocial problems and practical problems such as longer term housing. Psychosocial recovery will also require facilitating people's ability to adapt to, assimilate and actively manage their altered present and future demands.

A strengths-based approach

Historically, the psychosocial needs of individuals and families/whānau have been seen from a vulnerability perspective (i.e., pathology such as post-traumatic stress, anxiety states and depression). A strengths-based approach has been used in social work case management (Saint-Jacques, Turcotte, & Pouliot, 2009). This perspective focuses on concepts of empowerment and resilience, together with viable group and community membership (Saleebey, 1996). Needs or strengths assessment of active local community participation is a challenging but necessary component of recovery efforts. Active community participation and using individuals own capacities and resources can reduce perceptions of having recovery imposed without any consultation process.

This strengths-based approach is especially effective if it is accompanied by practical and psychological support and by information about associated health issues including the impacts and effects of and normal reactions to such experiences. Relevant psychosocial education materials and other delivery can include indicators of distress and strategies for managing this, the importance of using existing support networks, and information about how and when to access other services for additional support. Other information could cover: insurance; housing; budget advice; help in becoming an active community group; as well as access to more specialised psychological and health services.

Such information and materials are not helpful when people do not have resources to receive or deal with that information (Hobfoll et al., 2007). When planning for the promotion of positive recovery and reconstruction within the community, it is helpful to identify priorities.

The first step is to identify the factors that help or hinder people's active engagement in their own recovery, in what are highly atypical and challenging circumstances (Boyd, Quevillon, & Engdahl, 2010; Gillard & Paton, 1999; Lyons, Mickelson, Sullivan, & Coyne, 1998; Mishra, Suar, & Paton, 2009; Tugade & Frederickson, 2004). The importance of this activity and the emphasis on enhancing strengths while supporting the vulnerable derives from understanding how people experience a sense of crisis in disaster-affected communities. In general, people's reaction reflects how event demands (e.g., loss, disruption) interact with personal and community factors that influence people's capacity to cope with and adapt to challenging circumstances and those that make them more vulnerable to experiencing deficit and pathological outcomes.

In looking from the community perspective, strengths and resilience resources can include: social support; spiritual and cultural resources; active coping styles; collective efficacy; community competence; sense of community; place attachment; empowerment and trust (Paton & Jang, 2011). It is these factors, along with individual factors such as problem-solving, hardiness, self-reliance, flexible coping repertoire and self-efficacy, which allow people to deal effectively with most of the challenges they face in everyday life. Research into disaster recovery increasingly suggests that the resources and competencies that people have developed to deal with mainstream problems can assist their natural recovery from disaster (Paton & Jang, 2011).

Understanding this relationship provides the foundation for recovery planning designed to promote natural recovery. A state of social and psychological disequilibrium can result if the atypical and threatening circumstances in which people find themselves make it difficult for people to apply their existing skills and knowledge to the challenges posed by the post-disaster environment, or even in tackling everyday tasks. Not having the resources, or being unable to effectively draw upon existing skills and knowledge to help combat these challenges can have a negative impact on an individual's psychological and physical well-being.

In answer to limitations outlined by Saleebey (1996), focusing on strengths does not mean ignoring the need to address particular vulnerabilities. Vulnerability factors are an important influence on the likelihood of people experiencing negative outcomes (Boyd et al., 2010; Paton & Johnston, 2001; Raphael, 1986). Factors include learned helplessness, community fragmentation, loss of normal support networks, an uneven distribution of resources prior to the disaster, uneven distribution of disaster impacts, and being displaced from the community.

Individual Recovery and Empowerment within Communities

While psychosocial recovery needs to resource appropriate interventions to address mental distress and possible pathology following a disaster, psychosocial recovery is influenced by more than the availability of psychological supports or mental health services. Although these services and supports are definitely necessary, they are insufficient to meet the diversity of needs in an affected population. Our knowledge of the social determinants of mental health (of the impact of poverty, isolation, former trauma and unemployment) on psychological and social distress reinforces the interdependence of social and psychological factors on the well-being of individuals and communities.

Seeing individual recovery not as isolated persons, but as individuals within families/whānau and communities has strengthened recovery interventions. Thus, psychosocial recovery is linked to

community and overall recovery. Evidence detailed by Shinn and Toohey (2003) and Norris et al. (2008) shows that the psychosocial recovery process needs to build an organisational and supportive culture that engages and empowers affected local individuals and their communities. Coupled with individual, group and peer support, psychosocial activities need to be developed and managed in a collaborative manner with the local community to enable psychosocial recovery within an appropriate cultural context.

The objectives of recovery intervention are to assist people and communities to regain a sense of control in what are very atypical circumstances; to facilitate people's ability to return to effective functioning and to assist them to make sense of their experience now and in the future (Boyd et al., 2010; Paton & Johnston, 2001; Raphael, 1986).

Crucial to this is communicating with communities in ways that orient people to the reality of the situation in which they find themselves, clarifying what has happened and what is likely to happen in the short, medium and long term, and providing information that helps people to identify their strengths and resources and to use them to take action to assist their and others recovery.

Benight and Bandura (2004) and Hobfoll et al. (2007) highlight the importance of active community participation and community empowerment and engagement in all aspects of the recovery time-line. These authors state such empowerment and engagement are necessary for a community's sustainable recovery and adaptation to change. However, some populations are not accustomed to participating in a recovery effort, and need to be accompanied initially in this activity.

Participation is only empowering if voluntary, constructive and resourced (Arnstein, 1969). Hobfoll et al. (2007) and Benight and Bandura (2004) argued that although the person or population have a realistic capacity to react in the circumstances of disaster, it is important to plan participation effectively. If the affected population participates, without the capacity or knowledge of how to actively take part in recovery, that population will be set-up for an additional negative experience. This can compound the feeling of being overwhelmed, and reiterates the need for creating empowered people and empowering settings, as illustrated in Figure 3.

Recovery then is sometimes about supporting individuals and groups to be active in their community. This allows individuals to assume some feeling of control over the situation by shared ownership of an intervention and can mean an aspect of recovery is sustained by the population who will continue to live in the area.

Besides providing opportunities for community members to participate in the rebuilding process, community participation also increases the likelihood that interventions will meet community needs. Such participation may also offer opportunities to enhance community cohesion and trust which form a significant resilience factor (Bonanno et al., 2010).

Existing research by Paton (in press) has identified indicators of empowered people and empowering settings that have been validated for New Zealand populations. It has also identified ways of assessing the quality of inter-dependencies between people and agencies that can inform the assessment of the quality of relationships between people and agencies and service provides in relation to meeting people's needs. The resilience model (see Figure 3) was developed with the express intent of assessing the degree to which agencies meet people's needs when dealing with challenging and atypical circumstances.

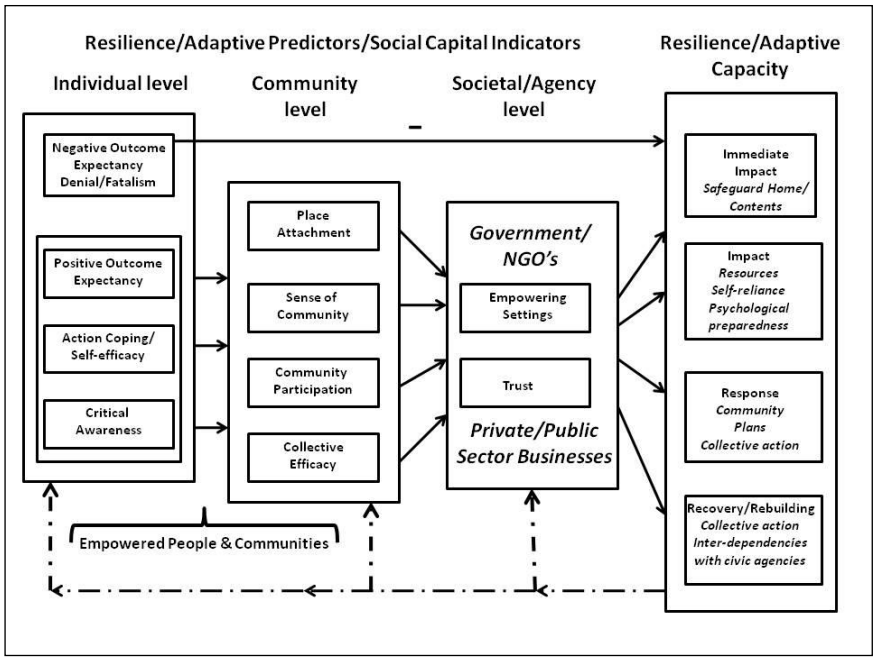
Empowerment literature (including Eng & Parker, 1994; Goodman, Speers, McLeroy, Fawcett, & Parker, 1998) suggests the need to facilitate, as far as possible, community empowerment processes in two ways. The first concerns assessing and/or developing the social and individual competencies that contribute to people being empowered and able to, for example, identify and represent their needs during the response and recovery phases of disaster (Paton & Tang, 2009). A commitment to creating opportunities for authentic participation in recovery planning and implementation for all has significant resource and timing implications that need to be organised within the structured recovery efforts

The second way requires agencies and institutions to create empowering settings by, for example, being responsive to community strengths and intervening in ways that promote the ability of community members to meet their own needs (Dalton, Elias, & Wandersman, 2007; Fetterman & Wandersman, 2004; Paton, Smith, Daly, & Johnston, 2008).

Given the atypical nature of recovery circumstances in which people find themselves, empowerment relies on people operating within empowering settings. The degree to which settings are empowering is a function of the degree to which they are receptive to community needs, expectations and capabilities and operate in ways that meet these needs and facilitate self help and natural recovery (Dalton et al., 2007; Paton et al., 2008).

Some Christchurch individuals may not be engaged in their local community and may be unfamiliar with their neighbours. Rather than building on existing community networks, support agencies often need to facilitate the development of new networks, to better disseminate information and aid.

In relation to empowering settings, it is imperative that those working in environmental, economic and structural areas acknowledge how their work can facilitate or detract from empowerment required for psychosocial recovery. It is hoped these agencies will consult with the advisory group and other psychosocial responders in this regard, to increase the availability of a holistic recovery process for the people of Canterbury.



▲**Figure 3**. Summary of empirical test of resilience / adaptive capacity model. From Paton, (2010) .

Figure 3 was developed with the express intent of identifying factors indicative of empowered people and communities facing natural hazard consequences and assessing the degree to which agencies met people's needs when dealing with challenging and atypical circumstances.

Practical Components of Strength–Based Recovery

The following components are based upon the preceding summary of psychosocial recovery processes. The components are not intended to provide an exhaustive guide to psychosocial recovery planning. However, we hope they will assist planning for more integrative community, family/whānau, and individual recovery from a strengths perspective.

Goal setting and problem solving

In the atypical and challenging circumstances in which people find themselves in the post-disaster environment, people can benefit from guidance on identifying the problems and issues that are posed by a need to change. This involves identifying how personal and community strengths can be mobilised to facilitate people's recovery (Paton & Jang, 2011; Paton & Johnston, 2006). This process also aids recovery by helping people focus on tasks that can be accomplished in the present.

Facilitating the development of short-term, realistic and manageable goals can reduce people's risk of feeling overwhelmed by thinking about the number and magnitude of tasks posed by the losses to their environment, home, and employment. Focusing on short-term goals reduces the anxiety associated with being preoccupied with abstract, vague, long term activities (Trope & Liberman, 2003), instead offering the affected population a sense of control over their immediate environment.

If people are to focus on identifying strategies for action, a practical goal is to help develop problem-solving and decision-making skills and to develop the planning skills required to implement strategies in ways consistent with community needs and expectations. This combination of activities helps ensure that individuals and groups put strategies into practice, thus providing a stronger foundation for progressively dealing with the demands posed by the disaster over the medium to long term (Boyd et al., 2010).

It is advised that support is given so that overall reflection on how short-term tasks fit into longer term objectives is part of this learning experience. Regaining a sense of control and structure under challenging circumstances provides people with a better foundation for thinking about long term issues and how they might be approached in ways that utilise the strengths and competencies developed in the recovery environment. People's ability to function under stressful circumstances can be assisted by ensuring that these activities occur in a supportive social and cultural environment. Restoration of a calm environment also aids clear decision-making and allows for rehearsal and practice of activities.

Social support

An important intervention goal is to facilitate the development of mutual support within the affected community (Boyd et al., 2010). Considering the potential of social support to help people deal with the challenges they face (Karasek & Theorell, 1990), it is important to develop supportive relationships with other people impacted and those who are responding (i.e., mental health workers and other relief workers). It is therefore imperative that recovery strategies performed by external agencies complement social support practices (Boyd et al., 2010; Paton & Johnston, 2006). An important way of achieving this involves ensuring intervention is consistent with spiritual and cultural practices. If, as in the case of some suburbs and districts in Canterbury, there will be an emergence of a 'new community' made up of both residing and newly arriving families and individuals, there will be a need to facilitate the development of mutual support.

Spiritual and cultural practices

Effective community-based intervention places considerable importance on accommodating spiritual and cultural values and practices within the recovery process (McCombs, 2010). The validity of intervention is likely to be increased by working with community leaders, both pre-existing and emergent after the disaster event, and by accommodating spiritual and cultural expectations. This in turn plays an

important role in building and maintaining trust between the community and professional agencies (Paton et al., 2008). Understanding and accommodating spiritual practices has implications for needs assessment, planning and design of the intervention, and for monitoring and evaluating interventions.

Prominent issues include emphasising the use of rituals and ceremonies within the community context. Community activities may or may not have a religious context and may simply be characterised by customary practices of community members. Providing recovery mechanisms consistent with the spiritual and cultural orientation of the community facilitates people's ability to impose meaning on their experience, and helps them integrate these meanings into the fabric of their culture and community (Gillard & Paton, 1999; Lyons et al., 1998; McCombs, 2010). This integration provides a foundation for future adaptive capacity and building people's ability to respond more effectively to future disasters.

Community diversity

Recovery planning must also accommodate the many ways different groups within affected communities can experience a disaster and thus present with special needs (Boyd et al., 2010; Cherry, Allen & Galea, 2010). Some of these groups are demographic in origin. Specific groups may be more at risk of developing negative consequences, including children, elderly people and people living alone. Other vulnerable groups may be characterised by those with a history of prior trauma, mental illness, chronic illness, and disability. Diversity can also be reflected in people's event-related experiences (Paton, Millar, & Johnston, 2001). For example, people who are injured, who have lost family/whānau members, homes and livelihood may present with specific needs. Family/whānau members living in different parts of the country and people who might be visiting the area when a disaster struck can also present with distinctive recovery needs which must be carefully assessed and responded to. Cultural diversity may also represent a different combination of strengths, vulnerabilities and needs among particular groups.

In designing a plan for psychosocial recovery, activities should be tailored to reflect the needs expressed from the affected community. The existing research on community adaptive capacity in relation to natural hazards provides an evidence-based foundation for this approach, as outlined in Figure 3 and our earlier summary of surrounding literature. This not only means that the community conveys its own conception of its needs, but that it influences the design of recovery efforts and is involved in its implementation. Spontaneous community activities (e.g., Christchurch's Student Army) need to be incorporated and can be measured as part of an integrated approach to evaluation.

Coordination and integration

The services people need are part of an overall service system that must be provided in a coordinated and integrated manner. Without the active collaboration of all involved: local community, government and non-government bodies, psychosocial support will be imposed and sustainability minimised. This is a multi–level understanding of psychosocial recovery, in that it can operate both vertically from governance bodies to grassroots groups and vice versa, as well as horizontally through effective collaboration and co-operation between groups. Often, in post-disaster situations, structures need to work together using a cross-cutting approach that differs from their usual, specific-focused interventions. Coordination by one recognised person or body can help this necessary process. Often, in post-disaster needs out-number resources, conflict will arise and a collaborative approach may need to be mediated between parties.

Monitoring and evaluation

Our advisory group is mindful that the recovery process in Canterbury is ongoing and relatively iterative. Initial psychosocial initiatives need to evolve with needs, to cover gaps noted by responders and the local population within a recovery planning structure. An ongoing monitoring and evaluation process is necessary to detect needs that are not yet met by the recovery efforts and to determine whether efforts are effective in answering needs. Finding appropriate indicators that signal effectiveness is a slowly growing aspect of psychosocial recovery, but a critical part of organising supports for psychosocial recovery. Some examples of indicators are the reduction in symptoms, a return to daily activities and an increase in designated coping behaviours. It is vital that this ongoing monitoring and evaluation of the recovery process is resourced as part of psychosocial recovery.

Later onset distress and ongoing community recovery needs reinforce this necessity for monitoring and assessment procedures to be in place for several months and years following the event (Galea, Tracy, Norris, & Coffey, 2008). For example, symptoms may peak on the anniversary of the adverse events or as a result of future large aftershocks. This necessity arises from the way these figures may vary according to the type and impact of the disaster, the capacities and functioning of the community, the cultural context and our ability to measure within certain scenarios. Sustained assessment can be facilitated using more community/peer-based processes designed to provide long term social support and to provide pathways to more specialised care, if required. For example, community centres can participate in collecting information on the effectiveness of interventions, and ongoing needs for those interventions. Identifying how this assessment can occur is an area that will benefit from additional research. Pre-existing Canterbury research (by Becker, 2010) used variables in Paton's (2010) resilience model and could be used to provide some baseline indicators.

Conclusion

The present Canterbury situation is marked by continuing after-shocks which impact on the community and delay the access and re-building of the Central Business District and other suburbs. The aftershocks prolong temporary accommodation and limit communication and information on sustainability of some suburbs. Ongoing geological instability continues to disrupt routine daily life and may hinder some recovery processes. Many core assumptions of certainty and predictability have been repeatedly violated. Such repeated events can provoke ongoing anxiety and distress that may influence how people respond.

Pre-existing complexities of even the most defined and focused approach to psychosocial recovery have become even more convoluted. The JCDR psychosocial recovery advisory group aims to help inform recovery efforts being planned for this long- term and uniquely challenging context. This advisory group offers a range of experience and expertise, based on the discipline of psychology, to help advise key agencies involved in the Canterbury recovery. The advisory group uses scientific literature to provide timely advice on complex psychosocial recovery topics. To date, this literature has emphasised the need for many levels of intervention, ranging from the general provision of basic living requirements, to community-based supports and specialised interventions for a small proportion of the population.

Seeing individual recovery not as isolated persons, but as people within families/whānau and communities strengthens recovery interventions. Individual psychosocial recovery becomes integrally linked to overall community recovery. Evidence shows that the psychosocial recovery process needs to build an organisational and supportive culture that engages and empowers affected local individuals and their communities. Surrounding research literature has impressed the need for a more strengths-based approach to recovery. Rather than referring to disaster-affected populations in terms of unavoidable deficits, our advisory group promotes the need to consider both strengths and vulnerabilities, when working to support adaptive capacity.

This strengths-based approach to recovery can include goal-setting and problem-solving, to help disaster-affected populations focus on the potential for longer-term objectives. The provision and facilitation of social support also become an important practical component of strength-based recovery, as does valuing and supporting both cultural and spiritual practices, and community diversity. Coordination and mediation appear invaluable, to facilitate constructive collaborations between recovery stakeholders, from the local to the regional scale. In the immediate term, it is important that over-arching monitoring and evaluation is resourced and put in place. This is necessary to address gaps in supports, new needs and whether the recovery effort is effective. This requires the establishment of both operational and strategic recovery management systems and practices. The Canterbury recovery process will be ongoing for some time. It has provided New Zealand with a challenge, but also with a chance to enhance all approaches to disaster recovery.

The advisory group continues to engage with key agencies working to support the Canterbury recovery. Advisory group members are also involved in designing research projects dedicated to a better understanding of the Canterbury context. It is hoped this research can ultimately give insight into the consequences of the earthquake for individuals, family/whānau, communities and organisations, over varying time frames. Other research may analyse societal factors that influence community resilience to the immediate and longer term impacts of an earthquake. Implications of persistent aftershocks, infrastructure disruptions and temporary or permanent re-housing on resilience and adaptive capacity is another area that may receive research attention. Likewise, research may look at processes by which society transitions, recovers and adapts after the disruption caused by the earthquakes, and how these processes can be enhanced.

It is not possible to clearly predict how consultation needs will change over time, and how processes will be affected by ongoing series of aftershocks or the financial aftermath. We are sure that academic engagement will continue to form an important part of the Canterbury recovery. The advisory group is honoured to be able to contribute to the re-development of this often remarkably resilient region.

Appendix

The Advisory Group was made up of the following individuals:

Maureen F. Mooney: Research Officer, JCDR. She has spent the last ten years using her skills as a psychologist in psychosocial support response and the Humanitarian field including Haiti, Palestine, Pakistan, Colombia, the Asian and African continents. Her area of interest is resilience and coping of individuals and communities.

Douglas Paton: Professor, School of Psychology, University of Tasmania. He has expertise in all-hazards risk communication, assessing and developing community resilience, and community recovery following natural disasters.

Ian de Terte: Clinical Psychologist, School of Psychology, Massey University. He has clinical and research experience in the areas of disaster mental health, PTSD, occupational trauma, psychological resilience, and vicarious trauma. He is also completing a doctorate regarding the relationship between psychological resilience and occupational trauma.

Sarb Joha: Associate Professor, Massey University, and Chair of the Psychosocial Recovery Advisory Group, JCDR. As a clinical and health psychologist, he has research and clinical interests in capability and capacity building for psychological support, before and after disaster events, as well as in disaster mental health.

A. Nuray Karanci: Professor, Department of Psychology, Middle East Technical University, Turkey. She has extensive experience in post earthquake psychosocial dimensions and support,

and has researched factors in preparedness for future hazard events.

Dianne Gardner: Senior Lecturer, Industrial/Organisational Psychology, Massey University. She has research and practical expertise in psychological well-being at work, risk management as applied to occupational health and safety, organisational behaviour and occupational stress.

Susan Collins: Research Officer, JCDR. Over the past 10 years, she has used her community psychology training to assist challenged communities with their revitalisation and recovery. Susan has been involved with rural communities which experienced flooding in the Bay of Plenty Region, and more recently in response to the Darfield Earthquake and the Queensland floods.

Bruce Glavovic: EQC Chair in Natural Hazards Planning, Massey University, and JCDR Associate Director. His work has focussed on building sustainable communities by facilitating dialogue and collaboration between diverse and often contending interests. His research encompasses natural hazards planning, collaborative planning and consensus building amongst other relevant themes.

Thomas J. Huggins: Administration Coordinator, Psychosocial Recovery Advisory Group, JCDR. He helps coordinate a range of complex Massey University initiatives, using innovative approaches to integrated project management.

Lucy Johnston: Professor and Dean of Postgraduate Research, Canterbury University. She is on the management team of the New Zealand Institute of Language, Brain and Behaviour and oversees postgraduate study at the University of Canterbury. Her research interests have included social cognition, stereotyping and social perception.

Ron Chambers: Clinical Psychology Professional Advisor & Consultant Clinical Psychologist, Anxiety Disorders Unit, Specialist Mental Health Services, Canterbury District Health Board. He has more than 15 years experience specialising in the treatment of anxiety disorders, and a range of mental health problems. He has provided related consultation, support and education to the wider Christchurch community.

David Johnston: Professor, School of Psychology, Massey University and JCDR Director. His research has focused on reducing the vulnerability of society, the economy and infrastructure to hazard events.

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