A general review of psychosocial factors relating to disaster recovery in the workplace in a 2010-2011 Canterbury context

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ABSTRACT

Individual reactions to disasters that affect the workplace and the components of recovery strategies are presented from an overview of the literature to guide organisations facing the challenges of supporting staff in a post-disaster environment such as the seismic events in Canterbury, New Zealand 2010 and 2011.

KEYWORDS

Disaster recovery, resilience, stress, frontline staff.

1.0 INTRODUCTION

While evidence-based research into organizational experience of recovery from the devastating seismic events in Canterbury of 2010 and 2011 is on-going and at an early stage of reporting (Mooney et al., 2011), the literature from past disasters worldwide can provide disaster affected organizations with pivotal learning as they face the challenges of recovery. However, there are limitations in relying on the generalizability of findings from different data sets and methodologies to confidently address the needs of organizations in the current recovery phase in Canterbury. At best, these findings may act as a guide to the range of anticipated staff reactions to a disaster and to appropriate strategies that enhance resilience. The following information was compiled to present an overview of:

- The New Zealand employer's legal duty in relation to stress in the workplace.
- Individual reactions to disasters ranging from acute and post-traumatic stress disorder to general signs of distress, and the individual and organizational factors that can exacerbate stressful situations.
- Fundamental components of recovery strategies.
- Ways to prevent negative outcomes from individual and organizational perspectives.

Anecdotal reports from Human Resources Managers at the May, 2011, HRINZ Canterbury branch networking event (Garside, 2011) identified two areas of concern for a full return to functionality: How do we support staff to recover? And how can the business operate in a changed environment? This paper will primarily focus on the first concern; staff recovery.

2.0 REVIEW

The discussion that follows may be generalised to a range of occupational groups especially those 'frontline personnel' who have direct contact with members of the public as part of their normal routine and may themselves have had exposure to distressed victims and potentially traumatic scenes. It is not intended to include 'first responders' such as emergency personnel who can be considered at 'high risk' of a broad range of physical and mental health consequences as a result of work-related exposure to critical incidents (Benedek, Fullerton, & Ursano, 2007).

A first consideration in supporting staff in a changed work environment is the employer's duty under Health and Safety legislation, which in New Zealand places an obligation on employers (including the Crown), principals and contractors to monitor the work environment and take all practicable steps to ensure hazards do not cause harm (Health and Safety in Employment (HSE) Act, 1992, HSE Amendment Act 2002, Crown Organisations Criminal Liability Act, 2002). Hazards relating to stress are particularly relevant after a disaster where a changed workload and/or duties produces extra pressure on employees, workplace displacement involves restricted work spaces, or the job involves frequent exposure to distressed customers or environments. External factors, such as longer commutes and worry over family recovery and the organisation's requirement to reoccupy the disaster site may exacerbate the situation.

A good employer would be mindful of the fact that 'Harm' includes physical or mental harm caused by work-related stress and the HSE Amendment Act (2002) interpretation of 'Hazard' which includes:

i. A situation where a person's behaviour may be an actual or potential cause or source of harm to the person or another person; and

ii. Without limitation, a situation described in subparagraph (i) resulting from physical or mental fatigue, drugs, alcohol, traumatic shock, or another temporary condition that affects a person's behaviour.

The inclusion of 'occupational stress' as harm in NZ Health and Safety legislation has clarified an organisation's duty which previously relied on a common law duty to take reasonable care to protect employees from the risks of foreseeable injury. A significant principle that has influenced the ruling in recent cases has referred to the English case, Sutherland v Hatton (5 February, 2002) ECWA 76 (UK) where the extent of an employer's liability for harm caused by stress depends on whether the harm in question suffered by the employee was reasonably foreseeable. The threshold question of whether harm to health arising from stress at work is reasonably foreseeable poses a responsibility on the employer to consider a) the nature and extent of the work (e.g. higher workload, emotionally demanding work) and b) signs from the employee of impending harm to health (e.g. signs of vulnerability to stress, a pre-existing health disorder).

Changes to the New Zealand Accident Compensation Act 2001 No 49 from 1st October 2008 now recognise that mental injury could cause incapacity, although the threshold for a claim is high; the individual affected must suffer a clinically significant behavioural, cognitive or psychological dysfunction that is supported by a reputable medical diagnosis.

The terrorist attacks of '9/11' (New York City, USA, September 11, 2001) highlighted the importance of understanding the effects of trauma on workers, and led to an increase in epidemiological studies of the consequences of disasters and evidence-based interventions for post-traumatic distress reactions and mental disorders (Van del Pol, Gist, Braverman & Labardee, 2006). Research into the influence of individual differences in resilience and vulnerability to trauma-related symptoms is on-going in the quest to develop theoretical models for understanding trauma responses, and in finding effective intervention strategies.

2.1 REACTION TO DISASTERS

When a disaster hits a community, it is almost invariably the case that physical disruption also carries with it social and psychological disruption (Ronan & Johnston, 2005) and when hazardous conditions are more extreme, so too are the social and emotional effects (Watson et al., 2003). Post-disaster settings are characterised by multiple losses: loss of life, property, security or hope for the future, and when there is loss people necessarily grieve. Most grieving is not pathological but it does take time for the affected individuals to move on.

Reactions to an extreme event such as a major earthquake have been found to vary. Nearly everyone in the community will experience emotional and psychological distress, which in the majority of cases remits over time without formal intervention (Gray, Maguen, & Litz, 2004). Initially, the reaction may be very intense, but for the majority of affected people reactions subside over time as the reality of the event is assimilated into an individual's life and memory.

Extreme social and emotional reactions include problems with increased distress such as **Acute Stress Disorder (ASD)** and **Post-Traumatic Stress Disorder (PTSD)** where ASD has a shorter time-frame. Both of these conditions are the result of an extreme stressor that produces a cluster of symptoms that includes a) re-experiencing phenomena (e.g. flash-backs, nightmares), b) psychic numbing and avoidance of hazard-related stimuli (e.g. refusing to re-enter buildings), and c) hyper arousal (e.g. an exaggerated startle response) (American Psychiatric Association, 2000).

Studies in the mental health field of the reactions of first response workers involved in rescue and relief operations, including medical personnel, typically focus on compassion fatigue, secondary traumatic stress, vicarious traumatization, and burnout. Frontline personnel in Canterbury who have witnessed potentially traumatic events may experience some of the same reactions, although this paper is unable to report on specific findings to support or negate this view at the time of writing. Internationally, there are few large-scale longitudinal prospective studies of rescue and exposed disaster workers with a comparison sample that have examined acute stress disorder, post-traumatic stress disorder (PTSD) and depression (Fullerton, Ursano, & Wang, 2004). There are even fewer published investigations on whether disaster rehabilitation and reconstruction workers involved in later phases of earthquake response are also affected by emotional problems (Ehring, Razik, & Emmelkamp, 2011).

2.2 PERTINENT NEGATIVE REACTIONS MAY INCLUDE:

Vicarious tramatization/trauma which is a form of post-traumatic stress response process that unfolds over time. It is a cumulative effect of contact with survivors of disaster or with people who are struggling. When we closely identify with the grief, anger and despair of sufferers it can change our frame of reference and lead to a loss of purpose and cynicism (Headington Institute, 2011). This US based Institute provides education for psychologists working in the behavioural science area and provides practical online resources. The Palm, Polusny and Follette (2004) study on how vicarious trauma reactions differ across professions in disaster and trauma work makes useful suggestions on self-care strategies, training and organisational factors which limit this form of stress.

Secondary traumatic stress can affect a range of workers where they have been exposed to traumatic events in their work and are also personally impacted by the event such as experiencing significant damage to their own home in an earthquake (Creamer & Liddle, 2004). White (2001) suggests that exposure to both primary and secondary traumatic events tends to increase the risk for negative reactions.

General signs of worker distress may be physical, emotional or behavioural, and interpersonal. Typical changes in usual functioning include: No time or energy for oneself, poor concentration, disconnection from loved ones, social withdrawal, irritability, cynicism, lower tolerance, getting upset easily, despair, and sometimes acting out behaviours (dangerous driving, increase in smoking and/or alcohol consumption).These signs are more or less important and become a problem as they increase and interfere with daily living. For the organisation, signs can include absenteeism, presenteeism, reduction of efficiency, and increases in conflicts.

Individual factors also contribute to stress levels. These can include: Perfectionism, inflexibility in work habits, low threshold for dealing with stressful environments, feeling of inefficacy, lack of control over one's environment and choosing negative coping habits such as alcohol consumption, etc. Also, the above can be exacerbated by problems in one's own living conditions and lack of social network support.

Organisational factors that can also exacerbate a potentially stressful situation include: Providing no adequate respite for staff such as allowing shared coverage, and failing to provide sufficient qualified supervision or support. In addition to the challenges of working in a changed physical environment, colleagues and managers may also be experiencing negative post-disaster effects.

Cumulative stress from a number of factors is arguably the most problematic. It is usually not one event but an accumulation of tasks or small stressors over time. This is especially pertinent in the present Canterbury situation where ongoing after-shocks translate into a chronic disaster context.

Understanding possible triggers that act as predictors of potential negative psychological consequences plays an important role in early diagnosis of trauma related problems and effective recovery strategies. For example, understanding the contribution of previous experience, degree of exposure and lack of personal control (of events and/or work), and alienation from others has been seen as important in the early diagnosis for health care of emergency/first response workers (Brunet, Boyer, Weiss, & Marmar, 2001; Heinrichs et al, 2005; Leon, 2004; Regehr, Hill, Knott, & Sault, 2003).

A changed work environment with increased demands such as pressure to catch up on work which may have lapsed from more lenient management post-disaster, or being asked to step into different roles, may produce the negative effect of high job strain. If these demands also occur with decreased control or a lack of resources such as human, financial, skills, support, and/or time, people are also likely to be affected by stress from psychological demand and low decision latitude (Bakker & Demerouti, 2007; Karasek & Theorell, 1990). This imbalance between demand and control has been linked to burnout and dissatisfaction in numerous studies, and should therefore not be underestimated in more stressful environments affected by disasters.

Moreover, factors such as the relationship between a perceived loss of control and increased uncertainty about the future underpinn strategies that promote successful coping after a major disaster (Ronan & Deane, 1998).

2.3 RECOVERY

Mental health protection for individuals exposed to potentially traumatic events can be divided into three stages: **Primary (activities to prepare for a disaster), Secondary (mental health treatment services during the disaster to prevent problems and diseases from becoming chronic) and Tertiary (the provision of rehabilitation services)**, (Aker, 2006). One of the most important functions of secondary protection is the screening of high-risk groups, and the determination of which individuals are at risk of a possible problem or disease (Aker, 2006, p.8).

Ronan and Johnston (2005) develop this model into a 'Multiple Gating and Stepped Care' philosophy that integrates other related research and emphasises the value of primary prevention strategies, and promotes natural resolution of disaster-related distress. This model of assessment and intervention is designed specifically to capitalize on those resources that are available to address needs within a community affected by problems including hazards (Ronan and Johnston, 2005, p.119). In summary, the earliest gate is concerned with primary prevention and protective factors; the next gate anticipates normal recovery and directs efforts towards facilitating the natural process by providing tangible resources for basic survival and safety needs, and informational support regarding orientation to the disaster and local services, and communication. **'Psychological First Aid'** (Protect-Direct-Connect, US National Centre for PTSD) is provided to protect victims from additional harm and to attend to the most distressed by mobilizing informational, social, and emotional support.

Needs assessment screening is used to locate those who are vulnerable to longer-term effects, and once identified, resources, training or interventions are employed to help these individuals become more resilient.

2.4 PREVENTING NEGATIVE OUTCOMES

The first step in preventing negative outcomes is to acknowledge that the risk of such outcomes exists.

Research and techniques are rapidly evolving in the field of crisis intervention, but research into what are the most effective strategies for preventing and minimising the potential negative effects is still limited. There is an ongoing debate on the efficacy of practices such as the once dominant 'debriefing groups' in favour of approaches with solid empirical backing (Smith, Lees, & Clymo, 2003; Van del Pol, Gist, Braverman, & Labardee, 2006).

The fundamental aim of early intervention is to reduce the state of arousal and restore stability; provide support, comfort and 'psychological first aid', to intercept continuing disturbances and emotional distress, and to aid in restoring self-management (Gordon, 2006; Watson et al, 2003).

Much of the literature discusses the role of resilience as a protective factor in predicting positive adaption in individuals who are exposed to a potentially highly disruptive event (Bonanno, Galea, Bucciarelli, & Viahov, 2006; Hobfoll, 2002; Paton, 2003, 2006; Paton, Johnston, Smith, & Millar, 2001; Ronan & Johnston, 2005)

Resilience for workers can be promoted at two levels: Individual and organizational. Adopting a preventative perspective allows both workers and organizations to anticipate stressors and to shape responses, rather than simply reacting to a crisis when it occurs (NZ Ministry of Health, September 2010).

2.5 INDIVIDUAL STRATEGIES

Among individual factors, "self-efficacy", a belief in one's own capability to exercise some control over environmental events (Bandura, 1991), is particularly relevant to reducing levels of distress (Heinrichs et al, 2005; McCammon, Durham, Jackson, & Williamson, 1988; Regehr et al, 2003). Efficacy beliefs also influence 'compassion satisfaction' such as positive feelings from helping the community (Stamm, 2002, 2005).

At a rudimentary level, self-care can be encouraged and supported through learning physical and emotional techniques. For a minority, it may be necessary to seek further support and counselling for more serious problems of anxiety and depression.

Psychologists and other appropriate mental health providers can help educate individuals or groups about normal responses to extreme stress and help make a plan for moving forward that increases adaptive capacity. A range of evidence-based treatments may be used including cognitive, behavioural, cognitive-behavioural, interpersonal, humanistic, psychodynamic, or a combination of therapy styles (American Psychological Association, 2011a).

It is anticipated that if individuals become comfortable with open discussion on their personal reaction to traumatic events, say in a workshop setting, the effectiveness of coping methods can be debated.

2.6 ORGANIZATIONAL STRATEGIES

At the organizational level, research and practice emphasises the importance of fostering a culture where both managers and workers can support each other and participate in decision-making that affects their work. The perceived efficacy of working collaboratively is a significant predictor of job satisfaction and wellbeing in stressful work environments (Jex & Thomas, 2003). Overall, organizational culture, systems and leadership have an intrinsic role in fostering the resilience of employees.

The issue of organizational resilience becomes important after a disaster. Organizational resilience concerns the ability of organizations to not only survive, but also to thrive after a major change. This means that resilient organizations are able to adapt and grow from the changes. Resilience includes preparedness to deal with unforeseen events, but also an ability to adapt to the consequences of these events (Stephenson, Seville, Vargo, & Roger, 2010).

The second aspect of resilience concerns the recovery and ability of an organization to get back to pre-event performance, and the ability of the organization to maintain a positive performance development (Norris, Stevens, Pfefferbaum, Wyche, & Pfeffbaum, 2008). This includes both the immediate response and the subsequent recovery strategies. Byron and Peterson (2002) found for example that among those who received a compassionate email from management after the September 11, 2001, attacks in the US, job satisfaction was higher than in organizations which did not send anything out.

The communication channel between employees and management was a central theme reported by Walker and Nilakant (2012) from their current research into the differing ways organizations responded to the 2010-2011 Canterbury seismic events. First-tier managers or supervisors played a critical part in the employees' evaluation of how the organization responded. "Their role in response and recovery by conveying information, identifying needs, and showing appropriate emotional responses was crucial" (Walker & Nilakant, 2012, p.25). This finding is consistent with other research into effective dissemination of important information during challenging times (Larkin & Larkin, 1996; Jacobson, 2006).

The subsequent recovery efforts are also important, but there is very little research on how organizations cope when the recovery is prolonged. The Canterbury earthquakes were followed by major changes in the organizational context, and these changes are on-going. Many organizations have had to relocate due to damaged buildings or cordoned-off areas, while others chose to move away from Christchurch. Many individuals have also moved away from Christchurch, which has altered the customer base for a lot of organizations, and there have been numerous layoffs in the area, as well as reports of several large organizations struggling financially. This creates a climate of uncertainty, which affects employees. The uncertainty concerns different levels: Strategic, structural and job-related, which need to be addressed in order to assist employees in coping with the changes (Bordia, Hunt, Paulsen, Tourish, & DiFonzo, 2004). The strategic uncertainty concerns the events themselves and the changes in the organisation; what will happen on a larger scale, how is the context in which the organization operates affected? This relates to the next type of uncertainty, structural uncertainty, which concerns how specific organizational structures and procedures will be affected. Lastly, the job-related uncertainty concerns how the changes in the organization affect the job of the individual employee, in terms of role definition, training, and changes to the quality of the job.

The different types of uncertainty need to be addressed by management, and communication during times of change becomes even more important than at other times. If employees are provided with updated information directly from management, they are less likely to react negatively. Lack of communication from management, and lack of organizational support and compassion towards the employees during disaster recovery has been related to lowered commitment and engagement, as well as to increased staff turnover (Byron & Peterson, 2002). Employee engagement and loyalty becomes even more important during recovery from a major event, since an organization can only be resilient and able to proactively deal with uncertainty and environmental change when its employees are fit enough and motivated to carry out the organizational strategies necessary to adequately cope with these changes.

Inbar and Ganor (2003) suggest that organizations can instigate strategies at four levels to help emergency workers cope with continuous exposure to traumatic events. The principles of these strategies could be adapted to enhance the resilience of other occupational groups such as those who have contact with distressed customers. Key strategies include:

Level One/Individual

Effective time management and psychosocial skills: Team working, peer support, participatory decision-making and communication.

Level Two/Professional

Developing caring distancing techniques: Using humour and supervision in an appropriate and therapeutic manner.

Level Three/Cognitive-behavioural intervention

Using cognitive-behavioural therapy (CBT) to identify signs and symptoms of secondary traumatic stress and to address them effectively.

Level Four/Socio-organizational

An organizational culture that encourages effective coping: Supportive monitoring, training, supervision and workshops in adaptive coping responses.

2.7 BUSINESS RECOVERY

Preparedness presupposes planning and having routines in place for handling disruptive events. This planning requires that organizations are aware of risks and take these seriously, especially when the likelihood is small but the impact would be great (Simon, Houghton, & Aquino, 2000).

Vulnerability to natural hazards adds another dimension to business risk. Organisations at risk respond in a variety of ways, including ignoring the risk, taking minimum precautions, or fully preparing to ensure resilience to any eventuality. Business continuity in the event of widespread systems failure was highlighted by the threat of 'Y2K' (Year 2000 Bug) with the implementation of Information Security Management Systems (ISMS) and international standards for security controls increasingly being part of due diligence (Garside, Christianson, Johnston & Leonard, 2011).

3.0 CONCLUSION

New Zealand Health and Safety legislation recognizes ‘stress’ as both a harm and a hazard; an employee’s vulnerability to stress can affect an employer’s liability for harm caused by stress.

Nearly everyone in the community will experience emotional and psychological distress following a natural disaster, which in the majority of cases remits over time without formal intervention (Gray, Maguen, & Litz, 2004). However, a good employer would monitor high risk employees to identify any changes over time as a result of continued stressors and different circumstances.

It is important to realize that there is no one ‘standard’ pattern of reaction to the extreme stress of traumatic experiences, and some people respond immediately while others have delayed reactions (American Psychological Association, 2011b). Some may feel OK and be getting on with their lives only to feel thrown by events, causing them to react in ways which feel unfamiliar or different to before the disaster. In this sense, response is complex and dynamic.

The literature suggests that a number of factors tend to affect the length of time required for recovery, including:

- The degree of intensity and loss.
- An individual’s general ability to cope with emotionally challenging situations.
- Pre-existing health conditions preceding the traumatic experience.
- The cumulative effect of other major stressors following the disaster.

Positive findings could be incorporated into staff training for disaster preparedness and recovery, such as the role of efficacy belief “when self-efficacy increases, psychological dysfunctioning decreases” (Heinrichs et al, 2005).

Research also suggests that there is a corollary between low levels of preparedness and delayed overall recovery (Peck & Mileti, 2002).

Understanding potential risk factors and promoting resilience at both the individual and organizational level have been identified as important approaches in intervention strategy.

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Other suggested resources:

Re. High Job Strain

http://bjp.rcpsych.org/content/181/2/96.full
http://jech.bmj.com/content/57/2/147.abstract
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