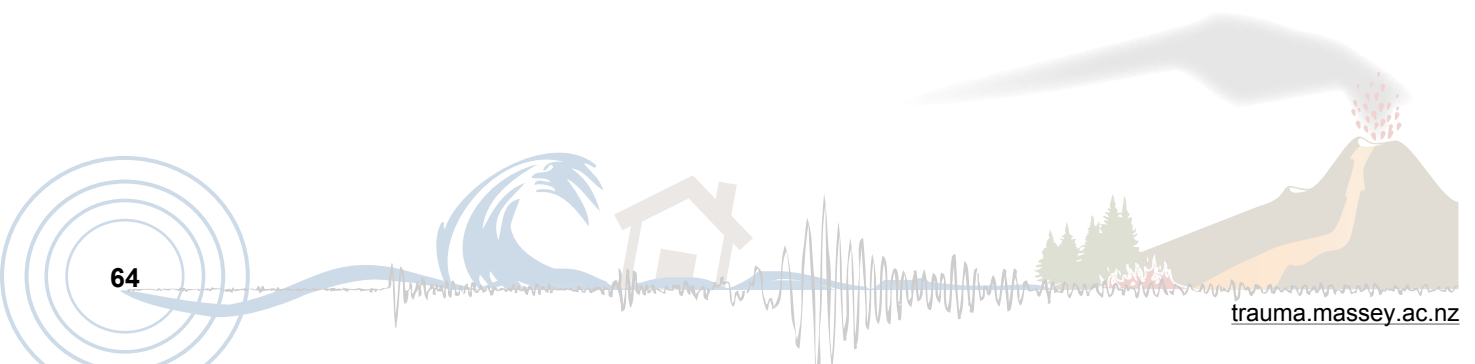# Contents: Volume 2011 (3)

Leadership Through a School Tragedy: A Case Study (Part 1 - The First Week)

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Abstract

The present study investigates the principal's leadership through a crisis in a New Zealand school where six Year-12 students and a teacher lost their lives in a river canyoning tragedy while attending an outdoor education camp. The principal was interviewed two years after the event. The study discusses strategies the school used to assist students, their families, and staff following the tragedy, and identifies areas where greater preparation and planning would be beneficial in crisis leadership and management for their school in the future. The principal had not been trained in crisis leadership, and there were no concise and readily available guiding documents available to him in the early phase of the crisis. It is recommended that such documents are developed for use by New Zealand school principals.

The study is presented in two parts: Part 1 (essentially, the first week) covers: first steps; guidelines and support available to the principal; needs of the school; initial responses to student- and staff-grief; and managing relationships. (Part 2 covers the next two years, and should be read in association with Part 1).

Keywords: leadership, school, tragedy, crisis, psychosocial, grief

Background

On April 15, 2008, six Year-12 students (aged 16-17 years) and one teacher (aged 29 years) from Elim Christian College (ECC), Auckland, New Zealand, lost their lives in a river canyoning tragedy. Students were attending an outdoor education programme provided by the Sir Edmund Hillary Outdoor Pursuits Centre (OPC), at Mangatepopo in the central North Island of New Zealand. The river rose rapidly after heavy rain, stranding the canyoning group on a ledge above the water. An attempt to leave the ledge and exit the river before the river rose further resulted in multiple loss of life. The canyoning group comprised 10 people: eight students; one teacher; and an instructor employed by the outdoor education centre. Two students and the instructor survived the activity. In total, 40 Year-12 students from the school were attending the outdoor education programme, planned to have been held over five days.

There was considerable media coverage of interest and concern to New Zealand and beyond in the days immediately following the tragedy. Since that time, the media has continued to follow related events such as the first anniversary of the tragedy and proceedings of official enquiries. Coverage of the tragedy has included interviews of the school principal, Mr Murray Burton (MB), for television, radio, and the print media in the days immediately after the tragedy, and at various times in the two years since. A parent who had himself lost a child in the tragedy has also spoken to the media several times. At no time when speaking to the media did the school principal, a parent, or a member of the Board of Trustees (i.e., the school governance body) attribute any blame for the tragedy; attributing cause was left to official enquiries. Through the media, the school consistently showed compassion for the grieving families, appreciation to the police and other supporting agencies, respect toward the outdoor education centre where the tragedy occurred, and concern for the students, parents, and friends and supporters of the school.

Introduction

Leaders in traumatic events

Although leaders are subject to the same physiological responses as other people when confronted with a sudden crisis or shocking news, people generally expect leaders to control themselves and the situation, and to behave rationally (Fein & Isaacson, 2009). Rational behaviour is by definition reason-based, calling on logical argument, McKenna, Rooney, and Boal (2009) stating that "wise" leaders reach better decisions through careful and logical reasoning. Mumford, Friedrich,

Caughron, and Byrne (2007) point out that context is an important factor in leader-performance. For instance, under stressful conditions, the application of abstract cognitive concepts can become inhibited if attention is divided or distracted from the task in hand. Mumford et al. go on to state that it becomes increasingly difficult to appraise likely outcomes of particular decisions in a context of complexity and ambiguity, stressing the role of mental processes involved in processing and using information.

Connelly, Gilbert, Zaccaro, Threlfall, Marks, & Mumford (2000) identified three key variables in effective leaders: creative thinking, social judgement skills, and complex problem-solving skills. In problem-solving, McKenna, Rooney, and Boal (2009) assert the need to consider subjective information alongside the objective, this consideration possibly influencing decisions involving humane or practical solutions and outcomes that are socially desirable. McKenna et al. assert there are non-rational aspects of wise decision-making that might be referred to as gut feelings or gut decisions, and that this sensate intuition can be valuable when making decisions. These authors assert that gut feelings include "insight, imagination, and foresight" (p. 178), responses that are not verified by any immediate, objective information, and that do not occur within a consciously rational process of decision-making. Also recognising that some decisions arise from unconscious information, Voltz and Cramon (2006) suggest that gut feelings might be explained from an information processing perspective. That is, particular situational cues automatically activate a wide network of prior experience related to the specific situation to provide a perception of situational coherence that the person cannot immediately explain. Thus, such perspectives are often described as "feelings" about the particular situation.

Leadership requires building effective relationships with team members. In a study investigating group performance, under task- and relationship-oriented leaders, Tabernero, Chambel and Curral, and Aran (2009) demonstrated that greater group cohesion was achieved by relationship-oriented leadership. Of the various leadership styles and their particular components or foci, the most effective leadership style in an organisation is one that is high on both task orientation and interpersonal orientation (Hutchinson, Valentino, & Kirkner, 1998). This view brings together a focus on achieving the desired task outcomes while also attending to the needs of individuals implicated in the decisions or outcomes.

The present study investigates the school principal's leadership and management of a traumatic event from the night the tragedy started to unfold, and through the two following years. It was expected that an interview with the principal might illuminate issues such as: first steps in dealing with a school tragedy; the types of protocol-guidelines and support available to school principals; grief-support for children, families, and staff; identification of school requirements in a crisis; managing relationships; tributes and memorials; issues of safety; and care of the leader. The study discusses strategies the school used to assist students, their families, and staff following the tragedy, and identifies areas where greater preparation and planning would be beneficial in crisis leadership and management for their school in the future. It was expected that findings from the study would ultimately serve to benefit other school principals faced with a crisis involving loss of life, and broaden psychosocial understanding of disaster leadership and management.

Part 1 covers: first steps; guidelines and support available to the principal; needs of the school; initial responses to student- and staff-grief; and managing relationships. (Part 2 covers: support for the school; grief-support for families; tributes and memorials; and looking after the leader.)

Method

Participant

The principal, Murray Burton (MB) of Elim Christian College (ECC) was interviewed. MB was invited to talk about his leadership and management of the school from the perspective of his own experience from the time of the disaster to the present day. This approach was encouraged in the first instance, as the researcher did not want to impose questions or themes regarding leadership but, rather, wished to hear MB's personal account.

At the time of the interview (almost two years after the tragedy), MB had been principal of ECC for seven years and was still in the position. At the time of the tragedy (April 15, 2008), ECC had a roll of 540 students from Years 1-13. In total, MB had been a teacher for 28 years, 21 of those as a principal. MB had also undertaken various leadership roles in churches over a period of 25 years. At the time of the tragedy, MB was aged 50 years.

The interview

For the first hour and a half of the two-hour interview, MB, an articulate and focused speaker, used prepared notes to talk about his leadership and management of aspects of the tragedy, and he spoke with few interruptions from the interviewer, those being requests for clarification or repetition. The last half hour of the interview was semi-structured, comprising discussion of questions that had not already been addressed by the interviewee in the first part of the interview, and further development of topics MB had mentioned earlier in the interview.

MB was open in his account of events, describing how he and his support team acted and reacted as the tragedy unfolded, and how he dealt with the many and various issues that arose immediately, and later in the aftermath of the tragedy. MB recounted the events chronologically, interweaving the strategies he and his team used to deal with each aspect of the sequence of events as they arose, at first minute by minute, then hour by hour, day by day, and then across the months until the present time (two years after the tragedy).

The interview was recorded. Toward the end of the data analysis, MB was contacted again to clarify several items in the interview-material.

Analysis and analytical procedure

Data were transcribed verbatim, and the script was checked twice against the recording. The transcription included prosodic elements, but did not require detailed elements of linguistic analysis such as length of pauses typical of conversation analysis.

In the first instance, there was no presumed or pre-existing coding frame, no set of hypotheses, and no assumed sub-topics for the investigation, as such assumptions may have missed out important parts of the principal's experience. Instead, an inductive approach was appropriate for the present study as this allowed themes to be firmly linked to the data, the data themselves driving the analysis. MB chose to discuss what he perceived to be pertinent aspects of his leadership through the tragedy, and how these aspects impacted on the school. In this respect, MB himself selected a number of the themes identified in the present analysis.

The transcribed data were analysed using a thematic analysis, material being organised into recurrent themes identified within the data. Direct quotations illustrate the various themes. First-order coding was used to organise and categorise the data, as the focus of the study was to examine explicit meaning through a semantic approach, the focus of the interview being to gain a sense of the principal's course of action, and the reasons for his decision-making as he led ECC through the tragedy. Codes were created according to sub-topics within the material, and then sub-topics were organised into identified themes.

One of the advantages of using thematic analysis is its theoretical freedom, and potential to provide a rich account of the data (Braun & Clarke, 2006). The thematic analysis of the present study allowed an essentialist or realist view of the data to report the experiences of the interviewee from a practical and personal perspective. Braun and Clarke point out that such an approach provides a further advantage of thematic analysis in its utility to gather information that can inform policy development. This had relevance for the present study, given that an analysis of experiential information would be offered for publication, and would be made available to relevant New Zealand government agencies (e.g. Ministry of Education; Ministry of Civil Defence and Emergency Management) for their consideration in developing or modifying policy and practice guidelines.

Identified themes were investigated in relation to recent literature concerning crisis leadership and management, and considered in terms of their broader meanings and implications for principals dealing with a tragedy in their school.

Results and Discussion

To provide a coherent context for the material in this section, a brief chronological outline of events is included where appropriate.

Managing information

Between 5 and 6pm on April 15, 2008 as the principal, MB, was about to leave his school office to go home, one of the ECC teachers at the outdoor education camp at Mangatepopo phoned MB at school and told him that a group of students on a river canyoning experience was overdue, and that a rescue-party had been sent out to pick up the students and bring them back to base.

I didn't think too much about it [at first – but then] I thought it's very unusual that one of my teachers would call me here to tell me about a very practical management issue at a camp. So I came back to my seat.

This initial phone call was the first of many fragments of information that MB received and which he had to piece together over the next six hours as the situation unfolded into a clear understanding of how many people had lost their lives, and who those people were.

Within three or four minutes of that first phone call from the teacher at the outdoor education centre, parents, members of the Board of Trustees, and the senior church minister started to phone MB at school. Unbeknown to MB, news of the tragedy had just appeared on the television News at 6pm. The Police had not yet reported to MB, and the delay in reporting meant that MB could not verify anything that the concerned parents and others were asking him. Over the next few hours, the police necessarily required time to process and confirm information before it could be passed on to the principal and, ultimately, to the families. However, the speed at which this could be achieved by the police resulted in a lengthy and anxious wait for the school and families throughout the evening.

During this time, MB had to lead the situation from his office, five hours by road away from the site of the tragedy. The climate for most of the evening was one of a developing traumatic situation, with uncertainty, incomplete information coming in from time to time, and urgent requests for answers from concerned parents. MB's leadership required a high focus on the task of clarifying the situation and taking appropriate action, and responding to enquiries from the people involved.

I think one of the classic things for a leader [in] all of these things is not knowing [what's happening, or what the process should be], but you still have to lead anyway.

On the night of the tragedy, MB had begun a task that was to become a priority for him for many months to come, and which would still require his attention two years later.

A multi-skilled support team

Within a few minutes of the first phone call and news of the tragedy breaking on the national television news, without prompting MB's essential leadership support team began to gather in his office. The team comprised the school's deputy principal, the assistant principal, the girls' dean, the boys' dean, the principal's executive officer, and the Chair of the Board of Trustees. These people all knew the students and were experienced in their own fields of work as educational leaders.

Also, on the night of the tragedy, the school contacted Roger Phillipson (RP) a member of the Ministry of Education's Traumatic Incident (TI) response team, and RP came straight over to the school that night, beginning what was to become an extended relationship with the school. RP is an educational psychologist and coordinates a TI team at the Ministry. In a critical situation where people are dealing with trauma and uncertainty, the decision-making team is likely to require people with a range of relevant skills, with some of those people probably being required to provide support for some time after the event as well.

RP has become a firm friend. He's been with us for two years now.

Since the night of the tragedy, the support team has widened to include members of the Board of Trustees, who have provided "unwavering support – freely sharing their expertise and corporate acumen." At times, a number of other people have also assisted the school with their particular experience and expertise. For example, Victim Support has assisted the school on several occasions, and Seasons grief support arranged for and held sessions for the grieving families. (Victim Support and Seasons are discussed in Part 2.)

Given that leaders depend on others to assist them in their tasks, that individuals in an organisation frequently work in teams, and that in a crisis a team approach will likely be inevitable, it is important to build strong teams in organisations so they can respond to a demanding situation at any time. Klein, DiazGranados, Salas, Le, Burke, and Lyons and Goodwin (2009) suggest that team strength can be built within an organisation through developing four key components within the group: goal-setting; role-clarification; problem solving; and interpersonal relations. Klein et al. state that goal-setting and role-clarification have the greatest effect on team outcomes.

The Police

When the police officer in charge of the rescue and recovery at Mangatepopo first contacted MB, he informed MB that he would be his only point of contact with the police that night, and that MB could not pass on information unless he (the officer) gave him permission to do so. This put limitations on MB's access to the police, and on his ability to pass on information to anxious parents. Even as media reports came in of how many lives had been lost, the police had not yet confirmed this with MB, and again MB had no way of

immediately substantiating this information for anxious parents whose children were at the camp.

Throughout the unravelling of the disaster, the tragedy, the police were always one step behind the media, and therefore we were one step back again. This put me into ... a difficult situation. Parents ... were hearing things that [I couldn't] substantiate. We had media reports coming through about how many had passed away ... and we had no way of really substantiating that immediately.

We just had to listen to what everybody was hearing and try to filter, literally filter what you think would be the facts - so I guess from 6 o'clock through to about 8.15pm it was purely conjecture.

As information came in from the police, it continued to be incomplete. At 8.15pm, more than two hours after the news broke on television, the police officer phoned MB to report that at that stage he could definitely tell MB that they had lost four students. MB and members of the support group were now reacting to tragic news, but with the knowledge that further deaths could yet be reported.

And I'll never forget those words as long as I live. The emotion that rippled around this office was absolutely unbelievable.... It's not til you actually hear the words "passed away" or "death" that you realise that things have changed for ever. And, just getting my mind around the fact that four healthy Year-12 students were actually dead ... it was just trying to get your head around - they are actually dead.

Still, MB was told not to pass on this information at this time. In what was now a traumatic context, MB and his support team were needing to respond in ways that would help clarify the situation, while giving thought to the next necessary steps. So, at this stage MB was dealing with a highly emotional situation, with only incomplete information available, with continuing delays in receiving information, uncertainty, phone calls from concerned parents, and requests from the police to withhold information from parents and concerned others. Now, MB was having to lead his support team through a serious and developing situation, a type of situation in which he had had no previous experience.

I've never been down this track before; I've got no idea.

MB was "reacting as events developed."

I had no crisis management plan. I had the [first]phone call, people came, and really it was – a lot of listening,

a lot of thinking and working out how best to juggle all the balls in the air as we went through ... that first night til about 2.30 [am].

So we were [trying to] work out which of the 40 students were back at base, and which party was actually in the gorge that day. ... Over that night of course, we were gradually working out who had perished and who had not.

... The identification process was long and laboured; then they [the police] had to relay to Auckland Central [Police]... and it wasn't until two-ish in the morning that families actually got told.

MB acknowledged the work of the police, and realised the need for thorough police processes and procedures, but for the school and families involved in this event, the uncertainty and lengthy waiting time resulted in considerable distress. In respect of how improvements might be made in a similar situation in the future, MB makes the following observation concerning police liaison with the school:

I think if I were to ask the Police to do one thing, it would be to station a member of their establishment here in my office – to actually help filter everything - even though they were brilliant.

A timing problem with the police

By midnight, the police had confirmed, with MB, the names of all six students and the teacher who had lost their lives. However, the police were still to visit the homes of all the families who had lost loved ones to inform them. At 2.30 am MB arrived at his own home and, assuming the police would have visited all the families by that time, began to phone each of the families to speak with them before going to bed. On his second phone call, MB unwittingly informed a family of their son's death before the police had arrived. This was most disturbing for MB who felt "terrible" that the family had received such news by phone, and that he, MB, had unintentionally breached police protocol by releasing this information ahead of the police. Unbeknown to MB, the police had assigned only one officer to go to all seven families, spread across the south-east of Auckland, and the officer had not reached all the families by 2.30 am.

In respect of informing families in situations where there are multiple deaths within a particular group, MB suggests the following:

My advice would be [to] get three or four officers together and ... do this over a 30-minute period, because you're dealing with a close knit community. You're dealing with a group ... who had been talking [amongst themselves]all night.

The media

MB acknowledged that the media had a role to play in taking news to the country at large where people would inevitably be concerned at the loss of so many young lives at a school's outdoor education camp. When the media approached the school, MB was prepared to co-operate with them wherever possible.

I don't know how the whole media thing happened, but ... it is sometimes very much a gut instinct. If we did get it right, [it] is to recognise that the media have a part to play and they have a story to tell .... I'm a principal of a school, an integrated school, so I'm accountable to my community. Being accountable is being available ... to consult and to listen. And the media in a sense reflect - represent - the wider community. It's a matter of actually working alongside them really.

The media first came to the church, adjacent to the school, late on the night of the tragedy (about 11pm) where about three or four hundred teenagers from the school and wider community had gathered for prayer and support. MB told the media he could not speak to them that night as the school did not have enough information at that point. However, he indicated his willingness to co-operate with the media first thing the next morning. The media agreed. At the first media conference in the morning, MB talked to the media about their access to the school, as well as the school's wish for particular limits on media access.

When you are dealing with the media, you say: Yes, we can work with you, but here's how we would like to do it. You give them [something of use to them], but you also tell them there has to be ... a boundary around it.

After we had done our press conference, we had this [school] assembly. The media wanted to come to the assembly ... but I said to them, You can come in for the first part where I welcome everyone and I pray, and then when I start to talk ... about who we have lost, where it happened and all that sort of thing, that's family stuff and I want you to withdraw for that, and then we'll meet you later.

They [the media] were happy because they got an entry, and some footage, and then they retreated, and they knew they could get me aside later.... It worked really well.

Working with the media was, once again, a new experience for MB, and required reactive leadership in a demanding and now publically visible situation for which he had not been trained.

I'm not trained in the media, and most principals or organisational leaders probably have little to do with the media until [something goes wrong], but once again, you back yourself in terms of being able to speak to them and work with them.

MB gave a clear message to his staff about contact with the media:

[The staff] knew that I was the only one speaking to the media, and they deferred all media comment to me.

MB said that by allowing the media into the school, the media "treated [them] incredibly well."

I think ... certainly do everything to get yourself on board with them, and work with them in partnership, rather than keeping them out.

The school's partnership with the media was extended by the church who served the media with refreshments (a new but welcome experience for the media) as the media visited the chapel to observe, and to gather material for their news reports.

[The media told the story] over and over again to the watching world, and it was the world really, and so it really, really did help us....

As a result of the media-publicity, the school was offered support from a range of sources (discussed in Part 2), and Christians around the country prayed for the school and families.

A less successful media decision

MB spoke of a "classic mistake" he made with the print media several weeks after the tragedy. A women's magazine rang him and asked if they could do an interview with the two surviving girls who had been pulled from the water. The girls and their parents agreed to the interview, but MB felt the experience proved too great a demand on these Year 12 students at this stage and in such a context.

Even though I had the parents' permission, I felt it was just too much for the girls. ... It turned out to be almost too intense for words.... And I didn't realise how intense it would be when these girls started to talk for the first

time to people beyond their family. [The girls] had been through their interviews with the police and through the Department of Labour and that sort of thing, but it just seemed to not work. And so I think that was a big mistake. ... I just felt I'd overstepped my mark as the principal.

Reactive leadership

MB stated that from the earliest stages of the tragedy (i.e., from the very first phone call, before 6pm) "things happened at lightening pace." From the very start, MB and his support team were reacting to their changing and uncertain environment, rather than planning a response or following an established protocol as the various pieces of information came in and the tragedy unravelled piece by piece.

We just really rolled with whatever came ... for the next so many hours.

It all happened in a bit of a blur too - you don't know from where you're sitting as to how serious the situation is .... You are forming an opinion.... I didn't have time to debrief with my key leadership team or my Board as to what the situation was.

Another observation ... was that a lot of personal management training is training you to be proactive, visionary ... being two steps ahead, and that is good. But, I think there is also a point where you have to be positively reactive - you don't know what is coming at you, but you are simply having to take what's coming, and then say, What now? And I learnt... not to assume or presume anything, but simply whatever situation came to me, we then say okay, what's the PMI [Plus Minus Interesting model used for decision-making]? What's the positives, ... negatives, and what's the interesting part we have to look at?

[The PMI model of decision-making was codified by Edward de Bono in his book, "Serious creativity" (Pub. 1998).] While it is beyond the scope of the present study to investigate this model, in short the implications of making a particular decision are broken down into the Pluses, Minuses, and Interesting aspects, in order to broaden, organise and evaluate one's thoughts on the issue.)

Three staff briefings a day

Immediately following news of the tragedy, and in a climate of widespread grief involving a large number of people from within the school and from outside, practical issues required the attention and combined efforts and decisions of a large group of people. MB was sensitive to the need for his staff to be kept informed and included in the immediate situation, and for colleagues to meet often and regularly in a supportive environment.

I met with the staff three times per day so that at all points they were fully informed as to what I was hearing, and what we were deciding as a school. I think you have got to keep people fully informed. … One of the simplest ways of bringing your staff together is to have good food and good coffee. (Seventeen local schools gave us morning tea over a period of about six months.) You could imagine the first morning tea, people coming together - there was just tears and grief, but they all came together - they just needed to come together. Over a period of three to four months, I saw the staff grow because of the coming-together.

RP from the Ministry of Education's TI response team has provided on-going support for the school from the night of the tragedy, and through the two years since that time.

I would always have Roger [RP] with me [in the early planning stages] and we would prepare things to share with the staff. So before that first assembly, staff went into the assembly knowing who had perished and what had happened that night. We met at lunch-time - we met at three in the afternoon [for the rest of the term]. And I think at all points they [the staff] knew what was going on.

ECC is a Christian school, and prayer was always part of the staff meetings, as it was part of assemblies with the students. The school is founded on the Christian faith which guides the school's operation and decision-making at all times, and prayer was an intrinsic aspect of the school's coping.

Commenting on the staff meetings, MB stated:
Over a period of three to four months, I saw the staff grow because of the coming-together. You've got to draw people together, and it's all about building around the core values of your culture. As a Christian school we are very used to praying together - to us that was important ... so I would always pray.

Initial responses to student and staff grief

The school provided ongoing assistance to children and staff at ECC through daily prayer and Christian messages. Following a traumatic event, many people who have a religious faith experience lower levels of stress and better mental health than people without a

faith (e.g., Koenig, McCullough, & Larson, 2001; Laufer, Raz-Hamama, Levine, & Solomon, 2009). Tix and Frazier (1998) suggest that the social support within a religious community, and a sense of control that can be gained by trusting in God are pathways to religious coping in stressful situations.

Decisions for reflection, coping, and supporting were consistent with the Christian culture of the school. For instance, the school considered how they were going to handle the empty desks in classrooms in the days immediately following the tragedy.

We decided that we wouldn't be lighting a candle or drawing attention to ... an empty desk.... We established the chapel instead as a point of reflection ... where people could come. The guidance counsellor [wanted] pens and paper ... where people [could] come and write things and pin them up - any messages they want to do. They can put the flowers there too, and we had nice music playing, and we just opened that up daily from 7am til 11pm, and just allowed that to be a place where people could, and visitors could, come - absorb and give and pray and reflect. And there was no more structure to it than that, and it was lovely.

Staff and students were able to make their own decisions about seeking support from the available counsellors or from family and friends, and about visiting the chapel. This approach allowed for individual differences in responding to grief, and provided flexibility for individual expressions of grief.

I think we did make an unwritten expectation of ourselves that we wouldn't judge any kid as to how they were feeling or whatever. We would just simply provide them with an out where they could be with like-minded kids or people. The same with staff - they needed time out ... it doesn't matter. It's not for us to judge, but simply to help.

We assumed that most kids were going to be in some level of stress, and for whatever reason they were going to need to be together, or going to need to be at home, or it was going to fall apart in some way.

In respect of identifying any children who may have been particularly distressed, MB indicated that he trusted his staff, who were in closer contact with the children on a daily basis, to be alert to children who might need special care and support.

I think that I relied completely really on those who are closest to the students - my deans, my teachers, heads of departments, my guidance counselling team.

Otherwise, MB let students express natural grief responses, and provided a place, opportunity, and continuing support for students to respond in ways that could be helpful for them at that time.

Whenever students were filled with grief or need to be together, we would just actually roll with that. We wouldn't presume or assume anything, and so we had a lot of movement of groups of students for [the three days left in that school term] and the next term as they just found their feet within the whole thing as they processed things.

By allowing students some latitude between class-attendance and chapel-visits in the early stages, MB was acknowledging to students that what they were feeling was a natural response to grief, at the same time providing some reassurance and ongoing support for the students in the midst of their sadness in distressing or confusing times. However, MB also understood the benefits for students to resume a normal school routine as soon as reasonably possible.

Over time we gradually drew a boundary around what the kids could do, but we just let it find its own feet. There was nothing manufactured ... but we also knew those who were absolutely stricken with grief, and they were not coping at all, and were sick and so on. But, gradually we just drew the net in and started getting the school finding its feet again, and back into a routine. I don't think it's anything that you can force. ... We just met regularly to work out this whole thing.

If variation from the normal school programme is allowed to continue past a time deemed as reasonable in the circumstances, students could perceive the situation as one of continuing disruption (Ronan & Johnston, 2005). Also, a return to normal routine sends a message to students that the adults have the situation under control, so assisting students to have confidence in the staff to care for them. Thus, there are benefits for students to resume normal routines and school operation as soon as possible after a disaster or traumatic event.

A level head
Among personal characteristics understood to predict effective leadership is emotional stability (André, 2008). This does not mean that a leader cannot or should not feel an emotional reaction to a particular emotion-provoking situation; in fact, in certain situations, followers may well expect a leader to express or display

certain emotions, and a leader who fails to do so, may be perceived to lack sincerity or credibility (Gardner, Fischer, & Hunt, 2009). Emotional stability refers to the characteristics of not being overly emotional, of not reacting strongly to all manner of stimuli, and of being able to stabilise emotionally after an arousing experience (Eysenck & Eysenck, 1996).

In order to perform effectively in a demanding situation, it is necessary to manage one's anxiety (Tarrant & Leathem, 2007). MB recognised the importance of remaining calm, and taking a steady, measured approach in a crisis situation, rather than becoming overwhelmed.

I think you respond according to the type of personality you are too - so I suppose it's going to be: I'm not a panicker. I'm not a panicker... and I don't get surprised easily or phased by things.

MB's reflective thinking and the aspect of his personality he describes as not being a "panicker," come together in his following comment:

I think you fall back on some of your own life wisdom at that point.... From 6 o'clock until I left here at 2.30 in the morning, I did probably more listening than speaking, and my decisions were made based on filtering what I heard. ... You have lots of offers of help and support [but]- no knee jerk reactions. I think it just needs to be measured. It needs to be thought about.

MB stresses that decisions are best made only after sufficient time has been taken to gather and assess available information into some sort of coherent picture and, importantly, where decisions have to be made in the absence of complete information, the most appropriate decisions were likely to be made if he remained calm.

MB also acknowledges that he was making decisions in the context of his overall learning from his life-experiences, which he described as "intuitive" responses, or responding from his "gut."

[In some instances, you're] going to ... respond intuitively from [your] gut.

Trust, relationships, and interactions with other people

MB emphasised the importance of managing relationships effectively, not only with people he knew, but with the many people he had never met before but who were involved in assisting the school at a time when important decisions had to be made.

You're ... surrounded with the enormity of emotion and the interplay of relationships and friendships and so on.

You're instantly thrust in ... you don't plan for a disaster, and you don't think about the amount of people-interaction [there] is.

Mutual confidence and trust between the principal and members of the school's Board of Trustees were critical for decision-making and cooperation in these difficult times.

As I've looked back on the operations of my Board of Trustees, I am of the firm opinion that primarily [the] best job that I can do with my Board is to build relationships of trust and of understanding. Therefore when situations like this come, I know who I can go to [and they know they can come to me]. I spend a lot of my time reporting to my Board with [how the school is doing] - I'm accountable to them. But in doing that I'm building a relationship.

MB refers to the need for effective interpersonal relationships in a range of situations that require considerable and ongoing communication and cooperation.

A lot of it [though] has been not around processes and guidelines and paper. It's really been about the fact that life is about relationship and people, and how it's very important to have those connections and relationships working really, really well - because that's what you fall back on.

If you have the people skills, then you can work with anyone really - Just setting up memorials you end up working with construction companies, you end up working with the police for investigations, you end up working with lawyers, the coroner's inquest - very, very difficult - but you build up knowledge as you go through - learning how they work and what they do.

Looking back: A need for concise crisis-documents

MB had not been trained in crisis leadership, and there were no concise, guiding-documents readily available to him on the night of the tragedy that could have guided him through a series of ordered steps. Nor was there a list of matters he should be attending to as a priority. There was no check-list of people he should or could contact immediately.

I literally didn't have time to find the right policy .... We do have policies on a range of things ... but I think it's
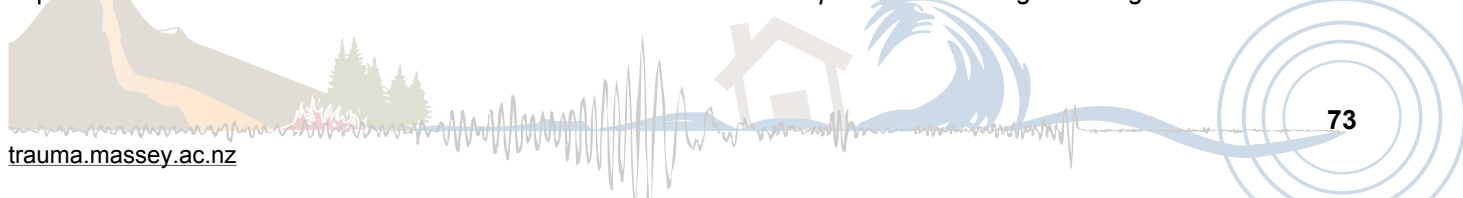
important to have "reach-for" policies, or "reach-for" documents.

It has to be a ... document that you have standing in your file there and you pull it out and it [says, do] A, B, C, D and E. I know it sounds a bit simplistic, but that's what you need.

Whatever ["reach-for" type of plan] is developed , ... they've got to tailor it to who they are and how they work in this situation, and I'll be the first to say that I can't just take my situation and drop it on someone else ... because it could be totally different next time.

I don't think ... it's always that you reach for the [phone] number because you don't know what to do, but you do want advice. And advice is coming at you from all over the place, and you do want people to suggest things that you haven't thought of.

It is noted here that the Ministry of Education does have an emergencies-document on its website: *Managing emergencies and traumatic incidents - The guide (Ministry of Education, 2010)*. This guide, available at the time of the tragedy, contains useful information for emergencies, but is 59 pages long, thus requiring more time for reading and deciding on a course of action than would typically be available in the early stages of a crisis. Thus, concise *reach-for* documents would have been helpful. It is noted that since the tragedy, in June 2009, the Ministry of Education has made available on its website an eight-step guide for "Responding to traumatic incidents." This briefer, seven-page guide contains some material that could be helpful in a crisis.

In relation to assistance available from the Ministry of Education website, the Ministry has a Traumatic Incident (TI) response 0800 telephone number (free in New Zealand) through which immediate assistance (across 24 hours) can be made available to schools needing help in a crisis. A local member of the Ministry's TI team, Roger Phillipson, was contacted on the night of the tragedy, and he has supported the school from that night and through the time since.

MB, the principal of ECC, led his school through a sudden, traumatic, and unique school event for which he had not been prepared. The present investigation advances understanding of school leadership in a human crisis, and suggests the following lessons and implications:

Lessons Learnt

- **There is a need for school principals to be trained in crisis leadership and management**

It is important that school principals are prepared through having trained in crisis leadership and management, and that they have access to reach-for documents that provide direction, guidance, and personnel contacts, especially in the early phase of a crisis. I n relation to principals being trained and prepared to deal with a crisis, it is important that support staff, particularly senior staff, are educated in preparedness drills and practices prior to emergency situations.

- **There is a need for development of reach-for documents for New Zealand school principals**

Based on findings of the present study, there is still a need for development of reach-for documents for school principals that are, by definition, concise and readily available to the principal immediately the crisis occurs. "Concise" documents would ideally be pamphlet-sized, with information shown in, for example, numbered steps, lists, or bullet-points, depending on the purpose of that document. Reach-for documents would include: guidelines for essential and recommended sequenced procedures in specific types of crisis event; a list of the pre-selected support team personnel with contact details, plus their expected roles and strengths; a list of the types of skills, knowledge, and advice that may be required from outside the immediate support team, with names and contact details alongside each identified skill or area of expertise; a list of groups who may be impacted by the crisis, and specified communication lines to those groups; and checklists for managing operational or routine matters not directly part of the crisis itself, but that may be impacted as a result of the crisis.

It is important that the principal and all staff in the school: (1) are informed of the contents of the reach-for documents; (2) understand their own role in a particular crisis event; and (3) know where the crisis reach-for documents are located (in case the principal is off-campus at the time of a crisis). Clear reporting lines should be stated in all documents. All aspects of crisis preparation, including contact details for personnel, should be updated on a regular basis.

- **School staff would benefit from a knowledge of the grief process**

  School staff would likely benefit from some knowledge of the grief process. In the case of grieving students or staff, the school would be able to offer support to students and their families according to the families' wishes, and according to the culture of the school. Where appropriate, students could also receive messages about the natural grief process. The expression of grief, and rate of coping and adjustment is individually variable and it is important that the school does not assume or presume there should be a consistent pattern of response among the grieving.

- **School staff would benefit from training in how to support children exposed to traumatic events**

  Teachers would likely benefit from an understanding of how children of different age groups commonly reactions to traumatic events, and of how to provide the children with appropriate support.

- **A multi-skilled support team is required**

  A support team should be pre-selected for particular types of crisis events. Members of the support team would bring a range of relevant school, local, and expert knowledge and experience to the team. Likewise, specific types of assistance that may be required from outside the school should be anticipated, and appropriate personnel with contact details identified ahead of time.

- **Police procedures take time**

  There will inevitably be delays before the police can confirm and pass on information regarding injury or loss of life to the school and families. In certain type of crisis events, consideration may be given to requesting that a police officer is stationed at the school to provide support over a critical time period. Communication with, and assistance from, the police should be anticipated in a crisis, and consideration given to possible requirements the school may have of the police, as well as ways in which the school could assist the police in particular types of crisis event.

- **Work in partnership with the media**

  A co-operative partnership with the media is encouraged where the event is of public interest. The school can provide access for the media, with boundaries for school privacy where appropriate. Communication with the media should normally be only through a nominated person (or persons), usually the principal who ideally has had some media-training.

- **Reactive leadership may be the only option at times**

  In the early stage of a crisis, information is likely to be incomplete, with uncertainty, gaps, perhaps errors or ambiguity, and constraints on what a leader can do, or what he/she can say to the people impacted by the event. Thus, at various points in a crisis, a clear pathway ahead may not be immediately obvious, even though a decision may be required. It is important for leaders to remain calm, listen to alternative viewpoints, and to avoid "knee-jerk" reactions as they make decisions in this phase of the event.

- **Keep staff informed**

  The principal should keep staff informed of current crisis matters affecting the school. Regular staff meetings, more than once a day in the initial phase, should be scheduled for information-updating and social support.

- **The culture of the school is important**

  It is important to consider the culture of the school when considering a school's needs during a crisis, and in a grief-context. Intrinsic values and beliefs of the school community will underpin decisions and approaches taken in dealing with the crisis; as well, cultural and individual differences within the school should be recognised and respected.

- **A steady, measured approach from a leader can encourage a calming environment for the support team**

  Even in a confusing and demanding context, a leader can assert some control over the situation through focussing on the task at hand, modelling a steady approach him/herself, and assisting team members to gather and assess information as far as practicable before taking necessary decisions.

- **Effective interpersonal relationships are critical for effective team operation**

  In a wisely chosen support team, there will be effective interpersonal relationships where there is mutual trust, respect, and effective communication between the principal and the team. To enable prudent decision-making in a crisis, a leader will encourage his/her support team to bring relevant perspectives to the
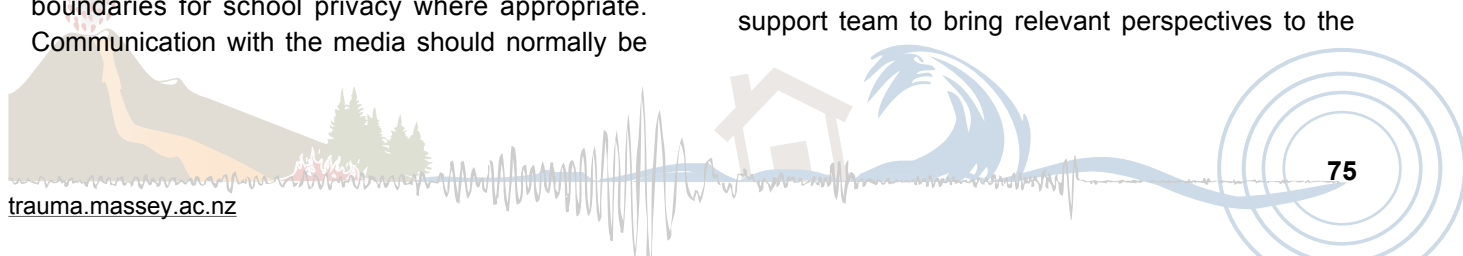
situation, and at times will entrust team members to attend to certain matters on his/her behalf.

Part 1 has investigated aspects of leadership in, essentially, the first week of the tragedy as events unfolded and as the school was coping with individual responses to the tragedy and managing operational aspects of the event. There is a long aftermath to a tragedy: see Part 2 for an investigation of the principal's leadership through the following two years.

Acknowledgements

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Leadership Through a School Tragedy: A Case Study (Part 2 - The Next Two Years)

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Abstract

Part Two of the present study continues an investigation of a school principal's leadership through a crisis in a New Zealand school where six Year-12 students and a teacher lost their lives in a river canyoning tragedy; the students were attending an outdoor education camp in the central North Island. There is a long aftermath to a tragedy, and the ongoing demands on the leader require considerable physical, mental and emotional energy. Part 2 covers the principal's leadership concerning the tragedy in the two years following the event. Part 2 covers: support for the school; support for grieving students, staff and families; tributes and memorials; issues of safety; and looking after the leader. Part 2 should be read in association with Part 1 (which covered, essentially, the first week of the tragedy). Background material for Part 2, and an outline of the Method, are contained in Part 1.

Keywords: *leadership, school, tragedy, crisis, psychosocial, grief*

Introduction

Children in traumatic events

Traumatic events involving a school can occur on-campus or away from the school itself. In both cases, the crisis may involve loss and trauma with the potential to impact on students, their families, and staff alike.

Heath, Nickerson, Annandale, Kemple, and Dean (2009) assert that immediately following a disaster, there is a need for children to be reunited with their families and caregivers. While students can be assisted individually and in groups in a school environment, when death occurs the family is considered to be their primary social environment and support; this is particularly the case for younger aged children (Rowling & Holland, 2000).

Previous studies have shown that within the family, parents' reactions to a disaster predict their children's behaviours, thoughts and feelings (e.g., Deering, 2000; Huziff & Ronan, 1999). Although children's vulnerability to trauma can be increased in the presence of negative parental responding, children's vulnerability to deleterious psychological effects is reduced where parents or other significant adults convey effective coping strategies to children, combined with warmth, consistency and support for the children (Ronan & Johnston, 2005). Conversely, where there are symptoms of trauma or distress in parents or caregivers, these can be magnified in children in their care (Pine & Cohen, 2002). There may also be instances where parents avoid discussing a traumatic event with their children because of their own distress, or fear that talking about the event may distress their children, believing that such avoidance may protect the children (Dyregrov & Yule, 2006). In such instances, children are denied an opportunity to discuss their feelings, to have their feelings acknowledged and validated, and to receive assistance where required.

Following a tramatic event, "most children are able to negotiate the grieving process without lasting scars" (Cohen & Mannarino, 2011, p. 117). However, where trauma symptoms intrude on the child's grieving process, a condition known as Childhood Traumatic Grief (CTG) may develop. Cohen and Mannarino state that teachers can help grieving students who are not coping by recognising CTG symptoms in children; CTG symptoms can include, for example, re-experiencing, avoidance, hyperarousal, learning-problems, or emotional, behavioural or cognitive difficulties. As some of these symptoms can be observed in children who are not experiencing CTG, it is important that educators refer children about whom they have concerns, to mental health practitioners so the children can be professionally assessed in the first instance.

Children experiencing CTG usually benefit from a trauma-focussed intervention, which assists the children to learn skills that can help them regulate their

feelings, thoughts and behaviours associated with their loss (Cohen & Mannarino, 2011). Children who are receiving professional assistance for traumatic grief can also be supported by educators: Heath et al. (2009) state that teachers can learn ways to support grieving children through the necessary collaboration with the CTG therapists and the parents of children receiving therapy. Such collaboration will assist teachers to provide assistance that coincides with the strategies and messages that the child is receiving in therapy and at home. Other grieving children may also benefit from learning such strategies. For example, all children can learn and practise relaxation exercises, and they can learn and practise skills for affective and cognitive coping.

Traumatised children, whether or not they are engaged in a CTG intervention, are likely to benefit where educators help the children understand that their feelings of shock or loss are normal. Heath et al. (2009) state that children can be encouraged to express their thoughts and feelings, either verbally or in drawing or play. These authors go on to state that adults should also respect a child's silence, and reassure the child that the adult is there to help him or her when and if the child needs or wants assistance.

In the school environment, Litz, Gray, Bryant, and Adler (2002) assert that social support is critical to positive adjustment, and that children need to be linked to their peers and teachers in structured activities that encourage and strengthen social support connections. Schools can also connect with community groups that work with and support members of their groups that may be represented within the school (Smith-Adcock, Daniels, Lee, Villalba, & Indelicato, 2006). Heath et al. (2009) suggest that encouraging Parent Teacher Associations to become active in the crisis management of the school can serve to unify the school, parents, and the community. Heath et al. go on to suggest that paraprofessionals, students, and volunteers can be invited into the school to help children and families with special needs.

Rowling and Holland (2000) state that peers and adults in the school are important sources of support for students, particularly if a death involves the school community. Rowling and Holland suggest that children can be prepared for managing traumatic incidents through the school having in place curriculum content concerning grief, and a supportive social and cultural environment in the school that acknowledges the normality of grief experiences as being part of life events. For the majority of children, naturally occurring social support will be sufficient for the children to make positive adjustments following a traumatic experience (Barenbaum, Ruchkin, & Schwab-Stone, 2004). For adolescents in particular, discussion among peers is a normal aspect of their social behaviour. Thus it is likely that this age group would be disposed to discussing issues relating to a traumatic experience; teachers, who are typically not trained in traumatic grief counselling, can assist students through empowering social support systems following a disaster (Litz et al., 2002).

For educators to provide optimal support for children and their families, particularly after a traumatic death, cultural views and practices of the children and families should be understood, particularly values and practices around mourning (Cohen & Mannarino, 2011). By asking families about their cultural values, it is likely that educators can increase further understanding and trust with those families. For continued support, children will benefit from being connected back into the cultural, family, and spiritual practices that supported them before the traumatic event (Barenbaum et al., 2004). A school may benefit from strengthened relationships with faith leaders in the community, who typically know the community's histories and strengths, and the availability of resources (Heath et al., 2009). In the first instance, faith leaders may mobilise physical assistance for the school (e.g., clean-ups or fundraising), and following the immediate crisis faith leaders can become part of crisis management teams in the school, encouraging families from their congregation to participate in services and prayer on or off-campus, and offering other assistance as deemed appropriate by the school (Heath et al.)

Schools in traumatic events
The question arises of how a school might assist children following a disaster. A study following the catastrophic event of Hurricane Katrina in 2005 (Barrett, Ausbrooks, & Martinez-Cosio, 2008) demonstrated the potential for teachers to assist traumatised children. The study of children's adjustment to life following their evacuation from New Orleans found that children turned to staff in their new schools to help them cope with the aftermath of this extraordinary event. Of special interest was the finding that children who coped most effectively with the loss of their homes and social networks, and the subsequent relocation to a previously unknown environment, were the children who had developed a positive relationship with teachers in their new school.

A further study (United States Dept of Education, 2006) highlights some effective strategies for assisting students when a school experiences multiple deaths. Prior to 2006, seven middle school (Grades 6-8) students from the same school were killed in a car accident in the southern USA. Immediately, a crisis team was established at the school to: (1) dispel rumours about the accident; (2) help the school respond to enquiries from families and media; (3) assist teachers and families with tools and resources to help them support the children; (4) provide short-tem counselling, and assistance to identify students in need of further counselling; (5) coordinate volunteers; and (6) help teachers restore a normal learning environment. In 2006, the US Department of Education's Readiness and Emergency Management for Schools Technical Assistance (REMS TA) Center reviewed the school's response to the tragedy, and from lessons learnt, suggested that schools: develop a school crisis handbook for future use in emergencies; conduct emergency management training for the trainers (i.e., for selected staff and students); develop memoranda of understanding that include procedural guidelines for communicating with and directing teams of crisis personnel and volunteers; establish procedures for communicating with families, school staff, and the media, and audit these on a yearly basis,; organise support for school staff and the crisis team while they are responding to the crisis; and decide on how the school might respond to memorials and anniversaries. Importantly, in relation to managing the crisis, REMS TA suggests that a record of processes, timelines, activities, and student-needs be kept throughout, as such records can be used to improve future procedures and protocols.

In terms of the leader and crisis teams being supported in various stages of the crisis, leaders take control of the situation from the beginning, and continue their role through the long aftermath that follows a major event. Thus, during the crisis, constant demands on, and constant availability, of a leader of an organisation can come at a cost of harming the leader (Fein & Isaacson, 2009). In this respect, Fein and Isaacson suggest that leaders dealing with a crisis could, themselves, benefit from support in the days immediately following a crisis: support may be in the form of, for example, working with a crisis mentor, or through meeting regularly with a counsellor experienced in crisis impact, or by taking a certain amount of time away from the site on a regular basis. In the long aftermath of a crisis event, similar ongoing support can be required for the leader as he

or she attends to requirements arising from the event in the following months, or years, to come (e.g., attending to legal and government enquiries; liaising with affected people who are linked to the organisation); attending to demands arising from the crisis are likely to continue for the leader while, generally, he or she conducts other leadership responsibilities concomitant with their position. Consistent with the need for a leader to be supported when handling a crisis, members of support teams are also likely to require similar types of support, especially in the initial stages when there are frequently constant demands on this group for information, action, reaction, decisions, and energy. Further, in crisis situations, there may be a particular need for support where the leader or members of the support team are personally affected by the crisis because of their own personal circumstances or losses (Cacciatore, Carlson, Michaelis, Klimek, & Steffan 2011).

Where there is loss of life among students or teachers, how can schools respect and celebrate the lives of those people? Jimerson and Miller (2008) suggest that writing-activities or compiling scrapbooks can assist students to "concretize" memories and experiences that are personal or shared. Permanent memorials can also assist the children and staff in their coping with loss. For example, Jimerson and Miller suggest that the choice of the particular type of memorial (e.g. planting trees as a living memorial) can be a permanent tribute to the deceased person(s), as a reminder of the deceased's value and legacy to the school, to their families, and to the community.

Part 2 of the present study covers: support for the school; support for grieving students and families, tributes and memorials; issues of safety; and looking after the leader.

Results and Discussion

Support for the school

Essential professional and social support from a range of sources has been available to the students and staff, the principal, and his support team for the two years from the night of the tragedy.

I think initially we would not have coped in the first three [or] four days til the end of term if we hadn't have had the unsolicited support. Guidance counsellors from other schools - they just came - they just downed tools and came. They were here. We would not have survived if schools had not released teachers at their expense

to come over and take classes for us. We would not have survived if the church hadn't been free to help us whichever way possible.

And it was never just about the Elim community. It was far wider than that. Victim Support came; the Ministry's [Ministry of Education] team [came]. (Victim Support is a New Zealand independent charitable trust and community organisation that works with the police to support people distressed by trauma or crime: Victim Support, Manaaki Tangata, 2010.]

So I think that we saw the best of our society coming together to help – offers of help from all over the place. The gifts that came from little people, older people, wealthy people - it didn't really matter - I think you've got to be all-embracing.

Supporting the grieving families

It is important to know when and how to intervene following a traumatic event in a community, rather than making an assumption that everyone will require assistance; where required, appropriately trained persons can be engaged to assist (Yule, 2006). In the case of the present study, teachers and counselling staff at ECC provided initial grief-support for the students and other staff at school, and the principal arranged the availability of professional off-campus grief-support services for the school and families who sought professional assistance.

For the two years since the tragedy, the school has provided ongoing assistance, care and social support for the families who have lost loved ones.

First, [there were] seven funerals, and we just committed ourselves to supporting the families in whichever way they needed it.

I just realised what it meant to people when other people came to pay respects. I saw that in those funerals, day after day. I think it's that collective ... putting of the arms around people isn't it - sort of like we are all in this together.

From the start, families have known they could go and talk to MB or others from the school's Board of Trustees [i.e., the school's governance body]. This social support is still offered to families two years after the tragedy.

We have walked the journey now with those seven families for nearly two years - the best thing you can do for people is simply to be there for them. Even now, if XY [a mother who had lost her son] walked in here, I

would drop everything and chat and listen to [her] - and that's just all we have really done. We haven't given them any clues of how to deal with this - we've simply answered the same questions [many times] - talked about the same things.

The Board's had them for dinner - have been places together - they just need to talk. They just need to get things off their chest. They need to ask questions - and we need to ask them too - everything we've done - how does this sit with you? Is this helping you move along your journey. We don't ever talk about getting over things - I don't think you ever get over things - I think you move through things.

There have been occasions when one or two of the bereaved families have had concerns regarding their surviving children being exposed to particular situations at school. MB has talked with the parents and acknowledged their concerns, providing parents with assurances that he was keeping a close eye on the needs of the grieving siblings.

Work with me and I'll filter it - I'll let you know if it's appropriate [he told the parents]. I think you've got to protect at the same time, and I put a little net around the families myself, and said what people should come near [those children] and who shouldn't.

Emotional intelligence [is important], the ability to be empathetic - to put yourself in another person's shoes.

By listening to and reassuring parents, MB was able to connect with the parents regarding the concerns they were expressing about their children. The principal has provided care and ongoing communication with the families over the two years since the tragedy. Greenockle (2010) asserts that effective communication is the key to relationships, and that empathetic communication can arise from careful listening. Empathetic communication is described by Greenockle as part of emotional intelligence, Mayer and Salovey (1997) asserting that emotional intelligence is central to effective leadership; Mayer and Salovey define emotional intelligence as a set of four distinct, though related, abilities that concern how emotions are: perceived; used; understood; and managed, these abilities guiding the individual's thinking and behaviour.

Other coping strategies that became part of the school's approach to dealing with the tragedy included acknowledgment and acceptance of normal grief reactions, and getting the school back into a normal

routine as soon as reasonably possible. These strategies are supported by Yule (2006) who also advises that children be given opportunities to express their reactions and experience of the event. The group-setting of a classroom is a suitable environment where children can choose to discuss their reactions to trauma. Talking in such a group-setting can help to reduce any feelings of isolation in the children, and to increase their feelings of connectedness to others (Openshaw, 2011).

Seasons grief course

The siblings and parents of the grieving families were all invited to participate in a *Seasons* grief course. The *Seasons* grief course is a support programme, usually for young people (5-18 years) who have experienced loss or grief. The course is facilitated by trained professionals experienced in grief and loss counselling. The course runs over several weeks (usually 10), and in Auckland is offered through the Anglican Social Services.

They all went, and it was done very, very well - adults and children.

[After the Seasons *session, held over a period of about two hours], they all went to [a local coffee shop] and talked for hours. It was a nine-week course, so there were a minimum nine opportunities of a couple of hours each to be bound together, and for a long time.*

I would recommend grief courses like Seasons*, and particularly for the siblings. We've [the school] produced a book … that the siblings wrote [while taking part in the* Seasons *grief course]. It's profound in its simplicity, and I think it was an incredible help to the siblings to work through their own grief process, and the parents too.*

Through their work and writing in the course, grieving siblings have published a short book that may assist other children who have lost a brother or sister. This book, called *Never be the same*, was reviewed in the New Zealand Education Gazette (a professional publication for schools), and is available directly through ECC and via the online bookshop, *NZBookShop.*

Individual differences in responses to grief

MB observed shifts in the families' responses to grief over a period of months as the families dealt with their grief in different ways and at a different rate.

[Early on] DV, my chairman [of the Board of Trustees] and I found it very easy to speak on behalf of the group as a whole. We knew exactly where they were

at - I've learned that probably for three or four or five months they were together - thinking about it the same, responding the same, and it wasn't until about the six-month period, approximately, that you started to see the shift.

Some families were appearing to go forward in their thinking and coping efforts, while others were having more difficulty moving ahead from their earlier thoughts about the tragedy.

[By Christmas time, eight months after the tragedy], I couldn't really speak on behalf of the families as a group any more.

To support people who are grieving, it is helpful to have an understanding of how the grief process works, to recognise that there are stages in the grief process, and that there are individual differences in how people respond to grief.

We do need knowledge of how the grief process works, and we do need to be aware that the goal posts will change, and that we can't just presume to speak on behalf of these parents. They were finding their feet in the whole thing.

Grief-support across the school

As well as assisting families who lost loved ones, the school has provided support, or arranged support, for all students and staff from the night of the tragedy. Children from a broad range of cultures attend the school, and in respect of the cultural mix of the school, MB acknowledged there were some cultural differences and gaps in dealing with grief, and in coping with legal processes.

Most of our students are European. ... We've got multi-cultures from around the world, but we've only got about eight Māori children [Māori are the indigenous minority of New Zealand.] ... We didn't embrace the Māori dimension as well as we could have, in terms of help, because they have a real affinity with grief. But that's one of the learning curves for us.

We had the added situation that one of our students (TS) who passed away was an international student, so we were dealing with Taiwanese matters as well, and their whole cultural breakdown - TS's parents still can't handle the fact that our legal processes take so long. Back in Taiwan [it would have been] dealt with and ... they would have moved on. Our culture's not like that, our legal system's not like that, and they just
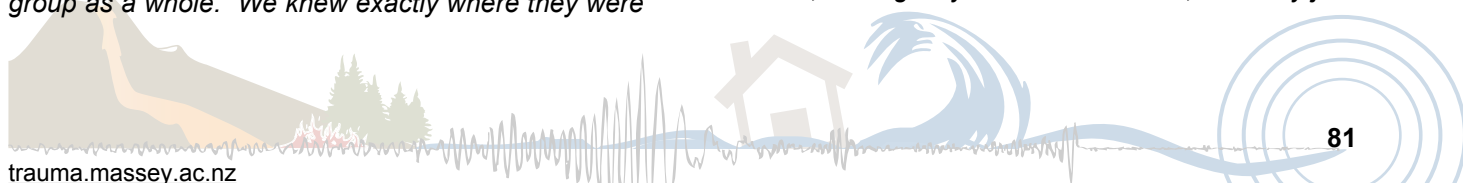
can't understand that. They went back [to Taiwan]… a few weeks after the tragedy. [The grandfather, back in Taiwan] perceives New Zealand [as] an unsafe country now.

Tributes to the school and families

Such was the impact of the tragedy on the country, that the school received a large number of private messages of condolence from across New Zealand and beyond. MB recognised the genuine public response to his school's grief, and extended personal thanks to the individuals for their support.

I employed a team of people to actually help me to reply by card or by email - it was thousands that went out. I signed every one personally with a little message if I could. And we were still getting them a year later, ... and [we] try and thank them for their gifts ... and try and reflect some of the grief they were feeling too.

MB took responsibility for ensuring that messages of condolence reached the families, while at the same time protecting families from messages that may not have been helpful to them.

But I think once again, it's got to come through a gate-keeper, and I'm the gate - I'm one of the gate-keepers and so are my office staff - it's just because some people mean well, but it comes out wrong. Basically, it's bringing in the help and evaluating it, passing it on to where it's most needed, and you continue to do that.

This tragedy connected the school with an empathetic public of New Zealand and with concerned people from outside the country.

We had gifts from overseas - a British school in Egypt sent us some ceramics. Incredible really. We've got scrap books and things like that - our living reminder of the whole.

I think we've got to realise we are not isolated - that life is all about a connection with others, and this story, this tragedy has affected New Zealand immensely, because everyone puts themselves in that situation, whether they be a parent or … an adult who has been through it - and that took me by surprise too.

Memorials

MB commented on the value of sharing ECC's experience with other schools that had been through traumatic situations involving loss of life. Exchanges with other schools were helpful in EEC's decision to build an active memorial that would capture the spirit

and memory of the students and teacher who lost their lives, a memorial that could also benefit future students at the school. Their memorial is in the form of a climbing wall. The wall has seven sections representing the six students and one teacher who lost their lives. Each of the seven sections is coloured differently and has an individually named memorial plaque attached.

A memorial is our climbing wall.... We've heard from other schools who have been through trauma, and how they continue to commemorate and remember, and so it's been quite useful as we go along as to what we do and how we do that sort of thing - what's meaningful and what's not - the messages from generation to generation.

MB also sees a value in creating a documented record of the tragedy for families to have in years to come.

We'd like to see a definitive account of what happened … not for any sensational reason - that's abhorrent to us - but simply to record what is a momentous, extraordinary event in the life of New Zealand. It's hard to know what emphasis you would give it. ... I'd love it to be done. There'd be learnings in there for everyone, and hopefully inspiration as well.

At present, not all parents have agreed as to whether this record might be created and, if so, how it might be done.

Timing is critical. In all of these things, timing is critical.

Over the last two years, *Victim Support* has provided the school with ongoing support, including how to manage anniversaries and significant events.

It's a brilliant organisation. We're very thankful for that. [They have been with us all along], but not intrusive. They're just there when the more momentous things happen. They realise that the media is going to be around, or we've got to go to court. … Initially, they were with us for quite some time. They gave us good advice on ... what to do with anniversaries and events like that.

Issues of preparation, safety, and consent

Occasionally, schools do experience negative events when providing students with access to outdoor education programmes, and the Ministry of Education reviews and updates their Education Outside The Classroom (EOTC) guidelines according to lessons learnt from these events. MB reflects on the balance between preparation and planning to maintain a safe off-campus environment, against the possibility of negative outcomes that could occur nevertheless.

I don't know whether all the guidelines in the world can prevent it from happening … so what do you do to ensure that a generation of New Zealanders still enjoys the incredible outdoors we have … without the whole thing falling apart and imploding on us.

Schools request parental consent for children to be allowed to attend educational experiences outside the school. However, it is likely there are instances in which parents are not giving *informed* consent. MB reflects on this issue:

When the school sends home another form and says please consent to sending [your child] on this leadership training [course] at [the outdoor education centre], what are we asking the parents to do? What are we asking ourselves to do? Where does our sense of responsibility start and stop? It certainly does not confine it just to the RAMS form, that's for sure [RAMS: Risk Analysis and Management system form the Ministry of Education requires schools to complete before students are taken off-site]. Everything was signed, every piece of paper was done correctly, all the activities had been assessed, and we had done our part in getting us from here to [the outdoor education centre]. I [as principal] still have duty of care while they are at the centre - just because the centre then applies their own risk management to what they're doing, doesn't absolve me of responsibility.

Generally, New Zealand parents favour their children gaining outdoor experience in a controlled environment. However, despite parents' consent and expectations that their children will be safe, situations occur from time to time where children may come to harm.

Looking after the leader
Such was the intensity of leading and managing the situation over the first few days of the tragedy that at this point the Chair of the School Board of Trustees recognised that MB could benefit from putting down his mobile phone and taking a little time out for himself. Two members of the Board took MB away from school to share a quiet lunch.

You need people who look after you in that situation. How do you get that? I think ... by being a real authentic person, building trust .... This sounds a little bit airy fairy ... warm and fuzzy, but it really does count on the day.

The effects on me - people ask me that a lot. I think that it's been therapeutic in the sense that I have been with it all the time. I walk past the photos [of those who died, in the school foyer] every day, I read lots of what is

written, and I talk about it lots, and I think that's been part of my therapy. I'm sure I've been stressed. But, I think the fact of just having that time to reflect on it and think about it, and talk about it has been quite therapeutic.

From the night of the tragedy, there were constant demands on MB's time, particularly in the earlier stages as he attended to a wide range of practical and interpersonal issues. Much of the work required him to prioritise or balance tasks, work with a diverse group of people, and learn about processes and procedures in situations previously unknown to him.

I think you do end up with new perspectives and different perspectives. I lost interest in purely educational - curriculum - matters, because I was just having to deal with so many other people - matters - organisational matters.

The constant load on the principal is illustrated in his comment directly above, and in the following section as well, indicating the relentless demands on his time and energy.

The aftermath of the tragedy
Among principals in New Zealand, MB's experience is unique regarding a school tragedy of this magnitude. For the two years since the tragedy, alongside running the school, MB has continued with the multi-dimensional task he began on the night of the tragedy. Over this period, MB has gained new insights and perspectives as a leader, and at times is asked to speak to educational and business groups to pass on his learning.

A tragedy like this does not go away for a very, very long time. The aftermath of it has a complete life of its own, and any research or documentation has to state that. We are nearly two years down the track now, and wherever I go I get asked about it. I'm still doing talks occasionally, we are still working through legal processes, endless conversations and decisions about memorials. It never stops - the administration ... is quite incredible. Those sorts of things colour your world for a long time.

A final word from the principal
We never think it will happen to us, so therefore we never properly prepare for it as we should. Probably, if anything I could have done differently [it would be] to perhaps have with real commitment and intent, gone and taken a course of a professional development experience in crisis management. I probably still need to. The difficulty I find with even saying that, is that it's in
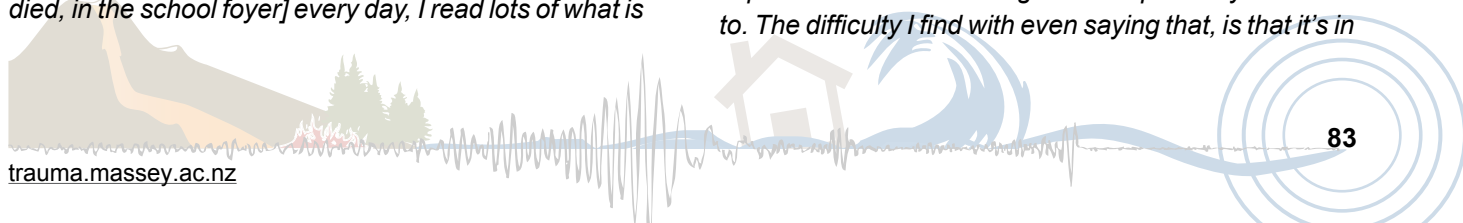
isolation - it's all a bit unreal - you're kind of connected, but you're not.

Apart from that, I don't think I would have changed anything really.

I think there's been a lot of reflection on the whole thing, and certainly you read the leadership books with new eyes too, and you upskill yourself at the same time. It's ... translating it from a purely academic exercise to the fact that this is a reality that you should prepare for.

MB, the principal of ECC, has led his school through a tragedy from the night it unfolded on 15 April 2008 and through the two years since. The present investigation advances understanding of school leadership in a human crisis, and suggests the following lessons and implications:

Lessons Learnt

• **Accept offers of support where appropriate to the school**

As help is offered from outside the school, it is important that the principal, and delegated others, act as gatekeepers to ensure that offers of support are empirically validated to be effective and appropriate to the school's and families' needs.

After the crisis, people who have helped the school should, where possible, be thanked personally for their contribution and, where appropriate, those who have helped should have their own concerns or grief acknowledged.

• **Grieving families may require support from the school**

Schools are advised to seek support-opportunities and resources for grieving or traumatised families, and advise the families of these. If required, families could be directed to specialised support from mental health professionals with recognised training in trauma-focussed therapy methods. Assistance from the school to locate such assistance is particularly important for families who may have limited ability to locate and utilise such resources themselves. Where there are several grieving parents, the school may also be able to assist those parents to set up opportunities where they can meet among themselves for social support.

Where appropriate, support for parents who have lost children could be provided through the principal

or a senior staff member being available to talk with parents, at times individually or collectively, and likely on repeated occasions.

Where there are grieving siblings at the school, the school is advised to allocate an appropriately trained staff member, or the principal him/herself may take responsibility, to keep a close eye on the siblings to ensure that the school is aware of any special needs of the siblings, and that those needs are met where possible.

• **There will be individual differences in responses to grief**

It is important for the principal and staff to have a knowledge of the grief process, and to understand that responding to, and expressing grief, will vary across time and according to the particular individuals.

• **Acknowledge cultural differences**

Schools are advised to consider cultural differences and needs among the students and staff, and in particular those individuals from minority cultures who may be impacted by a crisis event. The school could consult with such groups on how to best help them meet their needs and assist them in a crisis event.

Schools are advised to learn how best to assist Māori students and staff in their Māori grief traditions, and to learn how Māori grief traditions might be helpful in addressing their own wider school circumstances.

• **Talking and timing are important in tributes and memorials**

Talking with other schools who have experienced a traumatic event can be helpful to provide a range of ideas and approaches regarding remembrance of those who have lost their lives, and of how to approach establishing permanent memorials at the school in the longer term. Such memorials would be aligned with the spirit and memory of the particular individuals who had lost their lives. It is important to consider appropriate timing for families where the school requests their input into decisions regarding memorials.

• **Attend to detail in safeguarding the school as much as possible**

In seeking parental consent for children to participate in off-site school-related activities, it is advisable that the school provide as much information as is reasonably possible, so that parents are able to

make an informed decision. Even then, it may not be possible to eliminate all potential harm.

- **Look after the leader**

  It is important that members of the support team recognise the efforts of, and energy expended by, the leader in potentially mentally, emotionally, and physically demanding situations. In this respect, it is advisable for the leader to take time out from the site on regular occasions, or to be unavailable to deal with crisis-related matters (e.g., on specified days or half-days every week) in order to refresh and be relieved of the constant demands that will inevitably occur in a crisis situation. Likewise, it is important to "look after" other staff and the team who supports the leader.

- **Preparation in self-care is part of crisis leadership training**

  It is important that the leader and his/her support team are prepared in self-care, as this group is likely to experience considerable stress at times during the crisis.

- **Build a strong team to support the leader**

  As responding to a crisis generally involves a team effort under the leader's guidance, it may be beneficial for the team to engage in activities that build team-strength and understanding in preparation for an emergency. Such team-building may also be beneficial post-emergency.

- **The crisis will have an aftermath of its own**

  A crisis will not go away, and it is important that once the immediate crisis has been managed, that in the months or years following, the principal himself/herself is supported as he/she attends to matters such as government or police enquiries, court hearings, inquests, and decisions about memorials, all of which take place some months or years after the event and while the private journey of adjustment and remembrance for the school and families continues. Ideally, the principal will have mentor-support throughout.

  Elim Christian College operates on a foundation of Christian beliefs and values which guided the school through the tragedy, in the same way that the Christian faith provides the school's foundation at other times. A further study is required to investigate the role of faith in the adversity faced by Elim Christian College in this canyoning tragedy. The issue of parental consent for off-site activities remains a further area for exploration.

Limitations

The purpose of the present study (Parts 1 and 2) was to investigate the school principal's perspective of leading his school through the tragedy. Thus it was beyond the scope of the present study to investigate his leadership from the perspective of his support team, the children and parents, or the staff of the school. This means there was no direct input from any of these individuals, including the bereaved families at the centre of the tragedy. The study reports that the school counselling service was active in providing assistance for students and staff at the school, and the school ensured that access to counselling and grief-support was available for families. However, as the study investigated leadership of the school, it was beyond the scope of the study to investigate the mental health of any persons impacted by the tragedy. It is acknowledged that following traumatic events, some children and adults will require greater assistance than the social support and help provided by the school; in these cases, there will be a need for professional psychological assistance.

Finally, a View from Outside the School

In the absence of leadership perspectives from anyone other than the school principal himself, the following public endorsements of MB's leadership are of particular interest:

In August 2008 Murray Burton received the New Zealand Principal's Federation Service with Distinction award "in recognition for his truly inspirational leadership through the Elim crisis" (Auckland Primary Principal's Association, 2008).

In 2009, the year following the tragedy, *North and South* magazine, a pre-eminent New Zealand current affairs magazine, named MB as New Zealander of the year. In the North and South account of MB's leadership and management of the tragedy, Wade (2009) quotes the Chair of the school's Board of Trustees, (DV) who describes MB as the "right man in the worst of times" (p. 42). Wade also quotes the city mayor (LB) who described MB as "a sort of guiding star everyone looked to" (p. 41). In the same North and South article, a bereaved parent (JF) said of MB: "Whatever could be done, he did, and he would do: he just couldn't bring our boy back. That's all that man could not do" (p. 43).

In April 2011, Murray Burton was awarded The New Zealand Order of Merit (MNZM) for services to the

community. The award recognises Mr Burton's management of his school and the local community following the tragedy. This honour, instituted by Royal Warrant in 1996, is awarded to people who have "rendered meritorious service to the Crown and the nation or who have become distinguished by their eminence, talents, contributions, or other merits" (Department of the Prime Minister and Cabinet, 2011).

In the media, depiction of the school and its principal was an exemplar in school crisis response, management, and leadership. In the year following the tragedy, the school was "inundated" with enrolment applications to such an extent that a part-time enrolment officer had to be employed to handle the large volume of applications. Murray Burton has been invited, and continues to be invited, to speak to a number of education and business groups about his experience of leadership in a crisis.

Over two years after the tragedy, there is only infrequent media reference to the event. However, the school and seven families continue their private journey of adjustment and remembrance for the loved students and teacher who lost their lives while on an outdoor education experience on April 15, 2008.

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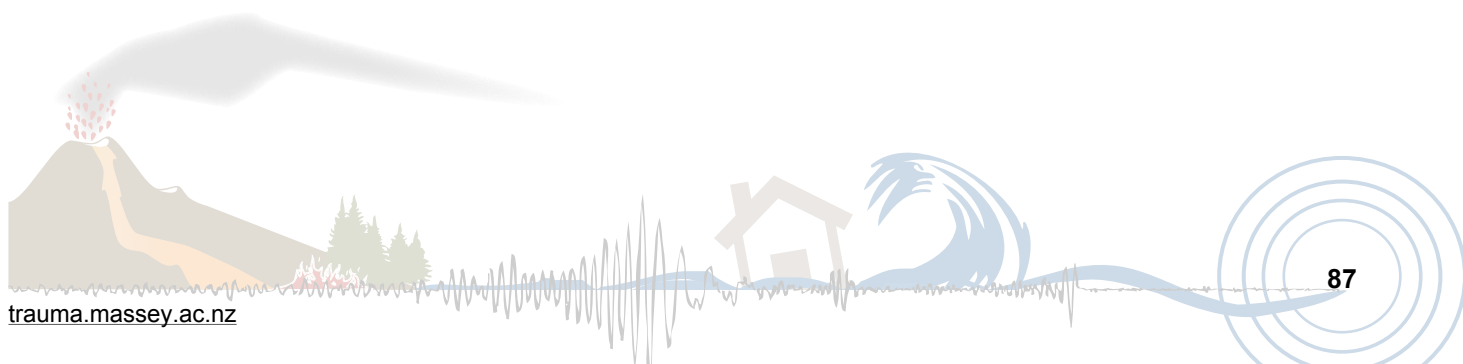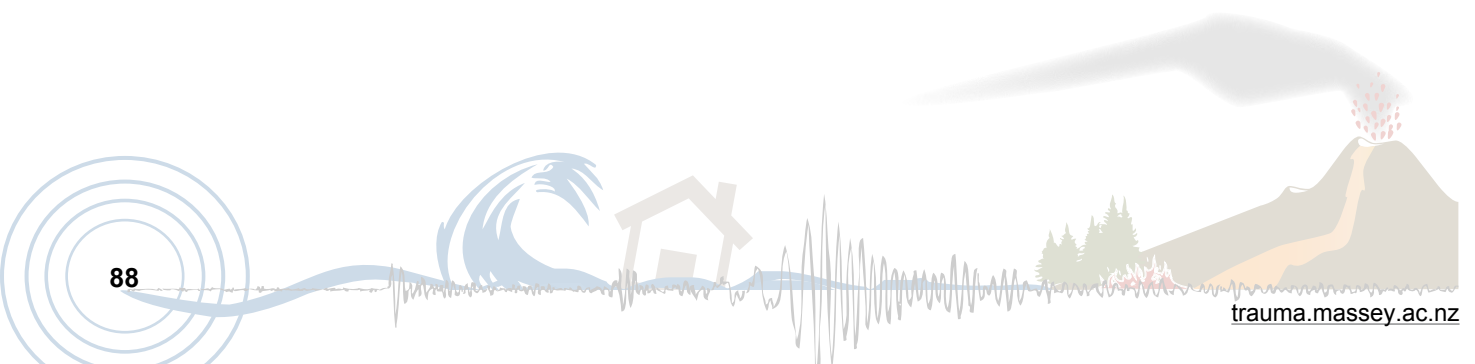
Is "Fear Itself" The Only Thing We Have To Fear? Explorations of Psychology in Perceptions of the Vulnerability of Others

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Abstract

*This paper highlights the importance of understanding
and exploring some psychological aspects of perceptions
of the vulnerability of others that contribute to disasters.
Despite decades of research suggesting how to improve,
fear and denial of vulnerability are too frequently seen
in practice. These points are corroborated through
comparative contexts in financial management,
industrial disaster, social care, construction, and climate
change. Post-disaster publication of independent,
comprehensive, and analytical reports explaining why
disasters occurred would identify practical steps for
countering aspects of fear and denial that contribute
to risk and disasters.*

Introduction

"*The restorations of productivity and reimposing of
'normal' relations become the main prescriptions of
crisis management, relief and reconstruction. The ability
to predict or contain natural processes in a technocratic
framework becomes the main goal for disaster
prevention. Now, I question whether this recognises
some major, indeed the major, ingredient of disaster*"
(Hewitt, 1983, p. 29).

Hewitt's (1983) concern is that the major ingredient of
disaster is society's vulnerability. Attempts to control
natural processes ignore the human element in deciding
where and how to live, especially regarding interacting
with nature. That is, creating vulnerability to nature is the
root cause of disasters. Conversely, controlling nature
does not tackle vulnerability and can, in fact, increase
it (e.g. Etkin, 1999; Fordham, 1999). More importantly,
from Hewitt (1983), one sector within society often
decides where and how others should live, thereby
creating vulnerability for others without the others
having a say.

It can be rare for this major ingredient of vulnerability to be
acknowledged and tackled head on by decision makers.
That is especially the case within decision structures
rooted in a paradigm preferring to blame something
else, usually nature, for disasters. Additionally, political
advantages accrue when blame can be attributed
elsewhere rather than admitting the failures of oneself or
one's community in actions that created the vulnerability.
In seeking explanations of disasters, has it, in fact,
become too easy for external influences to displace
internal shortcomings as the causes of vulnerability of
oneself or of others?

A contemporary interpretation is climate change
being cited as the cause of many "natural" disasters.
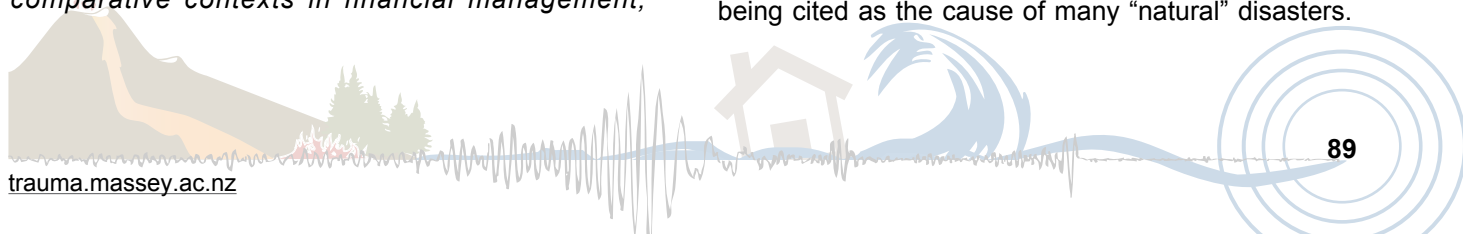
Yet tropical cyclones, wildfires, floods, and storms resulted in devastation long before climate change was a concern. Certainly, climate change is affecting all these phenomena, sometimes exacerbating them (IPCC, 2007). Yet they all led to disasters before climate change, so climate change cannot be considered a root cause. Normalised European flood losses, for example, increased from 1970 to 2006 due to societal factors, not due to climate change (Barredo, 2009).

As yet, climate change impacts on major earthquakes are speculation (McKie, 2009). There are linkages with landslides (e.g. Schmidt & Dehn, 2006), volcanoes through sea level rise (Mason et al., 2004), and potentially tsunamis if sea level rises sufficiently to permit tsunamis to travel farther inland. But those natural forces are involved in disasters irrespective of climate change.

Meanwhile, most of the same vulnerability factors that cause disasters are present, irrespective of climate change. It is easy and populist to blame environmental forces that often become 'hazards' or that are significantly affected by humanity, such as climate change. Instead, it would be appropriate to further explore other contributors to disaster causes, namely Hewitt's major ingredient of disaster: vulnerability.

Vulnerability creation

The dividing off of hazards from their real context of human-environment relations perpetuates the myths of "ordinary life" and "normality" as being hazard-free (Hewitt, 1983). Protected by centralised technocratic functions, it is this approach that eventually leads to the failure and destruction of what is being "protected". Hewitt (1983) instead explains that disasters are characteristic, not accidental features, of the places and societies in which they occur and that risk emanates mainly from decisions and activities made manifest by "ordinary life" (p. 25). Hewitt continues: "What I believe to be definitive of the disasters I have examined is, however, that most of them would not be disasters, and many of the damages would not (indeed do not) occur except as a direct result of characteristic and vulnerable human developments" (p. 27).

Hewitt's (1983) evidence supports research results (e.g. O'Keefe et al.,1976) based upon the assertion that disasters are not natural, but that casualties and losses are caused by humans and human settlements being obliged to accept vulnerable locations or disadvantaged opportunities. Covering the long history of vulnerability

theory, this view reminds us of our pusillanimous attitudes to change. As yet, there is little sign of that view's acceptance, comprehension or practise beyond lip service and some field applications nominally linked to post-disaster assistance. The view has been labelled "radical" for so long because there has been so little application in practice. Why should this be?

One aspect of the radical view is that "...disaster relief has been assumed to be the totality of necessary action for disasters and not to involve any but the department of that designation …Not only does institutional separation reflect shortcomings in the understanding of the crucial relationship between vulnerability, disasters and development – but it denies the opportunity that integration would offer for strategic development for vulnerability reduction" (Lewis, 1999, p. 132). Separation also impedes opportunity for crucial inter-sectoral and inter-disciplinary understanding and cross-checking required to ensure validity and efficacy on-the-ground of institutionalised policy making.

Until natural hazards are seen as a part of society's contexts, and until society sees itself as part of the environment and not separate from it, with which many traditional and indigenous outlooks concur, the hazards- and relief-focused views of disasters will remain a part of the problem, not a part of its answer. Additionally, "understanding of the causes of vulnerability has not been helped by globalized and institutionalized conceptions of disasters in distant places. Vulnerability is pervasive in local, community, and domestic contexts and our insights into its often invidious processes have to be achieved at similar levels of application" (Lewis, 2007, online).

Consequently, society tends to be more active in creating people's vulnerability (Lewis, 2008a) than it is at reducing it (Lewis, 1999). Perpetrations of "characteristic and vulnerable" development continue. For instance, relatively recent, widespread building on river floodplains across central Europe is alleged to have been a significant cause of flood losses in 2002 (Pearce, 2002). Former wetlands had been drained to provide more sites and rivers with high embankments "channelled" to reduce meanders, inducing sudden surges where, in the past, floodwaters would have been delayed for weeks across the plains. "Greedy mayors" are blamed for destroying forests to provide building land for "holiday homes on the banks of rivers" (Pearce, 2002) and enticing their own populations onto the floodplains (Lewis & Kelman, 2010).

More specifically, in the UK in July 2008, families in Gloucestershire and Hull, whose houses were flooded in July 2007, continued to live in unhealthily overcrowded temporary accommodation such as caravans and mobile homes (Morris, 2008). Extraordinary resilience was displayed by the owners of newly built houses, all with planning permission and bought in good faith, against an inexorable hazard made manifest by decisions beyond their influence and about which they could do nothing. Meanwhile, housing construction on UK flood plains continues against specialist advice to central and local governments (e.g. Werritty, 2006).

The official report of the Gloucestershire and Hull 2007 floods (Pitt, 2008) might be an exception amongst natural hazards reports in aiming to address root causes. Subsequent policy statements based on it may or may not result in action against disaster-causing practises (e.g. CIWEM et al., 2009). The words used here must be careful because similar recommendations were made after previous floods around the UK in 1998 (Bye & Horner, 1998) and 2000 (EA, 2001), yet what has changed with respect to vulnerability?

Is vulnerability unprecedented?

Vulnerability, the inadequately understood process by which susceptibility of people, infrastructure, communities, and environments accrues (Lewis & Kelman, 2010), appears to be increasing faster than the implementation of disaster risk reduction measures. Physical sciences of natural hazards have contributed extensively to disaster risk reduction and continue to do so. They rarely provide pre-emptive measures against the socio-economic causes of disasters. That requires a focus on vulnerability, for which accurate and realistic perception of the vulnerability of others is required.

As Hewitt (1983), observed, the very fabric of development, productivity and construction is administered in such a way as to bring about causes and sources of vulnerability to natural processes. The act of separating "disaster management" from other sectors of government administrations allows the creation of vulnerability (Lewis, 2008a) to be obscured and losses to be perpetrated by other departments under the name of "development" (Lewis, 1999).

Have "advanced" institutional and technical measures been weakened in their application by human shortcomings such as ignorance, fear, denial, deviance, malpractice, greed and self-interest? Have the instruments of the technocratic view, that often dominate this discourse, failed as policy? Has inadequacy in their implementation exacerbated the vulnerability they created? More simply, is it that levels of risk and counter-measures have escaped the rigorous consideration that they require and have been made on the basis of over-casual judgements? As Gaillard et al. (2010) note, such judgements can easily blame external forces or ascribe epithets such as "unpreventable", "accidental", and "unprecedented" that inappropriately seek to absolve responsibility.

So-called "unprecedented" happenings should be recognised as part of the reality of prevailing risk, since extreme events occur in any society, region or sector of activity. Consider, for example, Hurricane Katrina in New Orleans (2005); earthquake destruction in China (2008) and Haiti (2010); an earthquake and tsunami in Chile (2010); and genocide in Rwanda (1994) and Srebrenica (1995). These are realities seemingly beyond comprehension. Yet China denied investigation into the deaths of schoolchildren in the 2008 earthquake; Chile denied the need for international assistance after the 2010 earthquake and tsunami, just as the USA tried after Hurricane Katrina; and forces unleashed by climate change accrue whilst being denied. None of these extremes was unprecedented. They were excluded from many judgements regarding disaster risk reduction, seemingly due to administrative expediency.

On the one hand, a "*paradigme de l'extrême*" emphasises large magnitude rare events, leading to disasters being considered outside the normal social fabric—even though it is "the normal social fabric" that has induced vulnerability and causes disasters (Gaillard et al., 2010). On the other hand, Chichilnisky (2009ab) determines how humans are insensitive to rare events such as catastrophes, and that the notion of utility and rationality "underestimates our responses to rare events no matter how catastrophic they may be" Chichilnisky (2009a, p. 808). That suggests that utility and rationality are unnatural and contrary to experimental evidence. Even Hewitt (1983) makes an exception of the extreme by his statement that: "There are natural forces and some damages in most disasters that lie beyond all reasonable measures any society could make to avoid them" (Hewitt, 1983, p. 27).

These deviations and exclusions obscure the very reality upon which risk and its management should be based. Explorations follow into possible causes of why this is so.
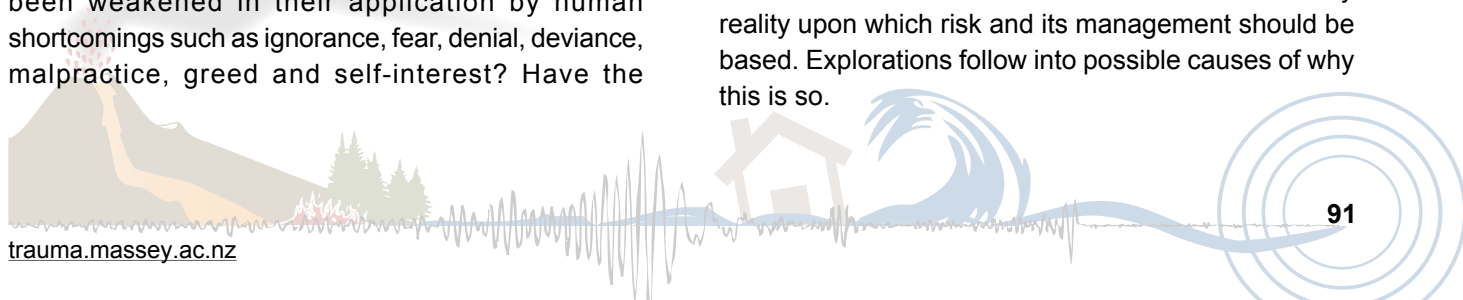
Decision-related causes of disasters

Whatever the extent and scale of comprehension and inclusivity within some institutions, susceptibility to what commonly is called "human error" - or "system error", trying to de-humanise and diffuse responsibility - pervades many institutions. It also pervades the management and administration of humanitarian undertakings but, in reality, the "error" may have resulted from a human condition. Whilst psychological and emotional consequences *among survivors* of disasters have been acknowledged (e.g. Wisner et al., 2004), and those upon children and other disaster survivors now receive active professional response (e.g. Chemtob et al., 2002; Hodgkinson & Stewart, 1998), "human error" in decision making is in need of further examination.

For most organisations in the field, views and opinions concerning the causes and consequences of hazards may vary. Nevertheless, they share one aspect in common: limited visible attention has been given to the possibility of variations in perception and reason as a result of human emotional responses. Guidance, where it is available, is given for the psychological equivalent of a "level playing field" and as if all players conformed to a behavioural "norm". Such assumption is not realistic; it does not accord with how well people are, or not, how their behaviour may vary, or how psychological variability could be an influence upon their reasoning; nor does it take account of previous experiences.

Reason may not be as pure as most of us think it is or would wish it to be:

> ...emotions and feelings may not be intruders in the bastion of reason at all: they may be enmeshed in its networks, for worse and for better. The strategies of human reason probably did not develop, in either evolution or any single individual, without the guiding force of the mechanisms of biological regulation, of which emotion and feeling are notable expressions... This does not deny that emotions and feelings can cause havoc in the process of reasoning under some circumstances. Traditional wisdom has told us they can, and recent investigations...reveal the potentially harmful influence of emotional biases (Damasio,1994 pp. xxii, 245-246).

Crozier et al. (2006) and McClure et al. (2009) provide empirical evidence from residents' attitudes in Wellington Region, New Zealand to preparing for an earthquake. Both studies found that the framing of the problem influences people's reasoning regarding preparedness. Within their sample, McClure et al. (2009) show that people are more likely to prepare when the consequence is framed as possible harm rather than as survival possibilities. Meanwhile, Crozier et al.'s (2006) sample responded more actively to information on earthquake preparedness if they were in a low-hazard zone than in a high-hazard zone—which some might see as being counterintuitive.

As another example, the decision-related causes of the "financial tsunami" (the global financial crisis of 2008-2009), undertaken in depth and detail to an extent rarely experienced following disasters involving natural processes, showed decision making to have been overwhelmed by emotional behaviour (Chapman, 2009). Could it be the case that management in other sectors is similarly susceptible to the influences of personal emotion? Whereas financial management thrives upon a certain level of risk (Bird, 2009), disaster risk reduction decision-making deals with risk but on behalf of others. That occurs to the extent that denial of disastrous reality, or failure in its perception and decision making, could result in serious disaster-related consequences for many people—exactly as the financial tsunami did.

Programmes for disaster risk reduction frequently appear unaware of matters outside their perceived purview (e.g. EU Scenario, 2008) but which often have colossal implications for disaster losses. Land clearance, population displacement and migration, development on flood plains and along coastlines, buildings insecure against high winds and earthquakes, and the causes and reasons for these conditions, all need to be recognised as closely related matters for disaster risk reduction. The magnitude and extent of disasters is created in the contexts of these conditions, as is the magnitude and extent of demands upon post-disaster management.

Post-disaster reports often do not refer to these causative contexts, despite the discussion being well embedded in academic literature (e.g. Hewitt, 1983; Lewis, 1999; Oliver-Smith, 1986; Wisner et al., 2004). Were they to do so, the causes of disasters, as well as their management, would become accessible evidence upon which the reduction of future disasters could be based.

As described earlier, investigative reports are often required by law after many forms of major incidents such

as airplane crashes, industrial fires, and chemical leaks. In these, measures to avoid recurrence are identified. The same standard is not always applied to disasters that continue to be falsely assumed as being "natural", with the implication that investigation of their causes would be presumptuous. Independent, comprehensive reports would invaluably combine post-disaster investigations with pre-disaster contexts in which long- and short-term changes in physical and social development have influenced the disaster occurrence in question (e.g. Lewis, 1982, 1991). Reports would also examine the efficacy of crisis management and stresses upon managerial and individual decision making.

Rather than blame disasters on only external influences such as climate change, deities, or nature's wrath, should matters such as social and economic change, as well as the realities, structures, values, comprehension, and decisions taken in disaster-related work, also be considered and appraised? Do case studies involving natural forces differ from those without any?

Risk, fear and denial

Institutional identification of risk to others comprises perceptions by individuals of that risk and their consequent decision-making under various stresses. Literature searches suggest that risk management tends mainly to be concerned with collective responses to risk (e.g. Berry, 2004) and how individuals perceive and respond to risk (e.g. Fischoff, 1995; Krimsky & Golding, 1992). Individual perception of risk to others may not have received the same attention. Despite solid literature providing a foundation in this topic (e.g. McIvor et al., 2009; Paton, 2007; Paton et al., 2008), there remains a need to study more about the practicalities of judgements made under stress—which sometimes differ from what individuals state they would hypothetically do in certain circumstances (e.g. see Sorenson's, 2000 discussion regarding gaps).

For example, the "disaster psychology" literature focuses heavily on various contexts of disaster aftermaths, with the psychological precursors of disasters sometimes bypassed (although see e.g. McClure et al., 2009; McIvor & Paton, 2007; Paton et al., 2008). Responses by the public, or by sectors of the public, to risk-taking in general or to specific day-to-day risks (e.g. health, food, alcohol, smoking, and HIV/AIDS) are highlighted, but often with less emphasis on individual professionals assessing other individuals "at risk". Without detracting from the importance of these studies which are insightful

and needed, administrative and emotional pressures upon individuals involved in decision making and consequent risk-taking on behalf of others, may be a priority for focusing future work. Ripley (2008) is an outstanding example of an exceptional study that does so, even if within a single cultural context, thereby setting an important research agenda.

Studies in the psychology of the individual preceded work in collective psychology, in which commonalities or averages of human behaviour became the basis for conclusions relevant to a group or sector. Some collective studies nonetheless concluded that human beings could not be generalised, such as Jung's (1958) eminent conclusion "that the real picture consists of nothing but exceptions to the rule, and that, in consequence, absolute reality has predominantly the character of *irregularity*" (p. 9; Jung's italics).

Jung (1958) was concerned to counter *knowledge* of collective statistical science, with *understanding* of the individual: "...the positive advantages of knowledge work specifically to the disadvantages of understanding... judged scientifically, the individual is nothing but a unit which repeats itself ad infinitum...For understanding, on the other hand, it is just the unique individual human being who, when stripped of all those conformities and regularities so dear to the heart of the scientist, is the supreme and only real object of investigation." (Jung, 1958, p. 11).

Response to situations of risk may vary, therefore, according to individuals' circumstances and experiences. Examples are genetics and emotions. As Le Doux (1998, p. 137) states "...genes make each of us different from one another and explain at least part of the variability in the way different people act in dangerous and other situations." Genetic responses themselves may be influenced in innumerable ways by fundamental psychological phenomena which include emotions such as love, hate, anger, joy, shame, guilt, and fear (Gray, 1971) [1]. Any emotion may affect decision-making, but hazards, natural otherwise, may inevitably invoke fear to some degree.

Human susceptibility to the emotion of fear may, in part, be due to hereditary factors and early environment which, in each person, is unique. Fear might occur as a result of limited information; can induce protective passivity (Cohen, 2001); can overwhelm ability to

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[1] "Even a casual analysis of the number of ways the concept of fear can be expressed in the English language reveals its importance in our lives: alarm, worry, concern, misgiving, qualm, disquiet, uneasiness, wariness, nervousness, jitteriness, apprehension, anxiety, trepidation, fright, dread, anguish, panic, terror, horror, consternation, distress, unnerved, distraught, threatened, defensive." (Le Doux, 1998, p. 129).

perceive and to act; and can induce other emotions such as guilt, hope, relief and anger (Gray, 1971). Linked to anger and anxiety, fear can have direct negative influences upon behaviour (Adcock, 1960; Paton, 2003), but the reality of the threat or risk may be denied or disavowed. Conversely, low-level threats can lead to disaster preparedness (e.g. Crozier et al., 2006).

Denial protects from unpleasant reality by refusal to believe that reality. Disavowal tends to accept the significance of a fact or perception, simultaneously playing down that significance, or becomes a basis of blame for why the hazard is indeed "hazardous". For denial to exist, the threat must first be perceived; inadequacy or failure of perception is myopia (Romero & Kemp, 2007; Jarvis, 2004). Studies of western society and culture that these and most other sources in this article represent, may not be directly applicable to other cultures (e.g. Paradise, 2006; Ryde, 2009).

Psychotic denial may seek scapegoats by acting out, indulging in deliberately wasteful behaviour by reaction, projecting anxiety onto some other unrelated but containable problem by displacement, the shutting out of information by suppression, or holding on to preconceptions in the face of new information as a version of cognitive dissonance (Festinger, 1962). These different forms of denial may not be recognised by the perpetrator (Marshall, 2001).

Cohen (2001, p. 4) notes that "Denial can be individual, personal, psychological and private – or shared, social, collective and organised". Consequently, denial can be effected by groups and organisations as well as by individuals. Denial has been identified as a response to annihilations, massacres and other major human rights atrocities (Slovic, 2007). To overcome that denial is the objective of major international non-governmental organisations such as Amnesty International and Oxfam (Cohen, 2001).

Chichilnisky (2009a, p. 808) observes that "although they are rare, catastrophes play a special role in our decision making processes...(and that)...Neurologists believe that such events alter cognitive processes and the behaviour that could be otherwise expected." She continues that the problem lies in the standard definition of rationality, which is narrow and based on testing whether or not we optimise "expected utility...(which)... underestimates our response to rare events....This insensitivity…creates an illusion of 'irrational behaviour' since what we anticipate does not agree with what we observe." (p. 808). The insensitivity of expected utility to rare events, she argues, and the attendant inability to explain responses to events that invoke fear, are the sources of many failures of rationality "that have been found over the years" (p. 808). Rational behaviour, she concludes, needs to be defined more broadly and more in tune with the way humans really behave. That will come to "a new understanding of rationality consistent with previously unexplained observations about decisions involving rare and catastrophic events, [and] decisions involving fear..." (p. 807).

Application

It is a small step, therefore, to suggest that denial can apply to perception of risk from natural hazards. An example is a couple who saw the tsunami approaching their Thai beach on 26 December 2004 and took photos rather than trying to escape (BBC News, 2005), possibly because, if they realised what was happening, they denied that they were threatened by the ocean's strange behaviour. This can also occur in disaster management individuals, departments or organisations.

Political denial is frequently recognisable. For example, referring to the ongoing depression during his inauguration speech of 4 March 1933, President Franklin D. Roosevelt asserted "...the only thing we have to fear is fear itself". His intention was to overcome "nameless, unreasoning, unjustified terror which paralyses needed efforts to convert retreat into advance" (Guardian, 2007). It may also have been a desire not to appear responsible for unavoidable events, or denial of a reality in which there was indeed very much to be feared. Britain's refusal to recognise the Armenian massacre of 1915, was not recognised as "genocide denial" until documents were disclosed in November 2009 (Leigh, 2009). The debate continues internationally. Only twenty years after the end of World War I, Prime Minister Chamberlain in September 1938 declared "peace for our time" when, within a year, World War II would commence. Then, in 1940, General (later Field Marshal) Rommel would estimate that "the war would be won in a fortnight" (Gilbert, 2009).

Examples abound from disasters other than war. Proposals were made for at least thirty years to implement an Indian Ocean tsunami warning system, but action was sidelined until the catastrophe of 26 December 2004 after which the Indian Ocean tsunami warning system was operational within 18 months (Kelman, 2006). The government of Florida, USA,

is ignoring the challenges that their coastline will experience due to sea-level rise in order to cater to developers and their short-term profits (Pilkey & Young, 2009). Denial also occurs due to priorities other than that of properly dealing with disasters. India clearly felt that developing nuclear weapons was more important than contributing to a tsunami warning system and is still reluctant to provide some real-time seismic data.

Whatever their context or cause, given that risk by social science definitions is subjective (Adams, 1995), it is clear that emotions must and do affect assessment of risk: "Although we may like to think that our judgements about risk are entirely objective... emotional responses (to events and situations)...could affect not only a person's judgement of risk...but also risk estimates for other types of hazards" (NSF, 2008, online). An examination of how emotions affect risk assessment found that participants exposed to fear held more pessimistic perceptions and were more risk-averse, while those exposed to anger were more risk-seeking (NSF, 2008). In this study, fear in some and anger in others were induced by the same experience and, although gender differences may have been significant, the resulting emotion depended upon the person.

A baseline for the topic has now been established, identifying some gaps in studies and indicating ways forward for closing the gaps. Next, more detailed vignettes are provided of comparative contexts in financial management, industrial disaster, social care, construction and climate change.

Financial management

Numerous analyses of the 2008-09 "financial tsunami" that caused chaos in London's City, New York's Wall Street and beyond, indicate that, in lending institutions, "...Individuals are often driven more by their own interests in a given situation than by the collective good of the whole. The way that the city rewards its employees enforces this tendency...based on a modest annual salary and an annual bonus that may be a multiple of the salary depending on the organisation's results...The culture prevalent in the City does not tend to encourage excessive prudence" (Bird, 2009, p. 2). A City-pervasive short-term culture worked against its (and others') longer-term interests whereas individuals' short-term risk taking should be monitored for the interests of the organisation (and beyond) in the longer-term.

From the 1987 film *Wall Street*, 'Greed is good' became "Wall Street's unofficial motto of the 1980s" (Sorkin, 2009, online). Changed attitudes to financial risk and rapidly expanding financial "bubbles" characterised the boom years before the global crash. Some had warned against the risks, but financial regulation had been relaxed. Low interest rates made "cheap money" available for un-restricted, over-eager lending, by which domestic and commercial debt became common-place. Attitudes to risk changed and a "reckless love of money" by traders ensued, until a chain of events led to large companies collapsing, triggering a world recession of a scale not experienced since 1929. The collapsed company Lehman Brothers' own comment was: "We lost the fear" [2]; that is, the fear that had normally restricted the taking of excessive financial risks. Capitalism had become greed and short-term gain irrespective of long-term pain, losing its innate capacity for caution and self-protection over the long-term.

Fear of risk, of financial uncertainty and of loss of job security triggered behaviour that included a serious lack of reaction during the preceding three years, followed by an equally irrational "absolutely frantic" overreaction. Underlying day-to-day fundamentals were not changed in tune with what was happening in unusually volatile markets. Irrational exuberance as greed, and irrational pessimism as fear, both played their part. Do fear and greed govern the efficiency of The City (Kollewe, 2008)? Fear is rational, but behavioural response to it might not be.

Comprehension of what was happening was obscured, even for financial managers, by the drawing on terminology not in daily use, a form of "denial by obfuscation" not unique to the financial world. "Credit default swaps", "structured investment vehicles", "collateralized debt obligations" and "securitised subprime mortgages" facilitated a passing on of risk that became unidentifiable and "proved far riskier than anticipated" (Anderson, 2009, online). One year later, bankers are reported to be concocting new, similarly unintelligible products such as "life settlements" and "re-remics", signalling a return to "chasing profits with complicated new products" (Anderson, 2009, online) for which others might use simpler terms of "hope, greed and fear" (Wharton, 2009, online).

An assessment of psychological factors in the crisis of confidence that heralded financial collapse noted the

2 With acknowledgement to the BBC2 Television series The Love of Money: The Bank that bust the world and The Age of Risk London. (September 2009) Director: Guy Smith; Producer: Michael Tuft; Executive Producer: Dominic Crossley-Holland.
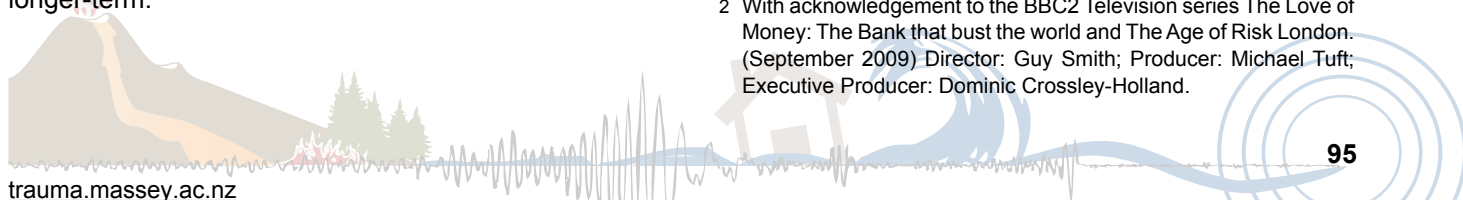
"mania and over-optimism behind the housing bubble, a lack of self-control by consumers hooked on debt, and the shock and feeling of betrayal...(of those)... who thought they were making safe investments, but now find themselves facing an uncertain future...suffer 'disaster myopia' either because they can't imagine a downturn happening, or they assume the probability of it happening is so low that it isn't worth worrying about...Myopia may be wilful in that we don't want to contemplate undesired outcomes" (Wharton, 2009, online). Thus, there is arrogance and over-optimism on the one hand, fear on the other, and myopia in between.

Industrial fire

"Summerland" was a leisure centre developed by the city corporation of Douglas, the largest town on and capital of the Isle of Man, UK. At the start of the fire that killed 53 people and destroyed the centre in August, 1973:

> the staff failed to call the fire brigade promptly, and the elaborate fire-alarm system was not used at all, one of the first warnings of the fire being given by a ship at sea which spotted the blaze on shore. This pattern is not limited to Summerland...(in a)...study of 1,200 fires, one sixth...had become large because of a failure to summon the fire brigade...questions are raised about whether such behaviour occurs because of a fear of sounding an unnecessary alarm, or because of a persistence of the syndrome of denial of danger, a persistence which Wolfenstein (1957) suggests becomes more pathological the nearer the danger looms (Turner, 1978, p. 74).

The official report of the fire differentiated between the issues that presented themselves as the disaster unfolded and those that were revealed in investigation afterwards. As noted, "All of these recommendations (made in a number of accident reports), diverse though they may be, have in common...that they are concerned to deal with the problem which caused the disaster as it is now revealed, and not to deal with the problem as it presented itself to those involved in it before the disaster" (Turner, 1978, p. 74). As one report of a significant fire commented: "It would be unjust not to acknowledge that not every failure which is obvious now would be obvious before the disaster put the structure and the people to the test" (Summerland Fire Commission, 1974).

Should it take 35 years after the event to observe, of a fire that grew larger because numerous people failed to

act, that "to deal with the problem as it presented itself to those involved" had, in reality, been the crucial issue?

Less than a year after the Summerland fire, at Flixborough, near Scunthorpe, UK, 70 people were working on the site of the Nypro chemical plant at the time of the explosion and fire on 1 June 1974. Of those, 28 were killed and the industrial plant was destroyed. Advised procedure in the event of an incident had been for all employees to report to the central control room on the site. Yet all of those who died were in the control room. All of those who survived had headed for the site perimeter, though there were few exits (Westgate, 1975).

Reports of these two cases suggest a failure of authorities to comprehend the potential extremity of "accidents" and limited perception of the serious possibility of "total wipe-out". Subsequent cases, such as the 1988 Piper Alpha North Sea gas platform explosion or the 2005 Buncefield oil storage explosion will have done little to change this view. Post-disaster reports only sometimes provide explanations or identify preventive measures, failing in many cases to tell everything we need to know (Kletz, 2009). That is despite a wide literature on how to train organisations for disaster-related decision-making (e.g. Paton and Jackson, 2002) that could be applied in practice so that people involved do understand what they need to know and how to ensure that they glean that knowledge.

Social care: crime by and against children

In the London borough of Haringey in 2007, an 18-month-old boy died from injuries inflicted by his parents and a lodger. Before he was one year old, a head injury and other bruises had been found on the boy and the mother was arrested. Due to physical abuse and neglect, the boy was placed on the child protection register, but he continued to suffer injury and bruising which a hospital doctor failed to examine. The boy died shortly afterwards (Batty, 2009) of his wounds being: "...more than 22 injuries on his body, a fingernail and toenail were missing, having been ripped out in some form of torture, his earlobe was torn and his spine had been fractured by being hyper-extended over his cot or someone's knee" (Laville, 2009, online). The boy's mother was jailed indefinitely, her partner was jailed for life and the lodger was given an indeterminate sentence for public protection (Batty, 2009).

Near Doncaster in Yorkshire, in 2009, two brothers aged 10 and 11 at the time "beat, burnt, stabbed, sexually abused and almost killed" (Murray, 2009, online) an 11-year-old boy and his younger nephew. The two accused were both victims and perpetrators of horrific child abuse. The brothers had been raised in circumstances of violence, drugs and neglect, and had been known to the police and to child protection services for some years. The 10-year-old was on police bail and the 11-year-old had been in court four times previously for "acts of violence". Together, they were infamous for their antisocial behaviour in the community. Social workers were criticised for failing to intervene earlier in the boys' dysfunctional family (McVeigh, 2009).

Could the backgrounds of poverty and sexual abuse, that characterised each of these two cases of extreme cruelty, have been perceived as warnings of extreme consequences? Possibly. First, only a minority of people who are poor and/or who have been abused end up being abusers. Second, because social services are notoriously under-funded around the world, does this reflect poor understanding of the role of social services? It may not be possible to monitor or intervene in all cases, especially given the long shifts, low salaries and consequent fatigue that many social and health service personnel suffer. Yet given the family histories, social background, sequence of injuries, the placing of the Haringey boy on the "at risk" register and the reportedly 60 home visits by social workers, doctors and police during the final eight months of his life (Doward and Slater, 2009), how could it have been that the extremity of risk in which he was living, and the consequences that led to his death, were not foreseen?

Did fear from lack of experience and of disrupting an established decision making process become a trigger of denial and the reason why perception of potential extremes appears to have been so limited? Would action have exacerbated an already onerous work-load? Is it realistic to assume that years of tertiary education and training will produce social workers, or any other decision maker, sufficiently able to anticipate extreme behaviour and to recognise and act on the potential for such extremes, within their system's constraints? Social workers are amongst the professionals who are exercised in repeatedly stressful contexts requiring critical decisions directly impacting upon individuals and families at risk. In any profession, assessment of people's circumstances requires judgement based upon experience perhaps not yet acquired by young

professionals. Can it be relied upon from managers, especially those who have long been removed from field visits? The official reports of these and other serious cases have been published (e.g. Laming Report, 2009).

Construction

That all users would otherwise be at risk from failure of bridges, buildings and other structures is the reason why efforts are applied for all construction to be rigorously and tightly regulated and controlled. Within its regulations, continual pursuit of greater achievement and efficiency, such as in improved earthquake resistance (e.g. Hikone et al., 2009), means advances in structural design based on failures and disasters involving workers and subsequent users. Histories of structural failures have become the foundation upon which subsequent regulations have been formulated. For instance, building codes involving seismic measures were first put into effect in Los Angeles, New Zealand, Japan, and Jamaica after these locations suffered earthquake damage, respectively in 1933, 1931, 1923, and 1907 (e.g. Levy & Salvadori, 1995).

As in other management sectors, failures expose human as well as structural shortcomings. For example, hubris and carelessness in over-optimistic design were exposed by the 1879 collapse of the Tay River Bridge in Scotland that, on its completion in 1878, was the world's longest bridge (Lewis & Reynolds, 2002).

Optimism and controlled success in construction can be reversed by corruption in construction practice (Ambraseys & Bilham, 2011; Lewis, 2008b) and corruption itself elicits emotions of disgust, contempt and anger (Solberg et al., 2010). Greed and exploitation cause bribes to avoid regulations and inspections, consequent failure of inadequate construction under hazard-induced loading, and development on inappropriate land. Construction examples, such as from earthquakes and floods, are prime cases of the creation of vulnerability, the making of disasters that wait to happen on behalf of greed and denial of consequences or consideration for those who become its victims.

Innumerable official reports have followed construction failures (e.g. Aini et al., 2005; Loughborough University & UMIST, 2003; HSE,1999). Risk might receive due consideration in such reports, but it is rare to find in-depth discussion of fear or denial.
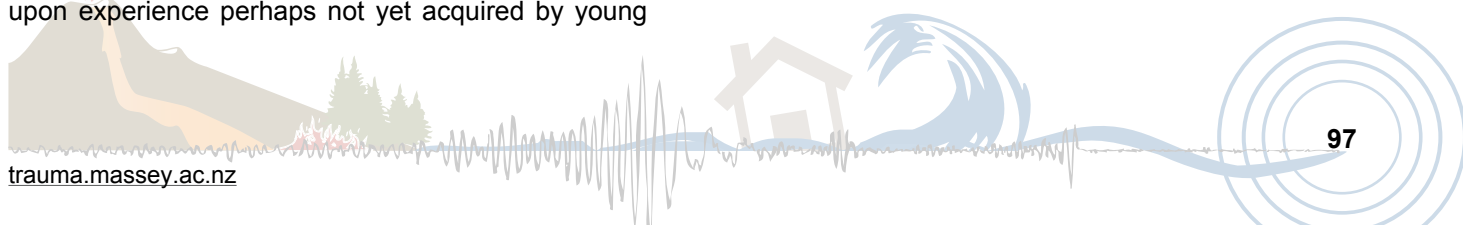
Climate change

The number of degrees that temperatures will change and the number of centimetres that seas will rise are the basis for most descriptions of climate change. Some descriptions enlarge upon the consequential collective hazards that will develop, whether accurate or not (e.g. Yamin et al., 2005), or on the global nature of their potential experiential reality (e.g. Vörösmarty et al., 2000). Other reports of meteorological disasters often give climate change as their context, cause, or excuse (e.g. Holmes, 2009).

Information for limiting carbon emissions or for increasing carbon sinks, in order to slow the rate of climate change, is now frequently and widely available. So far, this information has had little effect towards necessarily radical changes to affluent living standards and lifestyles (e.g. Lewis, 2009). Meanwhile "lifestyles" of poverty have no option but to suffer further degradation.

An inherent and pervasive political denial of the reality of climate change goes beyond politicians' perennial excuse of public alarm and "panic", and has become consistent opinion (e.g. Marshall, 2001). As the impact of climate change and its warnings intensify (e.g. Stott, 2010), individual and collective denial increases (Lorenzoni & Pidgeon, 2006) to the extent that, we are told: "…there is no leeway for delay or denial any longer." (Pachauri, 2010, online).

Information on climate-related hazards is hard to find in the *United Kingdom Climate Projection* (DEFRA, 2010). To learn from it about potential coastal flooding, for example, would take considerable time, patience, effort and intuition. Information is shrouded in probabilities, cautions and caveats regarding their interpretation: "Probabilistic climate projections are based on subjective probability, as the probabilities are a measure of the degree to which a particular level of future climate change is consistent with the evidence considered…the evidence comes from historical climate observations, expert judgement and results of considering the outputs from a number of climate models, all with their associated uncertainties." (DEFRA, 2010, online).

This "denial by obfuscation" deters sensible interpretation, understanding and decision making and does little to overcome the psychological reality in which "people can accept the truth of what is said without accepting the implications" (Marshall, 2001). Knowledge is not enough, even where it can be found, and denial cannot simply be countered with information; indeed, increased information may serve to intensify the denial (e.g. Weingart et al., 2000).

Hazards are not a comfortable topic. It is more amenable to implement measures envisaged for a more acceptable future than it is to take action against fearful hazards, whether of the present or the future (Lewis, 2007). Could denial be at the root of current lassitude to comprehensive approaches to deal with climate change? Why else do great divides persist between specialist findings and policy implementation?

In the UK housing sector, the carbon-free house (Building Research Establishment, 2010) exists side-by-side with legal housing development on flood-prone sites (Lewis & Kelman, 2009) and failures of recent construction in moderately high winds. In the UK energy sector, new nuclear power stations with a life expectancy of 60 years, are proposed for UK sites vulnerable to rising seas and storm surges (Blowers, 2009). In the over 25 years since sea-level rise became a concern (e.g. EPA, 1983), there has been adequate time for multi-disciplinary, multi-sectoral and multi-temporal policies to have been formed and implemented, yet century-scale sea-level rise is still frequently seen as an afterthought (e.g. Pilkey & Young, 2009).

The regrettable but persistent split between the two camps of "disasters" and "development" (Lewis, 1999, 2007) has to be overcome as part of fully encompassing climate change as a subset of disaster risk reduction (Mercer, 2010). Consideration of coastline vulnerabilities by Australia (Walsh et al., 2004) and the United Kingdom (POST, 2009) are overdue signs of improvement.

A supplementary view

Explorations into the five sectors of financial management, industrial fire, social care, construction and climate change, indicate that there is indeed much more to be feared than fear itself. Human behaviour is affected by emotions, many of which are triggered by fear. This exploration does little to change aspects of disaster theory as described; in fact, it could be that technocracy applies to itself. This exploration does acknowledge that, while strategies to reduce social and economic vulnerabilities remain poorly implemented, decision makers are themselves psychologically vulnerable in ways that may be unexpected and that may be exacerbated by perceptions of, or confrontations with, risk and fear. This paper shows that it would be advantageous if behavioural consequences, such as

denial, were to be regarded by those working with disasters *not* as an infrequent or unusual condition but as a normal aspect of human behaviour and response, thus facilitating permanent remedial strategies (Cohen, 2001) in management training and development of professionals tackling disasters across disciplines (i.e. not just psychologists, many of whom already recognise this point).

Within that context of the training and development of professionals tackling disasters, the psychology of the individual is introduced by Hewitt (1983) in a quotation from Bertolt Brecht: "We only dimly realise how dependent we are in every way in all our decisions... It's only much later that normal everyday life turns out to have become abnormal in a way that affects us all. Something has been forgotten, something has gone wrong...*It's because people know so little about themselves that our knowledge of nature is so little use to them*" (Brecht, 1965 in Hewitt, 1983, p. 26). Hewitt concludes that there is the need for reinterpretation through "examination of the psychological underpinnings of thought, assumption and practice" (p. 4). That plea has not yet been fully met by the research community.

In the organisation and management of resources, technocracy is inclusive of decision making which, like all human functions, is subject to the behavioural consequences of emotions. It is part of the technocratic approach to natural hazards that behavioural fluctuations and inconsistencies in response to emotions are a component of dealing with disasters. Acceptance of the high probability of psychological influences in perception and decision making should become the norm. Studies of the conditioning fear abound (e.g. Paton, 2003; Schiller et al., 2010) with attempts at conditioning regarding fear implemented in the training of, for example, firefighters, astronauts, humanitarian workers, and military personnel. While success varies (McFarlane, 2004), wider acceptance of, and instruction regarding, the psychological aspects of fear and denial in the context of disasters might imbue a deeper and longer-term understanding of the need to acknowledge, confront and work with human fear as part of tackling vulnerability.

This view does little to counter the technocratic dominant view, as articulated by Hewitt (1983), or to support the proposed changes in human-environment relations in order to seek the fundamental "ingredient" in disasters—vulnerability. It could be regarded as a supplementary view or, if preferred, as a compromise which suggests

that the consequences of the technocratic view are now too entrenched for radical change. This occurs despite scattered examples where radical change is witnessed, such as community-based teams setting out to reduce vulnerability prior to a disaster striking (e.g. Ogawa et al., 2005; Maceda et al., 2009; Paton et al., 2010). Within its *status quo*, however, there is a need for further understanding, acceptance and adjustment, a strong candidate for which is the probability of behavioural inconsistencies in management. Such inconsistencies might have impeded strong action for vulnerability reduction by failing to accept the vulnerability core of disaster creation.

Applications of Jung's (1958) concern to counter *knowledge* of collective statistical science, with *understanding* of the individual, could be timely. An apparent jumble of human emotions is easier to disregard than to acknowledge, understand and incorporate. Instead, formulaic and narrow "box-ticking" is quicker, more easily comprehended and more ordered. What may be required is managerial comprehension of multiple approaches for consolidation and application in the context of realities likely to be more jumbled than formulaic.

A difficulty might be that instinctive emotional forces unconsciously exert their effect on psychological functioning, variations of perception, and corresponding human reaction. Emotions, therefore, do affect our assessments of, or cause our denial of, vulnerability and risk. Our behavioural responses have the capacity to modify or to nullify the application of measures for disaster management and risk reduction, often in a manner that seems surprising to many, as evidenced by references throughout this paper. Acceptance of this reality is imperative and long overdue, potentially forming a strong foundation for focusing on vulnerability reduction.

Within the dividing off of disasters from human-environment relations, is the further dividing off of vulnerability analysis from those sectors responsible for its creation. For "vulnerable" to be a term that "may be taken as derogatory when applied to people, especially if the term is misunderstood" might itself indicate denial leading to "understanding of 'vulnerability'…being restricted by constraints of distaste, but unpleasantness, where it exists, should not become a barrier to understanding and resolving insidious and invidious activities and processes" (Lewis & Kelman, 2010, pp. 192-193).

Organisational technocracy repeatedly fails by its separation of "disaster management" and disaster risk reduction from other sectors and by failing to understand that vulnerability creation is a process, not an event. Furthermore, it is not the prerogative of one specialist sector separated from all other activities; it is an inherent risk for all sectors. Not only are organisational aspects of technocracy in question, but also its physical and technical applications are repeatedly exposed as structural flood walls collapse or are overtopped, as major industrial catastrophes continue, and as reinforced concrete construction so frequently fails in earthquakes.

Conclusions

Focusing on the interactions and feedbacks amongst fear, denial, and vulnerability would help to overcome the challenges. Significant attention is given by many sectors to post-disaster reporting, yet the reporting mechanisms are inconsistent, especially frequently underplaying the vulnerability causes of disaster. In particular, reports on disasters involving natural hazards could better emulate many reports from disasters without natural hazards in investigating decision-making processes and the role that psychological factors such as fear and denial played in the long-term and short-term run-up to the catastrophe.

Reports should not simply catalogue damage, deaths, and estimated reconstruction costs, or be lists of post-disaster donors, though these statistics are helpful. Widely comprehensive reports would reveal not only what has been affected but also give analytical *reasons why*, particularly highlighting why the vulnerability existed and why others' appraisals of risk were formulated in certain manners. In this way, reports would become a foundation for social, economic and political adjustments by which vulnerabilities could begin to be reduced as a result of our increased understanding.

Post-disaster publication of independent, comprehensive and analytical reports of all forms of disaster would be invaluable aids to management reassessments, collective memory, and understanding of the processes of vulnerability. Investigations would need to include (i) both the wider contexts of long- and short-term changes in physical and social developments that could have influenced the magnitude and extent of the disaster and (ii) analyses of the performance of disaster management before, during and after disaster occurrence. For both points, the aim should be to consider emotions and personal attributes concerning fear and denial as part of the systemic vulnerability that led to the disaster.

Nevertheless, although post-disaster reports may come to identify failures of perception, just having reports may do little to assuage pre-disaster denial of imminent catastrophe. Researchers need to engage with practitioners to apply the lessons learned before disaster strikes. Otherwise, the disaster problem will persist until appropriate measures prevail for the realistic perception of risk and vulnerability to others.

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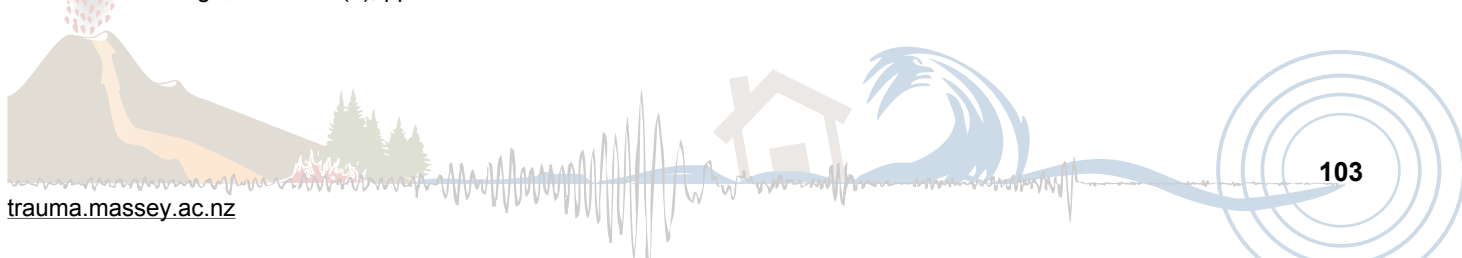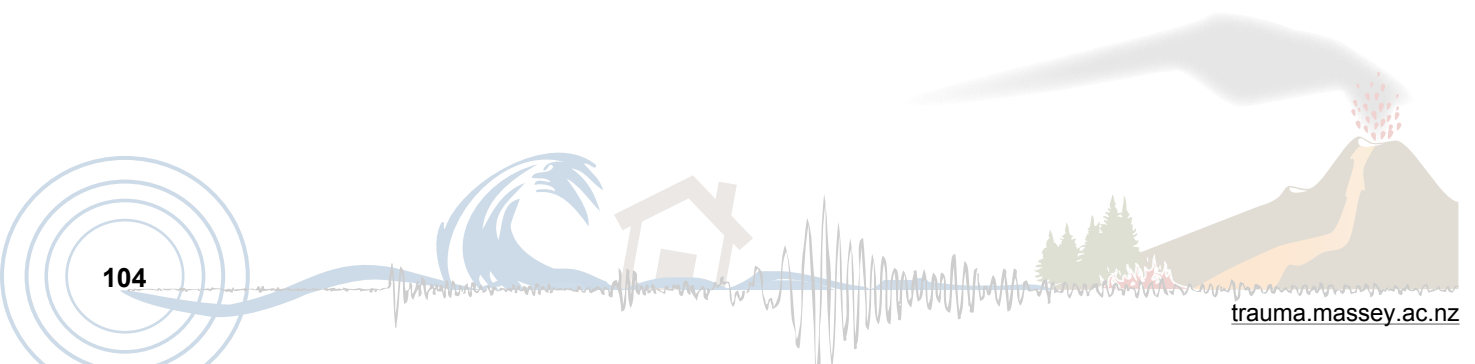
"Tired of Caring": The Impact of Caring on Resident Doctors

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Abstract

Compassion fatigue, also referred to as secondary traumatic stress, is increasingly being acknowledged as a possible consequence of working in any helping and caring profession. Previous research has focused on examining this construct in a variety of health professionals – social workers, counsellors, psychologists and nurses; however, little attention has been paid to this experience in doctors. This research examined the presence of compassion fatigue in doctors. A self-selected sample of 253 doctors, working in four locations in New Zealand and training in a variety of specialty disciplines, participated in this research by completing an anonymous questionnaire which included the ProQOL (Professional Quality of Life) instrument. This instrument measures compassion fatigue, burnout and compassion satisfaction. Results indicated that 17.1% of the sample appeared to be at risk for compassion fatigue as indicated by a high score on that subscale of the ProQOL, and 19.5% at risk of burnout. These results are similar to those reported in studies of other health professionals and suggest a need for caution on the part of clinicians and employers as to the potentially emotionally demanding aspects of patient care.

Keywords: *Physicians, compassion fatigue, burnout, compassion satisfaction, vicarious trauma*

Introduction

Burnout (BO), a term first used by Freudenberger (1974), is a state of physical, emotional, and mental exhaustion caused by long-term involvement in emotionally-demanding situations. It is the result of a transitional process, moving from an imbalance between resources and demands to psychological accommodation (Cherniss, 1980). Maslach and Jackson (1981) identified three components of burnout – emotional exhaustion, depersonalisation, and feelings of reduced personal accomplishment. Emotional exhaustion has been reported as a significant contributor to the stress experienced by doctors (Deckard, Meterko, & Field, 1994).

Previous studies of physicians have demonstrated their struggle with the emotional demands of their work (Balch, Freischlag & Shanafelt, 2009), and its impact on the quality of patient care (Shanafelt, Bradley, Wipf, & Back, 2002). In the past 20 years, researchers have been investigating the positive and negative effects of caring on the carer. Different terms have been proposed to describe these effects. In the first instance, McCann & Pearlman (1990) introduced the concept of vicarious trauma. They suggested that this may occur in those who work with traumatised individuals and can give rise to considerable psychological effects. These effects can be disruptive and distressing for the helper and can continue for a long time after the therapeutic association with the traumatised person ceases. The construct of compassion fatigue was described by Figley (1995) as a naturally occurring response as a consequence of knowing about the traumatic experiences of significant others. Another lead researcher at this time, Stamm (1995), focused on secondary traumatic stress, and describes this as negative emotions resulting from fear experienced in the workplace, and /or work-related exposure to the traumatic experiences of others.

Some authors have noted the inconsistencies in the conceptualization and measurement of compassion fatigue, secondary traumatic stress and vicarious traumatisation and made attempts to separate the definitions (Baird & Kracen, 2006; Thomas & Wilson, 2004). While there appear to be similarities between the constructs, they each contribute to an understanding of

the positive and negative aspects of caring. Vicarious traumatization describes a state of emotional and psychological health over time, with both vicarious traumatisation and vicarious transformation being processes that describe an individual's development of their self-awareness and self-perception. Compassion satisfaction and compassion fatigue focus on an individual's current experiences in working with traumatised persons. (Huggard, Stamm & Pearlman, 2011). The most common measure of these constructs is the Professional Quality of Life (ProQOL). This instrument includes scales for compassion fatigue, burnout, and compassion satisfaction. At the time of the current study, conceptualization of the compassion fatigue construct, as incorporated in the ProQOL (version 3), was described as being the same, or at least similar to secondary traumatic stress (Stamm, 2005). More recent conceptualisation and analysis of the constructs by Stamm (2009) views compassion satisfaction as being a positive component and compassion fatigue as a negative component, in terms of the possible effects on individuals. Compassion fatigue is thought to consist of two constructs: burnout and secondary traumatic stress (a construct related to fear and traumatic experiences in the workplace), with compassion satisfaction being a measure of the pleasure one receives from one's work. Professional quality of life is a complex concept as it involves not only aspects of the work environment and an individual's exposure to primary (experienced by one-self) and secondary trauma (experienced by others) but also the individual's personal attributes.

More recently research by Stamm (2002) and Pearlman and Caringi (2009) has described the positive and transformative aspects of caring. Stamm's original work gave rise to the development of the construct of compassion satisfaction, described as the positive aspects relating to providing care, and Pearlman's research identified the rewards of doing the work (Saakvitne & Pearlman, 1996) and the vicarious transformation that can occur (Pearlman & Caringi, 2009).

Interestingly, research has shown that it is possible to be at high risk of compassion fatigue while at the same time experiencing high levels of compassion satisfaction (Severn, Searchfield & Huggard, 2011; Stamm, 2009). Equally, high-risk scores for compassion fatigue can be associated with low scores of compassion satisfaction (Stamm, 2009). This gives rise to a hypothesis that,

while associated in some way, levels of compassion fatigue and compassion satisfaction experienced by an individual may be a result of other, possibly unconnected, processes. Stamm's preliminary view was that compassion satisfaction may be a portrayal of an individual's efficacy and may be "happiness with what one can do to make the world in which one lives a reflection of what one thinks it should be" (2002, p. 113).

Despite the above, and an increasing literature that discusses the presence and the impact of compassion fatigue, burnout, and compassion satisfaction in doctors and other health professionals (Najjar, Davis, Beck-Coon & Doebbeling, 2009), only one previous study involving Resident doctors was identified that quantified using a validated measure, the presence of compassion fatigue as well as burnout and compassion satisfaction in doctors (Markwell & Wainer, 2009). The importance of such a study relates to the need to gain an understanding of stressors in this population as years spent as a Resident doctor have been shown to be extremely stressful (Deckard, Meterko, & Field, 1994; Kam, 1998; Riley, 2004). In addition, doctors at this stage of their career may carry significant financial burden associated with large student loans, as well as the demands associated with achieving the developmental milestones of early adulthood, for example, the establishment of relationships with a spouse or partner, and possibly starting a family. This combination of factors may lead to the development of stress and a subsequent burnout experience.

The current study was conducted to further explore the presence of compassion fatigue, burnout, and compassion satisfaction in a group of hospital-based Resident doctors. The study participants were employed by District Health Boards (DHBs). These are the regional health authorities in New Zealand responsible for funding and providing primary, secondary, and tertiary care within their geographic region.

Methods

Sample and Recruitment
All House Surgeons and Registrars (n=1100) employed by four DHBs and working in a variety of training programmes leading to medical specialization, were invited by the researchers to complete the Professional Quality of Life scale (ProQOL, version 3) (Stamm, 2005).

Measures

The ProQOL (version 3) is a 30 item pencil and paper questionnaire with established subscales that measure compassion fatigue, burnout and compassion satisfaction. Each of the three discrete subscales is scored using a 6 point Likert scale with response options of 'never', 'rarely', 'a few times', 'somewhat often', 'often', and 'very often'. Internal consistency (Cronbach alpha) for each of the three sub-scales has previously been reported as follows: compassion fatigue, 0.80; burnout, 0.72; compassion satisfaction, 0.87 (Stamm, 2005). High scores indicate that the participant may be at risk from the effects of compassion fatigue and burnout. Similarly, low scores on the compassion satisfaction subscale may be of concern.

Procedure

The study was approved by the University of Auckland Human Participants Ethics Committee. Prior to distribution, the questionnaire and data gathering process were tested, using doctors who would not be participating in the main study, in order to assess the time required to complete the survey and to obtain feedback relating to the questionnaire design.

The invitation to complete the anonymous questionnaire was distributed to all potential respondents (n = 1100) on two occasions two weeks apart, with the instruction on the second occasion that only those who had not completed the questionnaire previously should now do so. Questionnaires were returned in pre-paid envelopes to a research associate and the data were entered into a Statistical Package for Social Sciences (SPSS) version 14 file.

Demographic characteristics of those who responded to the survey with respect to age, ethnicity, and gender were found to be broadly similar to the characteristics of the total population from which these doctors were drawn. This similarity was determined by comparing these demographic characteristics in the participating group with the same characteristics of the total potential participants from data was supplied by the human resources units responsible for this staff group.

Data Analysis

Data were analyzed using SPSS. In order to establish construct validity of the measures, the suitability of data for factor analysis was assessed by examining the results obtained from Bartlett's Test of Sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy. Results for Bartlett's Test should be significant at the $p < 0.05$ level. Results for the KMO test range from 0 to 1, with 0.6 considered as a minimum value for a good factor analysis (Pallant, 2007). Results for the ProQOL were: Bartlett's $p = 0.0001$, and KMO = 0.874.

Principal Component Analysis was used to extract the data so as to identify patterns in relation to each instrument and to reduce the number of variables into single factors. The analysis resulted in several factors emerging for both instruments, each with an eigenvalue of greater than 1. Varimax, with Kaiser Normalisation, was then used as the rotation method. Factor loadings of 0.40 or higher were considered evidence that instrument items were importantly correlated with a common factor (Pallant, 2007). Factor analysis resulted in the identification of subscales for each of the main instruments. The internal consistency of each total and subscale measure was assessed using Cronbach's alpha, with scores of 0.70 or higher indicating evidence of acceptable internal consistency (Pallant, 2007). Values of Cronbach's alpha for the total instrument and the various subscales were all greater than 0.72 (Table 1).

Table 1. Internal Consistency of Instruments

Instrument	Number of Items	Published Cronbach's alpha	Survey Sample Cronbach's alpha
ProQOL			
Compassion Fatigue	10	0.80	0.83
Burnout	10	0.72	0.70
Compassion Satisfaction	10	0.87	0.82

Results

Participants

Two hundred and fifty three completed questionnaires were returned representing an overall response rate of 23%. The response rate across District Health Boards (DHB) ranged from 16.7% to 25.6%. One hundred and forty nine (58.9%) of the respondents were female. Their mean age was 31.1 years (standard deviation [SD] 5.9) and the mean time since completing their undergraduate medical school training was 6.5 years (SD 5.4). The majority of survey participants identified as New Zealand/European ethnicity (52%) with the next most commonly reported ethnicities being Chinese (11%), Maori (5%), and Indian (5%). The majority (79%) trained at a New Zealand medical school.

Table 2. Comparison of Normative and Obtained Survey Means of ProQOL (Compassion Fatigue, Burnout, and Compassion Satisfaction Subscale Scores)

Dependent Variable	N	Normative Mean (SD)*		Survey Mean (SD)		Percentage scoring below 25th percentile	Percentage scoring above 75th percentile
ProQOL							
Compassion fatigue	230	13.0 (6.0)		12.9 (6.9)			
Burnout	226	23.3 (6.0)		24.4 (6.5)			
Compassion Satisfaction	222	37.0 (7.0)		29.2 (7.1)			
Percentiles		25	75	25	75		
Compassion fatigue		8	17	10	19	12.5	17.1
Burnout		17	28	20	29	24.3	19.5
Compassion Satisfaction		32	41	27	34	25.0	19.8

Note. Valid sample number differs in each case due to inconsistencies in completing the questionnaires by some of the participants.

*Normative data as reported by Stamm (2005)

ProQOL

Results for compassion fatigue and burnout were similar to those previously published, and the result for compassion satisfaction was lower (Stamm 2005). Results indicated that 17.1 percent of the participants have compassion fatigue scores and 19.5 percent have burnout scores above the 75th percentile, and 25 percent have compassion satisfaction scores below the 25th percentile (Table 2).

Associations between demographic variables and compassion fatigue, burnout, and compassion satisfaction

Testing for associations between the dependent variables of compassion fatigue, burnout, and compassion satisfaction; demographic variables of gender, age, and ethnicity; and contextual variables of the number of years since graduation, medical school attended, District Health Board (DHB) employer, and the hospital worked at, were carried out using multiple analysis of variance (MANOVA). Two separate MANOVAs were performed. With each MANOVA, preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrixes, and multilinearity, with no serious violations noted.

The first MANOVA investigated demographic variables in relation to the dependent variables of compassion fatigue, burnout, and compassion satisfaction. The independent variables were gender, age, and ethnicity. Inspection of the data revealed a number of categories containing small numbers. Data for these categories were banded into larger groups, and those categories already with larger numbers remained un-banded. Data for age were banded into two categories, 30 years and under, and 31 years and over, and ethnicity was banded into New Zealand/European and Others. No main effects were detected for any of the variables and none of the interactions was significant ($p <= .05$). However, two results were close to achieving statistical significance: gender*ethnicity, $F(3, 185) = 2.36$, $p = .07$; and ethnicity*age $F(3, 185) = 2.48$, $p = .06$.

The second MANOVA investigated contextual variables in relation to the dependent variables of compassion fatigue, burnout, and compassion satisfaction. The independent variables were the number of years since graduation, medical school attended, District Health Board (DHB) employer, and the hospital worked at. As with the first MANOVA, inspection of the data revealed a number of categories containing small numbers. The numbers of years since graduation were banded into three categories, up to 4 years, 5 – 9 years, and 10 years and over. The medical school was banded into three categories: Otago University, University of Auckland,

Table 3. MANOVA investigation of contextual variables in relation to the dependent variables of compassion fatigue, burnout, and compassion satisfaction

Contextual Variable	$F(6, 298)$	p	Wilk's Lambda	Partial eta squared
Medical school attended	2.65	.02	.90	.05
Medical school*Hospital	2.41	.03	.91	.05
Medical school*DHB	4.10	.001	.85	.08

and Others (overseas medical schools). The hospital worked at was banded into three categories. DHB data were not banded. Statistical significance results for this MANOVA are shown in Table 3. One additional result was close to achieving statistical significance: DHB $F (6, 298) = 2.00$, $p = .07$.

When the results are considered separately, and using a Bonferroni adjusted alpha level of .017, the two differences that reached statistical significance were both for compassion fatigue. Firstly, for the interaction between medical school attended and the DHB, $F (2, 151) = 6.64$, $p = .002$, and partial eta squared = .08. On inspection, the mean scores for medical school attended were Otago ($M = 13.06$, $SD = 7.04$), Auckland ($M = 13.30$, $SD = 7.07$) and 'Other' ($M = 12.07$, $SD = 6.97$). Secondly, for the interaction between medical school attended and hospital worked at, $F (2,151) = 4.78$, $p = .01$, and partial eta squared = .06.

For these statistically significant results, a one-way between-groups ANOVA was conducted to explore the impact of hospital worked at on compassion fatigue. Post-hoc comparisons using the Least Squares Difference test failed to reveal any significant difference between the hospitals.

A second ANOVA was conducted to explore the impact of DHB employer on compassion fatigue. Despite reaching statistical significance, the actual difference in mean scores was quite small. The effect size, calculated using eta squared, was .02. Post-hoc comparisons using the Least Squares Difference test failed to reveal any significant differences.

Discussion

The present study surveyed a group of Resident doctors to determine the levels of compassion fatigue, burnout, and compassion satisfaction in this group. Results indicate that one in six doctors in the study appear to be at risk of experiencing compassion fatigue and one in five at risk of burnout. These findings are similar to those previously reported in comparable studies of other health professionals (Stamm, 2005). Based on a review of over 2000 datasets of health professional's ProQOL scores, Stamm (2005) proposed that scores above the 75th percentile indicated that participants may be at risk for compassion fatigue and burnout. Similarly, scores for compassion satisfaction below the 25th percentile suggest reduced work satisfaction. These results give an indication of the potential of this

population experiencing compassion fatigue. With regard to burnout the number of participants achieving high scores was less than those reported in another New Zealand study that examined the level of burnout and the benefits of peer support, in a group of 50 specialist physicians (Bruce, Conaglen & Conaglen, 2005). However, it should be noted that Bruce et al's study used a different measure of burnout and reported that 28% of their participants were at risk of burnout. The reported levels of compassion fatigue and burnout in the current study are of concern, and indicate the need for effective strategies for managing the emotional and psychological demands that result from exposure to the suffering of others.

ProQOL scores for compassion satisfaction – the pleasure one receives from one's work - in the current study were low with many more participants than expected scoring below the 25th quartile as compared to data previously published (Stamm, 2005). This is of concern in that it may indicate significantly reduced capacity on the part of the individual to experience enjoyment, pleasure, and satisfaction from their work, and to feel as though they are making a worthwhile contribution. In addition, reduced satisfaction in one's medical practice has previously been linked to ill health (Leigh, Kravitz, Schembri, Samuels, & Mobley, 2002).

That there was an absence of any main effects for the demographic or contextual variables indicates that, over a large range of clinical specialties, in different locations, and with varying degrees of experience and of support, compassion fatigue is present in these doctors at levels similar to those previously seen in other health professionals (Stamm, 2005).

Limitations

There are some limitations to this study. Firstly, the low response rate of 23 percent means that caution must be applied in interpreting the data and drawing conclusions relating to the Resident doctor population as a whole. However, the demographic characteristics of those who responded to the survey with respect to age, ethnicity, and gender were broadly similar to the characteristics of the total population from which these doctors were drawn. Secondly, the data resulted from a one-off sampling of the Resident doctors, and did not consider the time of the year that sampling was undertaken. Specific workplace events, such as roster changes, working at a new hospital, and additional workload when covering colleagues on vacation, may contribute

to differences in scores for compassion fatigue, burnout, and compassion satisfaction. Multiple sampling that reflect longitudinal effects may enable conclusions to be made about changes over time. Thirdly, no attempt was made to gather information about exposure to potential traumatising material. Due to the nature of medical practice, the potential for such exposure is assumed. Fourthly, there may be a response bias in that those Resident doctors who responded to the survey may have done so due to a personal interest in the topic. Lastly, our study was limited to Resident doctors in one region, and the findings may not generalize to doctors in other regions. Resident doctors in another region may have additional and different support structures and processes available to them, such as peer group support, individualized support and counseling, and differences in workload such as the complexity, volume and hours of work. These differences may in turn have an effect on reducing the potential for compassion fatigue and burnout and enhancing compassion satisfaction.

Conclusion

This study has reported the level of compassion fatigue, burnout, and compassion satisfaction in a group of Resident doctors working across a wide range of medical specialties. These findings have implications for those involved in the mentorship and pastoral care of doctors, the doctors' employers, medical professional associations, and for the doctors themselves. Additionally, these results can be drawn upon by those involved in undergraduate medical education as an indication of the level of distress experienced by doctors in the workplace. Finally this knowledge could be used to support the design and implementation of educational interventions aimed at creating awareness and that address the emotional demands faced in the clinical environment.

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