



Disaster Prevention and Management

"Sailing through a river of emotions": capturing children's earthquake stories Carol Mutch

Article information:

To cite this document: Carol Mutch , (2013)," "Sailing through a river of emotions": capturing children's earthquake stories ", Disaster Prevention and Management, Vol. 22 Iss 5 pp. 445 - 455 Permanent link to this document: http://dx.doi.org/10.1108/DPM-10-2013-0174

Downloaded on: 05 February 2017, At: 11:09 (PT) References: this document contains references to 35 other documents. To copy this document: permissions@emeraldinsight.com The fulltext of this document has been downloaded 283 times since 2013*

Users who downloaded this article also downloaded:

(2013),"Lessons from disaster: the power and place of story", Disaster Prevention and Management: An International Journal, Vol. 22 Iss 5 pp. 385-394 http://dx.doi.org/10.1108/DPM-10-2013-0172

(2013),"After the disaster: Using the Big-Five to predict changes in mental health among survivors of the 2011 Christchurch earthquake", Disaster Prevention and Management: An International Journal, Vol. 22 Iss 5 pp. 456-466 http://dx.doi.org/10.1108/DPM-09-2013-0161



Access to this document was granted through an Emerald subscription provided by emerald-srm: 321607 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.



The current issue and full text archive of this journal is available at www.emeraldinsight.com/0965-3562.htm

"Sailing through a river of emotions": capturing children's earthquake stories

Carol Mutch

School of Critical Studies in Education, University of Auckland, Auckland, New Zealand

Abstract

Purpose – The three case studies reported in this paper are drawn from a wider project in which schools in Canterbury, New Zealand, were invited to tell the stories of their experiences of the 2010/2011 earthquakes. The purpose of this paper is to capture the stories for the schools, their communities and for New Zealand's historical record.

Design/methodology/approach – The approach taken was qualitative and participatory. Each school had control over their project design and implementation. The researchers were partners and facilitators in assisting each school to reach its goal. In these three case studies approximately 100 participants including principals, teachers, students and families were engaged in generating data to create tangible and long-lasting end products.

Findings – The two themes from the data highlighted in this paper are: first, the importance of providing emotional processing opportunities for children without severe post-trauma symptoms to support their recovery and second, the ways in which children can be engaged and given a voice in research that concerns them.

Originality/value – The paper contributes to the wider collection of research on and about the Canterbury earthquakes by giving voice to children and highlighting the role of schools in post-disaster response and recovery. The "continuum of engagement" described here is a new and original model.

Keywords Participatory research, Disasters, Disaster response and recovery,

Research involving children, The role of schools

Paper type Research paper

contributing to this study.

The details of the series of earthquakes that struck the city of Christchurch and surrounding areas of Canterbury, New Zealand, throughout 2010 and 2011 have been well described in media reports, documentaries, books and academic papers. Although children throughout the city discussed, wrote about, drew and re-enacted their earthquake stories many times at home and school, little of this has been formally captured by researchers. This is understandable as the adults responsible for children wanted to protect them from any psychological harm that could ensue if children were further traumatized by the re-visiting of their experiences. Yet research on helping children adjust after trauma suggests that emotional processing (Caruana, 2010; Gordon, 2007; Prinstein *et al.*, 1996) is an important post-trauma activity. Emotional processing is defined as "a diverse set of physical, cognitive and affective actions that lead to absorption of emotional disturbances [...]" (Prinstein *et al.*, 1996, p. 464). Without appropriate absorption or opportunities to put events into perspective, reminders of the event can interfere with normal functioning resulting in nightmares,

The author would like to acknowledge the funding and support of UNESCO and the University

of Auckland and express her appreciation to the children, schools, families and the research team



Disaster Prevention and Management Vol. 22 No. 5, 2013 pp. 445-455 © Emerald Group Publishing Limited 0965-3562 DOI 10.1108/DPM-10-2013-0174

445

ract pse – T s in Ca 011 ear unities a **n/meth** ntrol over sting ea ng prima ng lastin **ngs** – 1 viding e port the distress or listlessness. Carefully managed and repeated exposures through calm rehearsals, relevant conversations, drawing, play or drama contribute to appropriate absorption. Children also have the right to have their voices heard. The United Nations Convention on the Rights of the Child (UNCRC, 1989) states that every child, as well as the right to a life that is safe, healthy and socially connected, should have a voice in matters that concern them. Much child-related research is adult-centric in both determining the problems and the solutions. There is, therefore, a need for critically informed research that gives children the opportunity to engage in carefully facilitated emotional processing which gives expression to children's voices and perspectives. Through on-going and sensitive engagement with a group of willing schools, this UNESCO-funded research enabled children to find ways to retell their stories for themselves, their schools, their families and posterity. The data reported here are drawn from a larger study which aimed to capture this significant time in New Zealand's history by assisting school communities to record their earthquake stories. The researchers and a video team gathered stories from principals, teachers, school support staff, children and parents. Each school had control over how their own story-telling project would proceed, who would be involved, how it would be undertaken and what the final product would be. This paper discusses the engagement of children from three different schools in their projects. The schools chose to tell their stories in different ways and, in doing so, engaged the children to different extents.

After exploring the relevant literature, this paper introduces each school and outlines the approaches taken. Each school's project is discussed as an individual case study and the paper concludes by outlining the important lessons learned from children's experiences of disaster and how this can contribute to better understanding of children's perspectives on their experiences.

Literature review

Children and adolescents represent a large, but often under-recognized or ignored population group in disaster research (Cahill et al., 2010; Gibbs et al., 2013; La Greca, 2006; Save the Children, 2006). As Cahill et al. (2010, p. 6) suggest, "Caught between the perceptions that infants are the most vulnerable and adults are the most capable, there can be a tendency to overlook their needs". Children are most often conceptualized as passive victims who are excluded from contributing to disaster response and recovery. The focus is most often on mental health risks, including lessening their exposure to the potential of post-traumatic stress disorder (Cahill et al., 2010; Sagy and Braun-Lewensohn, 2009). There is a plethora of research that concludes that disasters have serious impacts on mental health and social functioning (Bonanno et al., 2010; Norris et al., 2002). Mental health and wellbeing impacts may be manifested in different ways, for different age groups, and can have a delayed onset (McFarlane, 1987; Norris et al., 2002; Peek, 2008). Children and adolescents may have particular vulnerabilities in relation to psychological impacts (Anderson, 2005; Hawe, 2009; Peek, 2008). Their sense of safety and security, their on-going development and their social relationships may all be compromised (Gordon, 2002; McDermott and Palmer, 2002). Young people who survive disasters report that the loss of loved ones and places, order and opportunity upset their sense of a predictable and hopeful future (Betancourt and Kahn, 2008). Researchers note behaviour changes such as depression and anxiety, irritability, poor impulse control and heightened aggression (Bonanno et al., 2010; Cahill et al., 2010; Prinstein *et al.*, 1996).

446

22,5

DPM

There is, however, a growing body of research that finds that while disasters can lead to serious psychological harm, it is only in a minority of exposed individuals and often linked to a combination of pre-existing risk and resilience factors (Bonanno *et al.*, 2010; Cahill *et al.*, 2010; La Greca and Silverman, 2009) or proximity to the disaster and its aftermath (Bonanno *et al.*, 2010). Elevated symptoms are common among children and young people for the first few months but less than one-third will exhibit on-going concern and most will recover within a year or two (Bonanno *et al.*, 2010; La Greca and Silverman, 2009). Post-disaster social relationships are important predictors of coping and resilience (Bonanno *et al.*, 2010; Cahill *et al.*, 2010; Gordon, 2004a, b, c, 2007; Prinstein *et al.*, 1996). Returning to normal roles and routines, distraction and emotional processing are activities that support children's recovery (Gordon, 2007; Prinstein *et al.*, 1996). Bonanno *et al.* (2010, p. 1) report:

Some survivors recover their psychological equilibrium within a period from several months to one or two years. A sizeable proportion, often more than half of those exposed, experience only transitory distress and maintain a stable trajectory of healthy functioning or resilience.

Focus on risks and vulnerability leads to a child at risk discourse (Gill, 2007; Leonard, 2007; MacDougall, 2009) which is reflected in positioning children as passive victims resulting in research and practice which overlooks the perspectives of children and young people and their capacity to make a contribution. This representation of the child is contested and examples are emerging internationally of children's capacity to actively contribute to planning, preparedness, response and recovery efforts and the apparent positive mental health benefits of this involvement (Anderson, 2005; Duncan and Arnston, 2004; Peek, 2008; Save the Children, 2006). Cahill *et al.* (2010, p. 13) suggest that:

While on the one hand, it is important to emphasise the vulnerability of children and adolescents and the requirement for protection and assistance, it is equally important to recognize their ability to form and express opinions, participate in decision-making processes and influence directions.

The perception of the child as an active citizen is reflected in the citizen child theory of childhood which recognizes children's right and capacity to contribute to the decisions affecting their lives (Gibbs *et al.*, 2013).

As schools and school children are intimately involved in the aftermath of large-scale disasters, they are logical settings in which to conduct research that explores how children are affected by disasters (La Greca, 2006; Smawfield, 2013). Where schools have been used as settings for disaster research, there are both advantages and disadvantages. One of the advantages is that researchers can select from large representative samples, or interview children in familiar surroundings (Gurwitch *et al.*, 2002; Prinstein *et al.*, 1996; Silverman and La Greca, 2002). The challenges include that schools themselves might have suffered damage, school staff might be coping with their own home and family issues related to the disaster, communication and transport may be affected and schools might prefer to focus on re-establishing routines or catching students up on missed work (La Greca, 2006; Smawfield, 2013).

In the case of the Canterbury earthquakes, all schools were affected to some degree. From closure for several weeks as city infrastructure such as power and water was restored, to having their schools demolished, being moved to temporary sites or sharing sites with undamaged schools. At the time of the earthquakes, schools became communication and support hubs for their local communities. School principals and Children's earthquake stories teachers selflessly returned to work despite their own personal tragedies within the city's on-going struggles. Families came to terms with the events they had witnessed and the resulting disruption to their lives. As a researcher living in Christchurch at the time, I wanted to preserve these stories for the schools themselves, as part of the history of the city, and of the nation. I also wanted to capture what the participants had learned about themselves as individuals, as a community and as a nation, as the world around them was literally turned upside down.

Theory, ethics and methodology

The aim of this research was to give the schools that participated an opportunity to record their school's earthquake story. The research team would have access to the raw data to generate research findings for the funder, the United Nations Educational, Scientific and Cultural Organization (UNESCO), and wider audiences. In return each school would generate a product that they could keep, for example, a book, a DVD or a photo essay. This research aimed to use the citizen child perspective to frame children as active participants in the projects. The research was carefully designed to ensure that it did not exacerbate post-disaster trauma (child at risk). To do this we acknowledged the child as a co-researcher who could guide the researcher through the activity, helping to direct both the content of the research discussion, and, where possible, the research activity itself. This ensured that children could engage in emotional processing but had control over how deeply they wished to go into sharing their experiences. Gibbs et al. (2013) discuss the importance of such work being undertaken by experienced researchers. Not only did we use researchers with many years' experience, they had wide ranging experiences with children and young people. They also worked in pairs in a non-threatening manner using warm-up activities and a conversational tone to put children at ease. Having two researchers also meant that one could lead while the other kept an eve on children's emotional responses to ensure children were not pushed out of their comfort zones. The data gathering sessions involved moments of tears and laughter but with sensitive handling and debriefing the children all left feeling the better for their participation.

The emotionally charged setting of the research also meant that the researchers needed to take time to build relationships with the schools. It was important that the schools did not see the research team as collecting data for their own ends but as providing a genuinely reciprocal process that would benefit the schools, as well as the funder and the nation. The researchers took a sensitively staged approach - first a phone call to the principal, followed by e-mailing through the research brief, following this was a personal visit, attendance at a staff and/or parent meeting followed, and so on – until the school finally felt as if all questions were answered, and fears allayed. Once a school agreed to participate in the study, the next challenge for the researchers was encouraging schools to allow children to have a more significant role within the design, data collection, synthesis, and presentation of the school's story. It is understandable that schools and parents felt they needed to be protective of their children, and they were concerned that reliving these experiences might cause distress. We provided research evidence that showed that creative ways of sharing stories could be an emotionally and psychologically healthy activity for children who were not exhibiting high levels of post-disaster trauma. With schools we talked in pedagogical terms, framing the project as helping children develop key competencies through inquiry learning.

The three schools represented here each chose different approaches to their disaster story – a book, an artwork and a documentary. In each school a senior leader (principal

DPM

22,5

448

or deputy principal) liaised directly with me, the lead researcher. Other teachers, school staff and parents became engaged in different aspects of the projects – as interviewees, facilitators or collaborators. Approximately 20-30 children per school took a major role in their school's project – as interviewees, interviewers, video makers or art designers, according to the school's project. Data were gathered through audio and video interviews, discussion, data generating activities (such as brainstorming ideas for the art work), drawing, video making, photography and collating previously generated materials. It took several visits to discuss and decide upon the approach each school would take and then the research team spent from three days to two weeks on site at each school in the data gathering phase and more in the production and presentation phases over the course of a year.

The case study schools

The three schools discussed in this paper – Hillview, Riverside and Beachlands (not their real names) are all state co-educational primary schools (educating children aged 5-12) but they represent differing geographical locations and socio-economic communities and thus, differing earthquake damage, response and recovery experiences. Despite the differences, the schools' stories had many commonalities (see Mutch, 2013b). One difference was, however, the extent to which children were given agency to determine the direction of each school's project. In theorizing children's engagement in disaster research (see Mutch, 2013a), I have developed a continuum of engagement (see Figure 1). Each place on the continuum values research that benefits children but engages them to a different degree. With the exception of research for children (child-related research), each of the case study schools in this paper exemplifies a different place on the continuum.

Hillview is located in an affluent suburb on a hill overlooking the city's business district. It has a roll approaching 500 with a predominantly Pākehā (New Zealand European) student population. Like all schools, it was closed for several weeks after the September earthquake, which one child described as "a warm-up" to the February quake. The February earthquake was more traumatic as the staff and students gathered on the school field following the lunchtime 6.3 quake and watched in horror as the dust rose from the city in front of them. Many of the community's houses were badly damaged and the school was traumatized by the death of the mother of two of the school's students. This school understandably took a cautious approach to the research. They wanted the project to be about the experiences of children and their families but to be adult-led so that children were engaged in a gentle and supportive manner. Theirs is a child-focused approach.

Riverside is a school located in a small town outside the city of Christchurch. It is a decile 5 (mid-level socio-economic community) with about 500 students, also predominantly Pākehā but with 15 per cent Māori (indigenous) students. The September earthquake was to have a marked effect on the town, with high levels of

	Research for children	Research on or about children	Research with children	Research by children
,	Child-related research	Child-focused research	Child-centred research	Child-driven research

Figure 1. Continuum of engagement of children in research

Children's earthquake stories liquefaction, slumping and damage, especially to the town's historic buildings. This damage was exacerbated in the February quake. This school wanted to design a memorial seating area where the school and community could come and contemplate what they had been through and how they had survived. When the research began in 2012, students from Year 8, the final year, were chosen to pull together ideas and design mosaic patterns to put on murals surrounding the seating area. In the following year, the next cohort of students would create the mosaics. In this case, the adults were facilitators – it is child-centred research completed with children.

Beachlands is located in the eastern suburbs of Christchurch, which were some of the most hard-hit communities, especially by repeated liquefaction, flooding and structural damage. It is slightly larger than the other two schools but with a similar ethnic mix (80 per cent Pākehā; 10 per cent Māori). Beachlands was adamant that their research was going to about "kids talking to kids". They wanted to capture the interest of their senior students in making videos. Students would be the producers, camera operators, interviewers and interviewees. This was to be child-driven research – for children by children.

Case study 1: Hillview

Hillview chose to compile a book of their experiences. The book would contain the narratives from interviews with children, parents, the principal and teachers. These narratives would be supplemented with photographs, children's stories and drawings: many completed immediately following the major earthquakes. Hillview school wanted children to be the centre of the story but some of the adults were concerned too much emphasis on children's individual experiences could be upsetting for them. Consequently, children were interviewed in a variety of combinations – in small groups from the same class, with their siblings, or with their parents. The research was framed in a way that allowed children to distance themselves a little from the trauma of their experiences by for example, asking them to imagine that they were explaining what happened to someone from another country or to imagine themselves as a grandparent, telling their grandchildren about the earthquakes. Protocols were set in place so that children felt free to talk only as much as they wished and could withdraw from the interviews at any time if they felt uncomfortable. The families have since reported, rather than the children being upset by the interviews, they have been catalysts for families re-telling their stories to each other, and even sharing experiences that had not been talked about before.

A striking feature of the Hillview children's stories was the vividness of the detail. It was two years after the September earthquake and 18 months after the February earthquake. They could recall sounds, smells, sights and colours. They talked of the rumbling that happens before an earthquake or aftershock; of "everyone screaming, shrieking and crying; the city going up in dust; people running down the hill". One girl recalled the smell of the chocolate drink she spilt at the time of the February earthquake; another of the smell of her house when everything in the kitchen had smashed on the floor. They talked of "things shaking about; things falling down; windows smashing; things falling on me and wardrobes falling over". One boy described his kitchen floor as "a multi-coloured oil spill" and another girl recalled she was wearing her purple nightie. They could describe in detail where they were, what they were doing and how they felt at the time of the September, February and June earthquakes: "my legs felt like jelly; really scared; really sad; freaked out; surreal". One little girl told us in a matter of fact tone that when her brother did not wake up during the September earthquake, she thought he was dead. Not all their stories were sad.

DPM

22,5

450

A favourite story at this school was how the local café whose freezer was defrosting because of the power outage sent bags of ice creams to the school for the children. They also talked about what they had learned and what they were most proud of. A brother and sister discussed how they had learned that "stuff didn't matter". "You can buy new stuff but you can't buy someone's life back". Others told us how they had overcome their fears: "Tm pretty proud of me because I haven't become a scaredy cat" and one boy described the children at his school as "the bravest kids in town".

Case study 2: Riverside

The second school, Riverside, wanted the children and their families to all be represented and remembered within their project. They wanted to create something that was both a memorial to mark what happened to their community, yet would also celebrate their resilience and look towards the future. The idea that emerged was to create a garden and seating area within the school grounds populated with plants from the families' gardens, especially where the property had been zoned "red" (to be demolished). The garden was also to include mosaics "with bits of bricks from broken houses" that would tell the community's story. A group of final year students (Year 8, aged 12) brainstormed ideas. They wanted it to remind people in the future what had happened: "To remind them of what was there in the past and of what had been lost"; "we want them to know what we went through"; "how we stayed together and worked it out" and "for memories of people who died". The students discussed lost buildings and icons, both in their town and the city of Christchurch. They came up with pre- and post-earthquake symbols and representations which would form the basis of a set of four panels. The first panel is their town in early times, the second represents their town in modern times, the third their town being torn apart by the earthquakes, and the fourth identifies their hopes for the future, framed by words such as "courage, stay strong, kia kaha (stand tall), faith, band together, stand tall, and new world". The river is a motif that connects all four panels and a well-known local sailing ship appears in the final panel, described by one boy as "sailing through a river of emotions" and when asked where it was going, he replied, "getting to calmer seas". The local community has already planted the garden around the seating area. A local artist has agreed to help with the practicalities of turning the mosaic designs into a living piece of art.

Case study 3: Beachlands

Beachlands School wanted children to drive their project using the skills their senior students had shown in video making. We brought in a trainee film director to mentor the students on the basics on filming, directing, interviewing and editing. The interviewing students designed the interview protocol and showed remarkable flexibility in adapting the questions to suit the age of the students or the flow of the story. The students who were interviewed chose the setting for their interview, often where they were when the February earthquake happened – in the library, in the playground, by the school garden shed or on a school trip to the New Brighton pier. As the students' stories unfolded they talked of where they were, how they felt and what they had learned from the earthquakes. Here is an excerpt that typifies the stories told on camera. This boy was at the New Brighton pier:

All of a sudden a huge earthquake struck. I tried to crawl away but the earthquake threw me back down again. They always say that your life flashes before your eyes before you die and I was waiting for that to happen. This was something that was completely unreal. I didn't

Children's earthquake stories think this would happen at all, especially here at Canterbury [...] I was really nervous and was wondering: how was my brother coping, how was mum coping, how was my dad coping [...].

The experience of being interviewed by their peers also provided interesting insights as children said they felt brave enough to tell their story their way or that it was "alright to tell a happy story about the earthquake". These comments reveal how adults may have intentionally or unintentionally kept children inside the passive victim role. When children talked with their peers, they felt as if they could be themselves, and take more control of how they framed their own stories.

Conclusion

The research has confirmed that with careful facilitation and support, children can draw on their personal experiences of traumatic circumstances in a constructive manner (Bonanno *et al.*, 2010; The Public Health Agency of Canada, British Columbia Ministry of Health, Emergency Management, and Development, 2007). Common themes across the schools represented here were the vividness and detail of their recall, their developing ability to put distance between themselves and the events, and yet the strong emotional response that often bubbled to the surface. They were shocked by the deaths in the city and further saddened by the changes to their locality caused by so much damage, yet were able to put some perspective on their own hardships. They all talked of the importance of family and friends, and many were appreciative of their principal and teachers. They were very keen to provide advice for others who might find themselves in a similar situation and eager to have input into how Christchurch might look in the future.

In conclusion, this paper shared two outcomes from the wider research project. The first outcome has been to highlight the use of emotional processing. In our efforts to protect children we perhaps limit those in the normal response range from engaging in important recovery activities. The emotional processing activities discussed here included conversation, recalling events in narrative or creative ways, designing and creating an artwork, and using technology to film, process and present a documentary. These activities allowed them to individually and collaboratively draw their experiences into coherent narratives which they absorb into their own personal histories and which support their return to emotional and psychological equilibrium.

The second outcome has been to create a conceptual framework for considering how children might be engaged in research that is for, about, with or by them. Researchers engaged in child-related studies can use the framework to reconsider the place of children in their research design, data generation and dissemination. Two years on, the children in this UNESCO project are able to see their experiences in a broader context, within which they can take agency for the collation and representation of their stories. The paper provides examples of how children might be more engaged in post-disaster research, especially as it relates to them. The children connected with the idea of contributing to something much larger and longer lasting; something that preserved their stories, their schools', and their families' experiences for history.

One final example exemplifies how children, through emotional processing and engaging in research that gives them a voice, can move from distress to pride in what they have achieved. This boy describes writing about his experience: "I was shaking as I was writing because of how it made me feel but it was a good thing to do". As he finished his interview, his face brightened and his body straightened. With a nod of his head he said: "I did that: I survived the earthquake".

DPM

22,5

References

- Anderson, W.A. (2005), "Bringing children into focus on the social science disaster research agenda", *International Journal of Mass Emergencies and Disasters*, Vol. 23 No. 3, pp. 159-175.
- Betancourt, T. and Kahn, K. (2008), "The mental health of children affected by armed conflict: protective processes and pathways to resilience", *International Review of Psychiatry*, Vol. 20 No. 3, pp. 317-328.
- Bonanno, G., Brewin, C., Kaniasty, K. and La Greca, A. (2010), "Weighing the costs of disaster. Consequences, risks, and resilience in individuals, families and communities", *Psychological Science in the Public Interest*, Vol. 11 No. 1, pp. 1-49.
- Cahill, H., Beadle, S., Mitch, J., Coffey, J. and Crofts, J. (2010), *Adolescents in Emergencies*, Youth Research Centre, The University of Melbourne, Parkville, Vic.
- Caruana, C. (2010), "Drawing on research-informed clinical wisdom to guide interventions with trauma survivors", *Family Relationships Quarterly*, Vol. 15, pp. 8-11.
- Duncan, J. and Arnston, L. (2004), Children in Crisis: Good Practices in Evaluating Psychosocial Programming, Save the Children, Westport, CT.
- Gibbs, L., Mutch, C., MacDougall, C. and O'Connor, P. (2013), "Research with, by, for, and about children: lessons from disaster contexts", *Global Studies of Childhood*, Vol. 5 No. 3, pp. 129-141.
- Gill, T. (2007), No Fear: Growing up in a Risk Averse Society, Calouste Gulbenkian Foundation, London.
- Gordon, R. (2002), "When children won't talk about trauma", Psychotherapy in Australia, Vol. 8 No. 4, pp. 14-20.
- Gordon, R. (2004a), "The social system as a site of disaster impact and resource for recovery", *The Australian Journal of Emergency Management*, Vol. 19 No. 4, pp. 16-22.
- Gordon, R. (2004b), "Community process and the recovery environment following emergency", Australian Journal of Environmental Health, Vol. 4 No. 1, pp. 19-34.
- Gordon, R. (2004c), Appendix C, Recovery, Australian Emergency Management Manuals Series No. 10, Emergency Management Australia, Canberra, pp. 111-143.
- Gordon, R. (2007), "Thirty years of trauma work: clarifying and broadening the consequences of trauma", Psychotherapy in Australia, Vol. 13 No. 3, pp. 12-19.
- Gurwitch, R., Sitterele, K.A., Young, B.H. and Pfefferbaum, B. (2002), "The aftermath of terrorism", in La Greca, A.M. Silverman, W.K. Vernberg, E.M. and Roberts, M.C. (Eds), *Helping Children Cope with Disasters and Terrorism*, American Psychological Association, Washington, DC, pp. 327-358.
- Hawe, P. (2009), Community Recovery After the February 2009 Victorian Bushfires: a Rapid Review, Sax Institute for the Victorian Government Department of Health, Melbourne.
- La Greca, A. (2006), "School based studies of children following disasters", in Norris, S.G.F., Freidman, M. and Watson, P. (Eds), *Methods for Disaster Mental Health Research*, Guilford Press, New York, NY, pp. 141-156.
- La Greca, A. and Silverman, W. (2009), "Treatment and prevention of posttraumatic stress reactions in children and adolescents exposed to disasters and terrorism: what is the evidence?", *Child Development Perspectives*, Vol. 3 No. 1, pp. 4-10.
- Leonard, M. (2007), "Trapped in space? Children's accounts of risky environments", *Children and Society*, Vol. 21 No. 6, pp. 432-445.
- McDermott, B. and Palmer, L. (2002), "Post-disaster emotional distress, depression and eventrelated variables: findings across child and adolescent developmental stages", *Australian* and New Zealand Journal of Psychiatry, Vol. 36, pp. 754-761, doi:10.1046/j.1440-1614.2002.01090.x.

DPM 22,5	McFarlane, A.C. (1987), "Posttraumatic phenomena in a longitudinal study of children following a natural disaster", <i>Journal of the American Academy of Child and Adolescent Psychiatry</i> , Vol. 26 No. 5, pp. 764-769.
	MacDougall, C. (Ed.) (2009), Understanding Twenty-First Century Childhood, Oxford University Press, Melbourne.
454	Mutch, C. (2013a), "The role of schools in engaging children in emotional processing of disaster experiences", paper presented at the International Association of Citizenship, Social and Economics Education Conference, Auckland, July 18-20.
	Mutch, C. (2013b), "Leadership in times of crisis: three Canterbury principals tell their stories", seminar presented to the Faculty of Education, University of Auckland, Auckland, 15 May.
	Norris, F.H., Friedman, M.J., Watson, P., Byrne, C.M., Diaz, E. and Kaniasty, K. (2002), "60,000 disaster victims speak: part I. An empirical review of the empirical literature, 1981-2001", <i>Psychiatry: Interpersonal and Biological Processes</i> , Vol. 65 No. 3, pp. 207-239.
	Peek, L. (2008), "Children and disasters: understanding vulnerability, developing capacities, and promoting resilience – an introduction", <i>Children, Youth and Environments</i> , Vol. 18 No. 1, pp. 1-29.
	Prinstein, M.J.L.G., La Greca, A.M., Vernberg, E.M. and Silverman, W.K. (1996), "Children's coping assistance: how parents, teachers, and friends help children cope after a natural disaster", <i>Journal of Clinical Child Psychology</i> , Vol. 25 No. 4, pp. 463-475.

- Sagy, S. and Braun-Lewensohn, O. (2009), "Adolescents under rocket fire: when are coping resources significant in reducing emotional distress?", *Global Health Promotion*, Vol. 16 No. 4, pp. 5-15.
- Save the Children (2006), *Child Rights Perspective in Response to Natural Disasters in South Asia*, Save the Children Sweden, Kathmandu.
- Silverman, W.K. and La Greca, A.M. (2002), "Children experiencing disasters: definitions, reactions, and predictors of outcomes", in Silverman, W.K., La Greca, A. M., Vernberg, E.M. and Roberts, M.C. (Eds), *Helping Children Cope with Disasters and Terrorism*, American Psychological Association, Washington, DC, pp. 327-358.
- Smawfield, D. (Ed.) (2013), Education and Natural Disasters. Education as a Humanitarian Response, Bloomsbury, London.
- The Public Health Agency of Canada, British Columbia Ministry of Health, Emergency Management, and Development (2007), *Children in Disaster: Developing a National Framework, Workshop Report*, The Public Health Agency of Canada, Vancouver.
- UNCRC (1989), "United Nations convention on the rights of the child", available at: http:// www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx (accessed November 1, 2013).

Further reading

- Drabek, T. (1986), Human System Responses to Disaster: An Inventory of Sociological Findings, Springer-Verlag, New York, NY.
- Gordon, R. (2009), "Community impact of disaster and community recovery", InPsych, April, available at: www.psychology.org.au/inpsych/community_impact/ (accessed 18 May 2013).
- Marsee, M. (2008), "Reactive aggression and posttraumatic stress in adolescents affected by Hurricane Katrina", *Journal of Clinical Child and Adolescent Psychology*, Vol. 37 No. 3, pp. 519-529.

About the author

After 15 years in primary teaching, Dr Carol Mutch became a Teacher Educator at the Christchurch College of Education (later the University of Canterbury). She came to The University of Auckland following three years as the Senior Advisor to the Chief Review Officer in ERO. During her career, Dr Mutch lived and worked overseas as a Teacher in Canada and the

UK, a Visiting Lecturer in the UK, a Visiting Professor in Japan, and set up and taught a masters programme at the National University of Samoa. Her masters and doctoral studies examined the contested development of social studies in New Zealand. Her teaching and research interests are in research methods, education policy, curriculum development and social education. She has published in scholarly books and journals on qualitative and mixed methods research, social studies and citizenship education, education history and policy, curriculum and evaluation theory, and the peer review process. Dr Mutch has written Doing Education Research (NZCER, 2005), which is one of the publisher's best selling books and edited the collection, Challenging the notion of "other" (NZCER, 2006). She is the Former Editor of Pacific-Asian Education and currently edits Curriculum Matters. Dr Mutch sits on a further five international editorial boards, as well international and national association executive boards, advisory committees and reference groups. Awards and citations recognizing her work have come from the American Educational Research Association's Critical Studies in Curriculum group (Early Career Award), Griffith University (for Academic Excellence) and the Christchurch College of Education (Sustained Excellence in Tertiary Teaching). She has taken on the role of the Chair of the School of Critical Studies in the Education Post-graduate Committee. Dr Carol Mutch can be contacted at: c.mutch@auckland.ac.nz

Children's earthquake stories

To purchase reprints of this article please e-mail: **reprints@emeraldinsight.com** Or visit our web site for further details: **www.emeraldinsight.com/reprints**

This article has been cited by:

- RonohSteve Steve Ronoh sron443@aucklanduni.ac.nz School of Environmental Science, University of Auckland, Auckland, New Zealand . 2017. Disability through an inclusive lens: disaster risk reduction in schools. *Disaster Prevention and Management: An International Journal* 26:1, 105-119. [Abstract] [Full Text] [PDF]
- 2. Chipo Muzenda-Mudavanhu. 2016. A review of children's participation in disaster risk reduction. *Jàmbá: Journal of Disaster Risk Studies* 8:1. [CrossRef]
- 3. Jay Marlowe. 2015. Belonging and Disaster Recovery: Refugee-Background Communities and the Canterbury Earthquakes. *British Journal of Social Work* **45**:suppl 1, i188-i204. [CrossRef]
- 4. Jay Marlowe, Rachel Bogen. 2015. Young people from refugee backgrounds as a resource for disaster risk reduction. *International Journal of Disaster Risk Reduction* 14, 125-131. [CrossRef]
- 5. S Ronoh, JC Gaillard, J Marlowe. 2015. Children with disabilities and disaster preparedness: a case study of Christchurch. *Kōtuitui: New Zealand Journal of Social Sciences Online* 10:2, 91-102. [CrossRef]
- 6. C Freeman, K Nairn, M Gollop. 2015. Disaster impact and recovery: what children and young people can tell us. *Kōtuitui: New Zealand Journal of Social Sciences Online* **10**:2, 103-115. [CrossRef]
- 7. Carol Mutch. 2015. The role of schools in disaster settings: Learning from the 2010–2011 New Zealand earthquakes. *International Journal of Educational Development* **41**, 283-291. [CrossRef]
- 8. Steve Ronoh, J C Gaillard, Jay Marlowe. 2015. Children with Disabilities and Disaster Risk Reduction: A Review. *International Journal of Disaster Risk Science* 6:1, 38-48. [CrossRef]
- 9. Carol Mutch. 2014. The role of schools in disaster preparedness, response and recovery: what can we learn from the literature?. *Pastoral Care in Education* **32**:1, 5-22. [CrossRef]