

RESEARCH ARTICLE

Disaster impact and recovery: what children and young people can tell us

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Christchurch's earthquakes revealed children's vulnerability to disaster but also their ability to respond and play an active role in recovery. We argue that children's voices need to be heard and given priority in the recovery process because the disaster impacts on them and their families in ways that are not recognised or well understood. We report the findings of a study undertaken with 94 Christchurch children. Its aim was to give voice to children's experiences of post-earthquake Christchurch and in doing so contribute to post-disaster recovery. The experiences of these Christchurch children offer other children, parents, government and agencies valuable insights into how to manage the recovery process in ways that best meet children's needs. In the post-disaster recovery period, decision-makers need to recognise children as authentic actors in the recovery process and should commit to hearing children's voices throughout the rebuilding. Children and young people's resilience and positive commitment to Christchurch are assets that should be capitalised on in the longer-term recovery process.

Keywords: children's agency; Christchurch; earthquake; recovery; young people

Introduction

After the February 2011 earthquake in Christchurch, an estimated 70,000 people left the city in the following weeks (Statistics New Zealand 2012) and 7581 students enrolled in schools outside Christchurch (Statistics New Zealand 2011). The earthquakes have impacted the lives of Christchurch's residents, including children and young people. Children and young people's advice for the recovery process and visions for Christchurch's future are the focus of this article and we contextualise this advice by briefly outlining the key impacts of the earthquakes on children and young people's lives. Post-earthquake there were children and young people who continued to live in Christchurch, although they often relocated within the bounds of the city, and those who left either temporarily or permanently. We explore children and young people's agency during recovery, demonstrating how their experiences, insights and recommendations for

post-disaster recovery are important to incorporate into future planning for any inhabited seismic zone. In this we prioritise children's voices, directly presenting their views as recorded in their own words in the study. The recovery process impacts directly on children and young people's survival in the short-term as well as on their long-term well-being, and it is their experiences that are given voice when presenting the results from the study. We draw out lessons for central and local government, education officials, planners and other agencies, to provide for better practice in relation to children in the event of future earthquakes or other natural disasters.

Positioning children in disaster research and response

Children are considered to be especially vulnerable during disasters. The Declaration of Geneva 1923,

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based on a draft by British social reformer Eglantyne Jebb, set down the principle of first call where ‘the children must be the first to receive relief in times of distress’ (Last 1994, p. 193). Last (1994) then observes: ‘All children even in good times, are often unheard but in distress are apt to be simply not seen’ (p. 193). At the same time as acknowledging children’s vulnerability during disasters, we want to acknowledge their agency, as emphasised in the sociology of childhood and childhood studies literature. Viewing children as agents means they are seen as ‘people who can make a difference through their actions’, which ‘positions children as participating subjects, knowers and social actors’ (Smith 2013a, p. 17). Adopting an ‘agentic’ perspective is not easy as it challenges the notion that authority, control and knowledge is invested in adults and will require some elements of devolution in favour of children and young people. Such devolution demands that children and young people be recognised as ‘social actors and agents with their own perspectives, who make important contributions to their own development and actively participate in society’ (Smith 2013b, p. 29). This theoretical approach informed our research methods.

In disaster research such an approach is especially relevant as it positions children not merely as vulnerable recipients in need of protection but also as competent social actors with voice and agency, capable of understanding and acting in response to disasters. The Christchurch quakes did severely impact the lives of children and young people but new insights are possible when children and young people’s agency and resilience is acknowledged and their views are sought.

Like adults, children and young people are not a homogeneous group. Vulnerability seemed to be an apt descriptor for many adults’ experiences as well, certainly from the perspectives of children and young people in our study who reported how one or other parent was frightened, often acting as the catalyst for the family to relocate. We therefore work with a conceptualisation of both vulnerability and agency of children and young people during and after disasters, to acknowledge the complexity of responses evident among our participants. In

highlighting children and young people’s agency, we are not denying the structural inequalities that exist between adults and children and young people, which constrain children and young people’s agency. Our emphasis is on what it is possible to learn from listening to the advice of children and young people in our study. In particular we convey their advice to other children and young people, to parents and to adults in central and local government and other agencies. But first we consider the disaster research literature and how much the perspectives of children and young people are considered (or not).

Writing after the 1990 Philippines disaster, Cola (1993) put out a call for greater thought to be given to children in disaster management and recovery, albeit from a viewpoint that in hindsight somewhat simplifies children’s needs. Importantly though, he notes that ‘children are *not normally recognized* in national disaster management plans as a special group with different needs from the rest of the population’ (p. 248, emphasis added). Children’s more recent experiences of natural disasters are better documented with children increasingly being a primary focus in both disaster relief efforts and in disaster recovery. The impacts of major disasters on children have been identified for a number of recent disasters including the Sri Lankan tsunami (Catani et al. 2010; Feranando et al. 2010), Hurricane Katrina (Kilmer & Gil-Rivas 2010; Kronenberg et al. 2010), the Chinese earthquake in Beichuan (Zeng & Silverstein 2011) and the Japanese earthquake and tsunami (McCurry 2011).

Research continues to emerge about the impact of the Christchurch earthquake (Dean 2011; Fawcett 2011; Gawith 2011; Gilmore & Larson 2011; Mooney et al. 2011; O’Connor et al. 2011; Sawrey et al. 2011; Child Poverty Action Group 2014). The emphasis in these studies is on understanding and responding to children’s vulnerability, notably their emotional and psychological trauma resulting from loss, grief and fear, in order to better enhance their post-disaster recovery. This is primarily through the application of appropriate expert intervention, either physical intervention with relief supplies, rebuilding or therapy. However, slightly

later research, adopting an approach where children are actively involved in telling their own stories, reveals how children's responses were complex, informed and agentic (Gibbs et al. 2013; Mutch & Marlowe 2013).

In the post-disaster recovery period, the need for child-focused research is imperative in order to enhance 'the effectiveness of prevention and recovery strategies for disaster-affected children and adolescents' (Masten & Osofsky 2010, p. 1037). Effective recovery programmes are vital for ensuring children's survival and also because 'changed contexts following the disasters can alter the course of development for children' (Franks 2011, p. 58). How recovery is handled impacts on children's long-term well-being.

Disaster research demonstrates a number of factors that enhance or hinder recovery. We know that the frequency of aftershocks created a 'dose-response effect' where ongoing exposure to adversity accumulates and there is an increase in symptoms of trauma and behavioural problems (Masten & Osofsky 2010, p. 1032). While it is not always possible to mitigate some disaster effects, such as ongoing aftershocks that contribute to increased levels of trauma for children and families, other effects can be more readily addressed. One obvious factor is that children's well-being is intimately connected to family/whānau and community well-being (Mooney et al. 2011, p. 35), thus aiding families generally in their recovery assists children's recovery (Kronenberg et al. 2010).

Negative trends that existed before the disaster tend to persist in its aftermath (Olshansky et al. 2006), at both the family and wider community level. Thus, families and places with good economic, community and other networks are often more resilient. After the earthquake in the Philippines in 1990, Cola (1993) observed clear instances where the community worked together to support children and their efforts were anchored in the 'self-reliance of the population'. In comparing post-disaster experiences of Haiti and Christchurch, Fawcett (2011) argues that it is the presence of resilient, flexible, effective social structures in New Zealand that enabled Christchurch residents to be more resilient as a community (although not

necessarily as individuals) than Haiti in the face of disaster.

Children living in poverty are at significantly greater risk for negative outcomes during and following disasters (Peek & Stough 2010; Murray & Monteiro 2012). Poverty was strongly related to vulnerability during and after Hurricane Katrina (Napier et al. 2006). A longer-term study of the impacts of Hurricane Katrina found that a number of stressors contributed to poorer recovery three years after the disaster, including: ongoing concerns about family, parental distress, the existence of multiple losses including loss of homes and jobs, and separation from family and friends (Kronenberg et al. 2010, p. 1255). A consistent finding in studies has been that the sooner routines can be restored, the better (Zeng & Silverstein 2011), and for children, school is very important in this regard:

When children returned to school, they were surrounded by peers who had experienced similar trauma; many of those children, particularly those who showed resilience, were likely to be able to maintain and build their peer groups in this setting following the [Hurricane Katrina] disaster. (Kronenberg et al. 2010, p. 1257)

We now focus on the experiences of children and young people in Christchurch following the 2010–2011 earthquakes.

Christchurch: children's and young people's voices

Christchurch City Council's strategy has as its goal: that Christchurch will be known as the city that is good for children, young people and their families (Christchurch City Council 2011). Yet, in the days and weeks after the February earthquake, little was heard of children's voices and little attention directed outside of the school system to providing a platform for children to be heard. It is a situation that accords with Last's (1994) observation that children are often unheard in times of distress. More recently, however, children's voices have been heard, for example, the 2014 documentary series *Hi-Viz*, a six-part series in which 10 children interview recovery experts and community leaders on recovery issues as well as

exploring the central city and the suburbs (Canterbury Earthquake Recovery Authority 2014). A website developed by a Christchurch man Adam Hutchison (whenmyhomeshook.co.nz) also provided a platform for children from Canterbury schools to share their earthquake stories.

The study's aims and methods

The aim of the study was to understand children and young people's experiences of post-earthquake relocation and contribute to knowledge about children's post-disaster recovery. The study recruited children and young people who resided in Christchurch at the time of the earthquakes. This included children and young people who had left Christchurch and were currently living in Dunedin or Central Otago (about 4–5 hours' drive from Christchurch) at the time of the interviews ($n = 44$) and those who were living in Christchurch at the time of the interviews. These children and young people may have temporarily left Christchurch after the earthquakes but had since returned ($n = 50$). School personnel from schools that accommodated relocated children were also interviewed as part of the study, but in this paper we focus on the interviews with children and young people.

We recruited children living in Christchurch from schools that were still functioning on the school site post-earthquake (some schools had to relocate their students to other schools with which they shared premises). Eight Christchurch schools were approached and four—two secondary and two intermediate—agreed to assist with participant recruitment and send information sheets home. Families elected to take part in the study and either contacted the researchers directly or returned consent forms to the researchers by post or via the school. Four additional children were recruited via 'word of mouth' rather than through their schools. The Ministry of Education provided a list of 46 Dunedin schools that were, as of 25 May 2011, accommodating children from Christchurch and all were approached. When recruiting, 34 schools still had children from Christchurch enrolled and 33 agreed to distribute recruitment material to the parents of these children. Consent forms were

returned from children from 17 Dunedin schools (four secondary, two intermediate and 11 primary schools). Both the primary and secondary schools at a Central Otago town also assisted in this way; however, consent forms were returned from only the parents of primary school children.

The final sample consisted of 94 children and young people (51 girls and 43 boys) aged five to 18 years (mean age = 11.7 years). The majority (49%) of the children and young people were aged 11–13 years, with 10% aged five to seven years, 22% aged eight to 10 years and 19% were aged 14 and over. Fifteen per cent of the children and young people attended a low-decile school, 55% a mid-decile school and 30% were enrolled at a high-decile school. The children's parents were asked their ethnicity and the following ethnic affiliations (some gave more than one ethnicity) were recorded: 28 Māori, three Pasifika, two Asian, three European; the rest of the children were New Zealand European.

Interviews took place between late August and early November 2011 and were conducted either at the child's home or school. The interviewer was sensitive to the fact that the aftershocks were ongoing and still impacting on families (Pfefferbaum & North 2008). In some instances not all questions were asked of a child when the researcher felt it was inappropriate or where the child could not or did not want to respond. In general though, the interviewees and their families were positive about the research, welcoming the opportunity to relate their experiences.

While we attempted to gain diversity within the sample, ultimately the children and young people who participated were those who were coping relatively well with the ongoing earthquakes. However, we were still careful not to ask children to relive traumatic experiences of the earthquakes and instead the interviews focused on the resulting disruption, dislocation and the rebuild. The interviews covered (where applicable) the child's relocation experiences, their knowledge and understanding about the decisions to stay (or not) in Christchurch, their perspectives on these decisions, their visions for the future of Christchurch and advice they would give others.¹ All interviews were recorded,

transcribed and analysed thematically, and descriptive quantitative data were extracted. The intention of the study was not to compare the experiences of those who relocated with those who remained in Christchurch, but more to understand the range of post-disaster experiences. More than 90% of the sample experienced some kind of residential move as a result of the earthquakes, and disruption and dislocation was common to all the participants.

In this paper we report on the advice children and young people would give to others (children, parents and central and local government) in dealing with a similar experience, and their visions for Christchurch. But first we document the key impacts of the earthquakes on children's and young people's lives, in the next section, in order to contextualise their advice.

Children's and young people's lives in the aftermath of the earthquake

Many children and young people experienced considerable disruption to their living situations. A key finding from our research was the number and range of relocation experiences of the children. Only eight of the 94 children in our study did not move from their homes at all. Most children made multiple moves, some within Christchurch and its surrounds while others moved to other towns and cities either temporarily or permanently. This meant leaving family and friends behind and, for some, attending a new school. Altogether the children made 218 separate moves post-earthquake during our study period (an average of two moves each, ranging from zero to six moves), with many still living in temporary homes in November 2011 when our interviews finished. The most common reasons for moving were because the house or land was unsafe and for emotional reasons. These moves could be complex, with different members of the family staying or moving, sometimes moving separately to different places. Family Court judges noticed a sharp increase in relocation cases in the months after the earthquake, usually where one parent had left the city and one had not (Caldwell & Maynard 2012).

Schools were closed for several weeks before reopening, with some schools being closed for longer periods or permanently. Where schools could not reopen, site sharing with a school that could open was initiated (Brown 2011; Ministry of Education 2011). Houses in several parts of the city were severely damaged, with few undamaged. Infrastructure issues were a major problem including loss of power, water and sewage systems; some families were still without toilets a year later. Roads were severely damaged with some parts of the city inaccessible for months, impacting on travel times including travelling to school. Workplaces were closed or relocated, with parents working from home, moving to work elsewhere or losing their jobs.

Children in Christchurch soon became experts on liquefaction, where soil becomes fluid, spilling out of the ground into streets, homes, playgrounds and sports grounds. Different suburbs experienced varying levels of damage, from suburbs with large areas 'red-zoned' to suburbs with relatively little damage.² The wider social landscape also changed as the city centre was cordoned off and shops, sports grounds, swimming pools and a whole range of other facilities were damaged or unavailable. Disruption to the ability to get around in the city due to road damage, road closures and changes to public transport all impacted on children and young people's families. Across the city demolition is ongoing (although concentrated in certain neighbourhoods and the central business district [CBD]). Although the CBD reopened mid-2013, some 80% of its buildings either have been or are expected to be demolished. In addition to changes to the physical environment, children also have had to cope with financial hardship arising from disruption to parents' work and businesses (many lost their jobs), family separation and loss, either temporary or permanent, as families or family members moved, loss of friends and neighbours, emotional distress from fear exacerbated by years of aftershocks, as well as changes to the school and home environment.

Children and young people's experiences varied considerably, although all felt the quakes and aftershocks and were impacted in some way. Based on

their experiences, we were interested to know what advice children and young people would give others about coping with and mitigating the effects of the earthquakes; it is to this advice we now turn. The quotes we have selected are those that exemplified the themes and issues raised and tend to be from older and more articulate children.

Responding to the earthquakes: advice from children and young people

Advice to children

Children and young people in the study were asked what advice they would give to other children and young people who might experience similar events in the future. The responses they gave demonstrated a mature and resilient view of what they have gone through and how to cope. They also demonstrated their sense of agency; much of the advice focused on what children and young people themselves could do to help themselves in a difficult situation rather than looking to others, particularly adults, to solve things for them. We present illustrative quotes as extensively as we can within the word limit to privilege children and young people's voices and create a forum for adult readers to 'listen' to children. Pseudonyms are used.

Not surprisingly, many children and young people gave practical advice about being prepared for a disaster or what to do in an earthquake. They mentioned the importance of survival packs, of being able to contact family, and strategies for keeping safe. For example:

Stay calm. Don't start screaming because that's just acting stupid. Take cover first, do the turtle. (Rhys, aged 13)

Just get survival kits ready if something happens. ... Any medical equipment like [for] asthma. ... and some food. (Molly, aged 11)

Have money on you, have your phone charged so you can keep in contact with friends and family. (Natalie, aged 15)

... in my room, like I've got a tent and a sleeping bag and like a bag full of just everything that you would need and things like that. Oh and hand sanitiser that ... was a massive thing we needed, when there was no water. (Victoria, aged 18)

Two children related how they were more prepared than their parents and organised emergency kits themselves, for example:

After the earthquake drill ... I came home and packed an emergency kit, and Mum and Dad they laughed at me ... and they were always taking stuff out of the emergency kit, they were like, 'Oh the dog. We don't have any dog food. Okay, we will just go get some from there.' And I always told them not to, so I probably should have a lock on it. And after the earthquake they all went to get things out of it, they got the candles and torches and everything from there. (Sage, aged 13)

Other children and young people emphasised remaining calm when an earthquake or aftershock occurred. Many spoke of the importance of relationships and supporting each other. They noted that others would be there to help so there was no need to panic.

Remain close to friends and family because they will help you get through it ... Keep cool and calm. (Crystal, aged 12)

I would tell them, that you are not alone. That there are always people there for you, and even if you feel like you are alone and if you are at school by yourself, there is someone who will always try to get to you as soon as possible. Maybe they are stuck in traffic or can't contact you but there is always someone out there thinking of you. (Ruby, aged 13)

Children's words indicated that they saw themselves as active agents who could help others. Several acknowledged their responsibility to help others, including their friends and family.

Stick with the people that you know, your family and relatives and things like that, and help other people that need it. ... One of the biggest things you might regret in your life, is when you walk past someone that needed help, you turned a blind eye, and then ... you think, 'Oh I should go, I just wish I could have gone back.' (Brett, aged 13)

Make sure you keep an eye on your family and friends. Make sure they are all right and be prepared. (Victoria, aged 18)

Be a friend. (David, aged 8)

Children and young people's agency is evident in these quotes (Smith 2013a). They were aware of

essential items for survival packs, including medication, hand sanitiser and pet food, and some organised these packs in spite of adult indifference. They had adopted the key civil defence strategies of 'keep cool and calm', as Crystal put it, and if at school, waiting there for family to arrive. And significantly, they reiterated the importance of helping and supporting others, ranging from eight-year-old David's insightful 'be a friend', to 13-year-old Brett's warning of regret if you do not help others, to 18-year-old Victoria's articulation of responsibility to others.

Personal strategies for dealing with stress and fear were also recommended, such as:

Even if you hate talking, write it down, write it down on a piece of paper and burn it. (Tessa, aged 16)

And Richard offered the following advice as a form of protection from witnessing too much trauma:

Because on February I was looking up on the internet to see the magnitude and I saw some reports about people being pulled out of buildings and I just switched it off. (Richard, aged 12)

Remaining positive or looking for the positives in difficult times was also seen as important.

Well, think of the positive things. Don't think of anything negative. Just keep on keeping on. (Jayde, aged 15)

In addition to remaining calm a common piece of advice was to stay strong and persevere, along with the reassurance that things would get better.

Just try and continue, you know. ... Don't just stop and be like, 'I don't want to do this anymore.' Because then you ... won't handle it. You need to try and continue as normal as you can. Although it is very hard, there is nothing normal about it. But you've just got to do as much as you can to keep going and just don't give up. You know you will get through it and it will eventually slow down. Like the aftershocks slow down. We get five a day maybe and we don't even feel many of them. ... and just keep going. You can't stop. ... Yeah, if you stop then it is all over for you really. (Helen, aged 17)

These quotes demonstrate the sophistication of children and young people's advice to others. There

are recognisable therapeutic strategies of writing down feelings, turning off disturbing coverage on the internet, thinking positively, and the significance of persistence and resilience, so well summarised by Helen's phrase 'just keep going'.

Some children and young people participated in decisions about matters that affected them, such as whether they remained in Christchurch or moved elsewhere, and offered advice accordingly.

I'd say, depending how old they are ... you need to think about it, if you don't like the decision your parents are making, look at all the options. Prepare a presentable argument for your case and don't make rash decisions because although you are frightened you need to think about what you are doing because they will have long-term impacts on you. (Olivia, aged 16)

Go with the flow really. It's no good worrying about it. Just think what is best for your family, best for yourself. Sometimes you just have to make hard decisions. (Harry, aged 16)

The two young people quoted here demonstrate wisdom and awareness of the complexity of family decision-making. Olivia acknowledges how age might influence a child's participation in family decision-making but advocates for children and young people's views as worthy of consideration in her advice to 'prepare a presentable argument'. She clearly perceives children's contributions to family decision-making as important and advises children to consider their options carefully rather than making 'rash decisions'. Harry advises children to take account of what is best for themselves and their families. Olivia and Harry in effect demonstrate how their sense of agency is shaped in relation to, and in consideration of, other family members.

Advice to parents

Similar themes emerged when the children and young people were asked what advice they would give parents, such as the importance of being prepared and keeping their children safe. The importance of involving children in decisions, or at least consulting and informing them, came through strongly.

Talk to your children about what's happening. We were, but I know others who weren't even asked what they want to do. (Jemma, aged 17)

Well what I had, was my parents talked to me a lot about the Christchurch earthquake, so that felt good, just talking to them about it. And how it was, you know. It would also be quite nice if they give up on the chores and stuff. (Ben, aged 15)

They should consider what their children are saying but it really does come down to being safe. (Alex, aged 18)

Parents were encouraged to think about what their children were going through and see things from their perspectives. Children also recognised their parents' role was to look after them and show love and understanding.

Cut your child some slack because yelling at them and getting angry a lot is not going to make anything better. It's just like in a sense you have got to grieve for leaving and all the hard things we have been through, but you have got to get through it. (Jayde, aged 15)

Just to keep your children safe and to comfort them if they are feeling sad and to understand how they are feeling, because some people I know who were really down because of earthquake and were really shaken up. But just to understand how they are feeling and the children's perspective of the earthquake is what I would tell them. (Diana, aged 12)

In their families, children and young people want to be informed and consulted, talked with and their perspectives understood. This desire for recognition of children's participation rights (UNCROC 1989) was heightened by the circumstances of a natural disaster that lasted so long, the impact of which prompted Jayde's plea for parents to 'cut your child some slack'. But this was not one-sided; the children and young people in our study also understood how the long-term stress of the earthquakes impacted on their parents, as the following quotes demonstrate.

Some thought that parents actually worried more than their children and panicked. Their advice to parents was to remain calm:

Stay calm again. Normally cell phone wires and everything is kind of blocked in with other

people trying to call, so don't try and call the police or anything. Like try and wait. Like wait awhile, before you do that. If you text your kid they might not text back for a while but that is just because their cell phone might be down and it may take a while to get it. (Rhys, aged 13)

Some children and young people believed that when parents showed their own anxiety and distress it impacted negatively on their children and that they needed to stay strong for their children.

I know it's hard not to panic, but just like stay calm because I know like if my Mum goes to panicking, I'm panicking too. ... better to have a bit of calmness. (Gabrielle, aged 13)

Others, especially those who were older, thought that it was healthy when parents were open about how they themselves were feeling.

The worse thing for you to do is try to hide your fear because kids do pick up on that and they, your kids get really like scared and everything but they have to know you are human too and you are afraid of stuff like this happening. ... Like my Dad pretended nothing was wrong, because he was brought up that way, and it really annoyed me, and whenever I would get emotional about that he wouldn't understand. To be emotional, not too emotional or you will just traumatise the kids. You have to have some emotion in it or else the kids are going to act even worse. (Tessa, aged 16)

Advice to parents clearly demonstrates children and young people's wisdom and their awareness of the extra pressures on themselves as well as their parents during disasters. While many younger children wanted their parents to remain calm, older children such as Tessa advocated for parents and adults to show their emotions and vulnerability, in order to acknowledge the impact of the earthquakes. In effect, children and adults alike are vulnerable in the face of natural disasters, and there is the possibility of shared understanding if this is acknowledged. Overall, children and young people wished for more acknowledgement from their parents of their capacities as social actors with the ability to contribute to family decision-making and to demonstrate empathy for others, including their parents.

Advice to central and local government

Children had a number of specific recommendations for local and central government. Some were negative and were indicative of problems experienced by their families such as difficulties with insurance companies. Where there was criticism, it was largely directed at central government, the Earthquake Commission (EQC), and private organisations such as insurance and phone companies.

Make sure insurance payments are easier to get and much sooner. Be aware that everyone is affected by things like this, not just the people in the immediate disaster zone. Maybe provide emergency communication backup for when the cell phone system goes down. It was horrible trying to contact parents not knowing where they were or if they were okay. (Jemma, aged 17)

Well there's thousands of people I know that have nothing, had nothing straight after the earthquake and for a month after that. And that was kind of bad for them, they had to come over and get water and stuff like that. So if they could like get emergency tanks in places that people know about would be good. (Ben, aged 15)

Well some people up in Christchurch they have lost heaps of dollars in the red zone and stuff and the EQC are sometimes not paying them a lot of money that they need. So yeah I think the EQC need to pay a bit more money. (Riley, aged 8)

These three participants, ranging in age from eight to 17 years, demonstrate a sophisticated analysis of the shortcomings in the post-disaster infrastructure, including emergency communication, water supplies and EQC compensation processes.

In contrast to central government, EQC and the Canterbury Earthquake Recovery Authority (CERA), local government was generally perceived by children and young people to be doing a reasonable job under difficult circumstances. Practical measures such as reopening of roads and provision of water tanks were appreciated, as were the difficulties in achieving these outcomes.

The [local] government was pretty good with keeping those big tankers of water and stuff and ... Red Cross and like all different places giving away free bottles of water. (Sage, aged 13)

I think they [the council] are doing an amazing job. I think all the fundraising and the support

has been pretty spectacular. I honestly didn't think that it would touch the heart of so many people. All the support has been really lovely and it's been good to know that there are people out there that are willing to listen. (Olivia, aged 16)

Children and young people's discernment of the relative effectiveness of local and central government's emergency responses, and their appreciation of local government efforts in particular, could powerfully influence their engagement with local and central government as citizens in the here and now, and as voters in the future (Smith & Bjerke 2009).

Children and young people did have useful advice on the types of assistance needed and ways to improve safety procedures, resource distribution and communication:

Just maybe like updating, like the school's evacuation, like the building evacuation rules. Like maybe making sure that every single person knows exactly what to do. Like I know [at] our school not a lot of people knew actually what to do ... And maybe like, making sure everybody has an emergency kit and like a place to meet up in your community that you can like get together with your community and maybe talk about. (Gabrielle, aged 13)

Well they could set up advice, like advice hotlines, they could help people with their relocation. ... They could help find schools and a place to live, rent and stuff like that. Just help them. (Harry, aged 16)

Children also identified the need to prioritise where help should be focused:

Maybe instead of coming around here, go and help more people more in need ... instead of checking our buildings around here because some of them are damaged but not as bad as some of the other suburbs. (Molly, aged 11)

Well I think they should do the areas that are obviously more damaged first. (Grant, aged 13)

Molly and Grant's advice to government clearly indicated a sense of social justice, of their awareness that other people and other suburbs were more severely affected than they were. Advice was also pragmatic, such as Gabrielle's recommendation to update school evacuation procedures and Harry's to set up advice

hotlines. Children and young people made sound recommendations, and demonstrated awareness of the differential impacts of the earthquakes across the suburbs of their city. In the next section, we advocate for decision-makers to include these insightful perspectives in the process of recovery and rebuilding.

Children and young people's visions for the future

When we asked about the city there was a predominantly positive attitude towards life in post-quake Christchurch. Of the 50 children resident in Christchurch at the time of the study, 34 were positive about the city, seven negative and nine had mixed feelings. When asked how they felt about staying in the city, 40 were positive in their response, three negative, three said they just accepted it and three were mixed. In spite of the difficulties facing the children and their families this was an encouraging result.

In the later part of the interview the children were asked to think about what Christchurch could and should be like in the future. The responses were varied and fell into three main categories: the first were children who wanted a return to what was, with a strong emphasis on heritage buildings. A key building in this regard was the historic Christchurch Cathedral, which was a landmark in the city centre. Many children wanted the cathedral to be repaired rather than rebuilt. In this, the children's views accorded with those of Olshansky et al. (2006) who, in their analysis of recovery following the Kobe and Los Angeles earthquakes, argue that it is better to repair buildings than rebuild. The second category included children who wanted to build new and have a fresh start. The third wanted a mixture of both.

Rebuild as it was. Unrealistically I would love it to all stop and go back to normal. That's what I say to Mum all the time, I just want everything to be normal again. But in the future I try and keep going, rather than everyone just leaving. ... We have had a disaster but you can't stop what you have got to do. And I just want things to continue and the city to be rebuilt and be Christchurch again. That would be nice. (Helen, aged 17)

Mixture of rebuild of the old and new build. I would like it to be really unique and modern.

Like so when people come to Christchurch they always get a memory like what they had there and ... like how it is different to the rest of New Zealand and the rest of the world. And I would just like it to be quite modern but then also, at the same time have, still have that kind of old part of the city that's kind of always going to be here. (Gabrielle, aged 13)

Build new. Something that's different, to say that it doesn't remind us of the old site, it doesn't remind us of what has happened. Something that is new, something that hasn't been done before. (Callum, aged 13)

The views of the children on the rebuilding incorporated an interesting blend of their own experiences and thinking about the wider needs of the city. Few focused just on their own troubles or neighbourhood and they tended towards being pragmatic and altruistic in their suggestions (for example, on which areas should be rebuilt first). Naturally there was a strong concern that new buildings be adequately earthquake-proof.

Learning from children and young people

We conclude with recommendations for central and local government, education officials, planners and other agencies, to provide for better practice in relation to children in the event of future earthquakes or other natural disasters.

Recognise children's strengths

Despite the damage and discomfort children experienced, they showed strong resilience of spirit. Even young children demonstrated a realistic understanding of the circumstances and an ability to offer thoughtful insights. Children feel and understand the crisis, they feel the quakes, see the impact, are reasonable in their responses and aware of economic pressures on families. Their contributions to family and community recovery need to be acknowledged and supported. Children draw strength from and add to community togetherness in the post-quake period, whether it is by talking to neighbours, shovelling liquefaction or fetching and carrying water.

Community impacts and connections

In Christchurch, children played a role in maintaining and enhancing community, clearing liquefaction, building shelters, toilets and generally helping to restore family and community functioning. Children's physical and emotional relationships with their communities are vital in the recovery process and play a significant role in determining outcomes (Allan et al. 2013). The understanding that pre-disaster vulnerabilities, notably poverty, continue post-disaster was evident among our children and their families (Murray & Monteiro 2012). Children in families and communities living in poorer areas of Christchurch experienced severe hardship and in many cases had few options but to continue to live in severely damaged and overcrowded homes for extensive periods. 'Housing costs, both house prices and rental costs... increased in the greater Christchurch area. A decline in the availability of lower-priced rentals is particularly noteworthy' (Ministry of Business Innovation and Employment 2013, p. 7). Families that had lost jobs and income, struggled to afford housing resulting in overcrowding or the disruption of leaving the city. Vulnerable children suffer particularly from the withdrawal of services in damaged neighbourhoods, especially those needed in poorer communities (Henderson & Hildreth 2011).

Supporting families

Children living in the most severely affected areas were often unable to stay in their homes or home communities. In these cases, relocation may be unavoidable and children and their families will need assistance with reintegrating into new communities. Those involved in post-disaster recovery efforts need to understand, recognise and support family relationships. Family relationships were by far the most important factor in recovery mentioned by children and young people. The loss or relocation of family members, friends and teachers were especially problematic for families already coping with change such as separation and/or blending. It is imperative that those involved in post-disaster recovery efforts prioritise measures that 'protect

and restore the secure base of attachment relationships as soon as feasible' (Masten & Osofsky 2010, p. 1036) whether it be through providing emergency housing, jobs and/or reopening services. 'After disasters when children lack a sense of routine and normalcy and are suffering physically and emotionally, it is difficult, if not impossible for family members and communities to begin the process of recovery' (Fothergill & Peek 2006, cited in Peek 2008, p. 20).

A return to normalcy

Schools are vital in this respect and the priority of getting children back to school was demonstrated at both local and central government level. Where schools could not reopen, site sharing and other collaborative arrangements were put in place to enable children to return to school as soon as possible. This also enabled parents to then focus on rebuilding their lives without worrying about having to also look after their children. School-based interventions are very effective at reaching children and identifying and responding to vulnerable children and families (Franks 2011). Decision-makers involved in post-disaster recovery efforts can play a huge role in this regard, facilitating the reopening of schools and sports and other facilities.

Children and young people's voices

Historically, Christchurch has a strong commitment to hearing children's voices, but it is too easy for children's voices to go unheard in the post-disaster period. A commitment to listening to children's voices needs to be maintained at all times not just in the 'easy' pre-quake period (Gibbs et al. 2013; Mutch & Marlowe 2013). In the rebuild period, children need to be an active part of the process. This commitment is not easy when planners and local government are confronted with their own problems; Christchurch City Council was homeless for a time, staff had their own family and housing problems, and the city was reeling from the effects of the quakes. Nevertheless, those involved in post-disaster recovery efforts can use the positive commitment and resilience of its children and young people to

repair and rebuild. It is fitting to finish with Ruby's (aged 13) positive vision for the future of her city:

I just want it to be a really happy place and I have always imagined it as like full of grass. And I really like music, so like outdoor concerts and stuff and everything. I would like to see Christchurch happy again.

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Notes

1. The interview schedules are available from the authors on request.
2. For land the following codes were applied: red zone—severely damaged, unlikely to be rebuilt; green zone—lower damage and suitable for residential construction; white zone—complex geotechnical issues needs further investigation; and orange zone: needs further investigation. Land and house colour coding was subject to further refinement over time.

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