Surviving to thriving

Psychological and activity related impacts of the Canterbury earthquakes on urban living older adults.

Annear, Keeling, & Wilkinson

The active ageing in Christchurch study (2010-12)

- Exploration of the potential urban environmental influences on active ageing among independently living older adults.
- 355 adults aged 65 and older.
- 12 diverse urban areas (including two controls).
- Three data collection phases.
- Mixed methods (GIS analyses, systematic observations, survey, photovoice, focus group discussions).
- Earthquake disruptions
Research concepts

- **Older adult**: independently living adults aged 65 years and older who reside in urban Christchurch (including retirement living communities).

- **Active ageing**: a process of optimising opportunities for health, participation, and security to enhance quality of life as people age, and including those who are frail, disabled, and in need of care.

- **Active ageing behaviours**: physical, social, civic, cultural, spiritual, and economic activities.

- **Environment**: the physical (natural and built) and social (networks and community) surroundings with which an individual regularly interacts.
Working with earthquakes

Phase 1
- Initiation of participatory research process
- Research design and development
- Area observations

Phase 2
- Pilot testing methods
- Survey of 355 older adults in 12 urban areas.
- Administration of EQ questions (time one)

Phase 3
- 14-day activity diaries.
- Photovoice
- Focus group discussions
- Administration of EQ questions (time two)

Phase 4
- Development of a local model of active ageing
- Dissemination of information to community stakeholders

Literature and theoretical perspectives on coping

- Physical vulnerability is common among older adults, but mental resilience prevails for many.


- Maturation theory: emotional maturity developed over the life course prepares older adults to face and overcome adversity (Knight et al., 2000).

- Burden theory: with reduced employment, child care, and financial responsibilities, many older adults face less disruption than younger adults following a disaster (Thompson et al., 1993).
Self-reported impacts of the September 2010 quake ($n=340$)

Earthquake effects and observations

- A story of vulnerability and resilience
  - Massive discontinuities in reported effects and coping strategies.
  - Health and activity impacts were widely reported.

- A tale of two earthquakes and of two cities
  - Reported disruptions following the February 2011 earthquake were considerably greater than September 2010.
  - Central and eastern suburbs experienced considerably more disruption than other areas.

- Apprehension about an uncertain future
  - “Anxious about on-going quakes. Is another big one building up? (66, Hawthorndon, SeptEQ)”
  - “Feel anxious at each aftershock fearing we are heading for another big one! (65, North Hornby, SeptEQ)”
Remarkable resilience

- Apart from sleepless nights, chaotic house, phone calls, arthritis, I have kept my assignments: assessing story telling, adjudicating senior speech and drama, attending a conference, preparing and delivering a seminar, and an 85th birthday (79, Central City, SeptEQ).

- I have not really been affected much at all and I am still going about my daily activities the same as before, except when I only have a few grocery items to buy I have been walking to the shop as there is so much traffic it is quicker to walk than drive (71, South Hornby, FebEQ).

- We are fortunate that our area has been relatively unscathed by the earthquake (75, Papanui High Deprivation, FebEQ).
Emerging mental health challenges

• Anxiety and depression.
• Insomnia and lethargy.
• Irritability and confusion.
• Negative behaviours.
• Feelings of grief and anger.
• Difficulties coping with everyday life.

• The big one [September 4, 2010]: utter powerlessness, shock, horror. The continuing smaller ones: a closed circle of anxiety, insomnia, lethargy, and depression (85, Papanui, SeptEQ).

• I observed my stress levels eternally held at a higher level. Ready to leave [home] at any time. It’s like being in the starting blocks for a race waiting for the gun to fire (70, North Hornby, FebEQ).

Environmental challenges

(C) Michael Annear Presentation at College of Nurses Symposium 2012
What does active ageing mean following disasters?
Activity participation

Vulnerability

- Loss of venues and destinations
- Cancellation of meetings and events
- Confinement and isolation
- Disruption to transport networks
- Fragmentation of social networks
- Environmental hazards
- Disruptions to activities of daily living

- Prior to the February 22nd earthquake, I had a very active life with bowls, visiting, socialising, telephone calls...Since the earthquake, I have spent four weeks with my son and family and have since returned to my unit. My activities have been somewhat curtailed due to road and traffic problems, friends who have moved temporarily or permanently, and various organisations not operating because of problems arising from the earthquake (90, Ferrymead, FebEQ).
Resilience

- Earthquake recovery activities
- Disaster preparedness
- Adaptation and flexibility
- Care of others
- Accessing networks of support

- Apart from sleepless nights, chaotic house, phone calls, arthritis, I have kept my assignments: assessing story telling...adjudicating senior speech and drama...attending a conference...preparing and delivery a seminar...and an 85th birthday (79, Central City, SeptEQ).

Depictions of resilience

- Recovery activity
- Care of others / networks
- Care of others / community
- Adaptation & flexibility
A local perspective on vulnerability and resilience

- Earthquake disasters constitute a negative environmental change and constrain activity participation for vulnerable older adults once a threshold of disruption is reached. Less resilient older adults experience an overall reduction in their activities and potential disablement, while more resilient individuals continue their participation in pre-existing or new modes of engagement often in alternative and undamaged locations.

Developing resilient communities

| Transportation needs of isolated older adults | Accessible transport in worst-affected suburbs  
Remaining hazards in the road and footpath are addressed  
Information updates about infrastructure status |
| Age- and disability friendly rebuild | Utilisation of uninhabitable open space areas (riparian margins)  
Age- and disability friendly design principles to the fore  
Improvements to community aesthetics and sense of place |
| Resilient and helpful support agencies | Home-help services provide support to isolated older adults  
Churches and non-profit groups are supported to find new premises |
| Access to venues for social & cultural activity | Access to cultural and social events and venues  
Information about activities is readily available to older adults |
| Remediation of the worst-affected areas | Water! Water! Water!  
Financial support and information for relocation  
Maintenance of vacant properties |
| Safe and resilient communities | Rebuilding in low risk areas  
Building heights lowered and standards raised (perceived and real)  
Emergency information and preparedness |
Summary

• Older adults expressed both vulnerability and resilience in the aftermath of the Canterbury earthquakes.

• Psychological disturbances were the primary health concern reported by research participants.

• Some older adults were constrained in their activities, while other found ways to continue or adapt their engagement.

• A challenge for health professionals will be the identification of vulnerable elderly prior to a natural disaster and swift follow up and needs assessment in the immediate aftermath and over the longer term. Disaster-related disruptions to environment affect activity and are likely to have downstream health impacts that may be overlooked in the long-term recovery process.