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## **ABSTRACT**

Older adults are a population group who are at higher risk of experiencing negative impacts from a disaster. Factors such as age related physical and cognitive decline, mobility problems, reduced financial resources, and reduced social networks often result in greater challenges to older adults' ability to cope prior to, during, and after a disaster. This report describes and analyses factors that can influence the recovery of older adults following disaster, and is based on international research literature and qualitative case study research from a recent New Zealand disaster event. Findings from this report suggest that a better understanding of age related needs of older adults is required to improve recovery assistance. Furthermore, the engagement and participation of older adults in decision-making and planning initiatives would improve age appropriate care for this age group in the recovery phase of a disaster.

## **KEYWORDS**

Older adults, ageing, rest home, flood, Kaitaia, disaster, natural hazards, disaster recovery, social support, social connectedness, social inequalities, social capital, loss of treasured possessions, risk perception, insurance

## 1.0 INTRODUCTION

A demographic group more likely to be at greater risk in disasters and therefore more vulnerable in a disaster are older adults (Bolin & Klenow, 1988; Cutter, Boruff & Shirley, 2003; Perry & Lindell, 1997). Studies of Hurricane Katrina, which devastated New Orleans in 2005 demonstrated disproportionately poorer outcomes for older adults compared to other population groups (Fussell, 2006). In the recovery phase of a disaster older adults are more likely to become vulnerable by nature of their age-related physical and cognitive decline, and the influence of social conditions, which can affect health and wellbeing outcomes.

The recovery phase has been defined as the period of time after a disaster during which community and individual routines are regained following the destruction and disruption that has occurred to social life (The Australian Psychological Society, 2009; Eustace, Johal, Stevens & Yates, 2008). Both personal health factors as well as external social factors will have an influence on community recovery after a disaster (The Australian Psychological Society, 2009). Personal health factors that put older adults at risk after a disaster include chronic health conditions, and those who have cognitive and sensory decline. Following a disaster, extra assistance and supportive services may be needed that would enable older adults to remain living independently in their homes or temporary accommodation.

External social factors that can have an influence on recovery relate to social life rather than individual characteristics. For example, the availability of support networks in the recovery phase may be disrupted and reduced (Kaniasty, Norris & Murrell, 1990) or overstretched as reduced networks begin to feel the stress of providing ongoing social support. Disasters can reduce the sense of support as well as “remove significant supporters from victims’ networks through death, injury, or relocation” (Jerusalem, Kaniasty, Lehman, Ritter & Turnbull, 1995, p.122). Older adults can also experience discrimination through the uneven provision and allocation of resources (World Health Organisation (WHO), 2008). Hence recovery from a disaster can become a more difficult challenge for older adults.

In the recovery phase after a disaster, many older adults will provide valuable assistance to their families and their communities; therefore it is important that appropriate support is offered to aid their recovery. Older adults are a very diverse group; we need to recognise that they have a wide range of skills, experiences and capacities, which can contribute to recovery and can benefit the whole community.

“Their years of experience make them models of community resilience and sources of inspiration and practical knowledge. They give voluntary aid, care for grandchildren or neighbours, and participate in support or recovery initiatives” (WHO, 2008, p. 4).

However, in order to maximise the positive contributions that older adults can make in recovery initiatives within affected communities, recognition of older adults’ age-specific challenges is needed. Such challenges include declining personal health, and the availability of social support assistance. Therefore, assessing and addressing personal health and social factors influencing older adults’ recovery, would promote the adaptive capacity and wellbeing of older adults, and benefit communities as a whole. In this report I examine factors associated with age specific needs of older adults that can promote post disaster recovery.

Part One of this report focuses on research literature about individual and social factors relevant to post-disaster recovery of older adults. Individual factors that are discussed include psychosocial aspects of recovery assistance, and loss of treasured possessions. Treasured possessions encompass identity and meaning for older adults, and losing such possessions can create psychosocial recovery challenges. Social factors influencing recovery that are discussed include: social inequality, the role of insurance in assisting recovery, identification of the different types of social support that can be effective in the recovery phase, the role of social support networks, resilience, and social capital.

Part Two of this report focuses on a qualitative research study with older adults about their experiences of the 2007 flood disaster in Kaitaia (Tuohy, 2009). The participants in the study were a location specific sample of nine older adults from Kaitaia, who were evacuated from their accommodation because of rising floodwaters. Four participants lived in a rest home and five lived independently in a grouping of semi-detached rental flats. The two participant groups differed in their levels of independence in the community: the rest home environment provided 24 hour support to the residents, while the adults in the rental flats were independent within the community. Part Two provides an analysis of factors that influenced older adult's recovery after a disaster, and links to the literature discussion and concepts discussed in Part One of this report. Factors that had an influence on older adults' recovery from the Kaitaia flood disaster included: social support and social connectedness; loss, recovery and restoration of material possessions; and home contents insurance.

## PART ONE

### 2.0 PSYCHOSOCIAL FACTORS AFFECTING OLDER ADULTS' RECOVERY

Trauma from a disaster can significantly affect psychosocial recovery. Primary and secondary levels of trauma have been used to describe the types of trauma individuals and communities have been exposed to. Primary level trauma is related to personal exposure to a disaster and the effects and impacts experienced. This includes the level of exposure to trauma such as injuries, the number of lives lost, and the loss of home and possessions. Responses to primary level trauma include: emotional responses such as panic, anxiety, dissociation or numbing, sadness, depression, feelings of helplessness, sleep disturbance, and agitation (Eustace et al., 2008). Psychosocial recovery is also influenced by an individual's ability to work through and make sense of the disaster, and the ability to talk with others about the trauma experienced (Hobfoll & de Vries, 1995).

Secondary trauma is related to the level of destruction at a community level and how well individuals and communities are able to respond to the long-term disruption (The Australian Psychological Society, 2009). Dislocation and relocation away from familiar neighbourhoods can also contribute to secondary trauma because daily routines and the familiarity of surroundings have been disrupted. Recovery for older adults after a disaster may also be influenced by their pre-disaster quality of life; disaster victims, who have been living with long-term problems affecting quality of life, are more likely to experience additional challenges in the recovery phase. This is because the necessary assistance may not be immediately available.

Recovery assistance in the immediate post impact phase will have an effect on recovery in the weeks and months ahead. After a disaster, individual recovery needs will come in phases and will be influenced by primary and secondary level trauma. These psychosocial recovery needs will commonly relate to personal injury, loss of family, friends, homes, property, possessions or pets, shelter and relocation. Therefore, it is important that the recovery personnel who work alongside disaster victims are responsive to victims' individual practical, psychosocial, and community needs. The provision of best practice psychological assistance in the initial recovery phase has been termed psychological first aid, which is the first response delivered by emergency responders to disaster victims (The Australian Psychological Society, 2009). Eustace et al. (2008) state that during the very early days following a disaster, mental health professionals need to work alongside emergency support responders to be part of a cohesive response that enables victims to be assessed and connected with appropriate social support networks and agencies. Immediate needs and practical assistance should be the focus of early assessment; "the provision of practical help may be seen as more helpful and positive than the specific psychological care offered" (Eustace et al., 2008, p. 26).

Older adults have particular age-related needs, which relate to physical and cognitive decline, and the ability to access appropriate health care and social support. Access to appropriate care and support will have an influence on recovery outcomes for this age group. Therefore, it is important that the support assistance offered, is sensitive to the

needs of older victims. Such assistance can help to ensure that there is 'on the ground' engagement with communities to assess their needs (The Australian Psychological Society, 2009). Similarly, both local government and local services must support each other in ways that are responsive to the needs of the community.

## **2.1 Loss of treasured possessions**

The loss of treasured possessions in a disaster has an impact on all victims, but for older adults loss of treasured possessions may become an added challenge to post disaster recovery. Personal possessions in late adulthood invariably have significant meanings and lifelong associations connected to them. Possessions communicate what is important in the lives of older people (Kamptner, 1989). Research on late adulthood has found that treasured personal objects provided individuals with symbolic meanings connected to a sense of identity (Kroger & Adair, 2008). The role of treasured possessions in an older person's life can provide a connection with the past, while also providing a sense of continuity throughout their lifespan through the meanings objects hold for the owner (Tobin, 1996). Kroger and Adair (2008) state that "during late adulthood, loss of spouse, friends, a social context, abilities and a life era may give cherished personal objects a special role in helping to signify and anchor an individual's sense of personal identity" (p.6). Treasured possessions have a transferability about them; their meanings remain even if the place where one lives changes because they create a continuity of memories and connections (Shenk, Kuwahara & Zablotsky, 2004). The treasured possessions are physical reminders of "how [the person] is connected across time and place to present, past and future generations" (Kroger & Adair, 2008, p. 23). Such meanings may not be obvious to others, but for the owner, the treasured possessions give a sense of pleasure, attachment or wellbeing and provide a sense of self-identity (Kroger & Adair, 2008). Research which looked at the impact of quality of life of older adults following flooding in northeast England, 2000, found that health and wellbeing was negatively affected by the loss of irreplaceable personal items and memorabilia that related to the loss of sentimental possessions (Tapsell, Penning-Rowse, Tunstall & Wilson, 2002). Restoration and care of treasured possessions therefore is an important area to consider when assessing and assisting in the recovery needs of older adults.

## **3.0 SOCIAL FACTORS AFFECTING RECOVERY**

After a disaster, social factors can have a significant influence on older adults' ability to recover from a disaster event. Social factors addressed in the following section include: social inequality, insurance, social support, social networks, factors that promote resilience, and the role of social capital.

### **3.1 Social inequality**

Following a disaster, the most vulnerable and marginalised sections of society are the ones who are the most 'at risk' of poor outcomes following a disaster event. Research by Bolin and Klenow (1988) found lower socio-economic status was a factor in delaying older adults' recovery after a tornado in Texas, USA. The authors suggested that this was because practical and material resources could not be accessed or utilised by poorer older adults. Housing inequalities can also influence poor outcomes for older adults. Housing location may be a reflection of social inequality related to place, that can predispose lower socio-

economic population groups or communities to becoming more vulnerable in a disaster (Cutter et al., 2003). For example, flood prone land is likely to be utilised by more marginalised sections of the community because of the cheaper land values and cheaper housing stock. Social inequalities therefore can influence the risk of loss in a disaster, which subsequently impact on recovery because of uneven vulnerability distributions across individuals, households, communities and regions (Bankoff, Frerks & Hillhorst, 2004). Social inequality in a disaster can also be reflected in other vulnerable minority groups, which includes women and migrants (Enarson, Fothergill & Peek, 2006). Older adults are represented in both women and migrant groups, which can further contribute to adverse outcomes being experienced by older adults in the post disaster recovery.

### **3.2 Insurance and recovery**

No matter what type of disaster unfolds it is likely that housing and personal possessions will be a major part of losses incurred by individuals and businesses. It therefore is important to understand how the idea of risk operates in terms of how we perceive subjectivities around natural disasters. Lupton (2006) argues that managing risk at this point in time has become an individual endeavour and one of self-responsibility. However, the meanings of risk and self-responsibility as they relate to understanding environmental hazards and the need for insurance protection, may not be salient or a priority for some people. For some citizens, subjectivities about risk and the reasons for insurance may still remain in the 'domestic domain' such as theft or accidental damage of items. Mitigating and protecting against loss from environmental hazards may not be considered a salient risk factor for some population groups, including older adults. As a result, older adults may not be insured if they assess their risk to home and possessions as being low while at the same time discounting environmental risks.

New Zealand insurance data from Massey University's Health, Work and Retirement Study (HWR Study) is presented below. The longitudinal HWR Study was established to identify the influences on health and wellbeing in later midlife. The sample is representative of New Zealanders aged 55-70 years. The self-report questionnaire from the HWR Study included a question about home contents insurance. Results from the first two waves of the HWR Study on the question about home contents insurance are presented in Tables 1 and 2 (<http://hwr.massey.ac.nz>).

Table 1 presents data from the HWR Study which showed that in 2006, of the participants (n= 6280) who responded to the question on home contents insurance, 84.5% had insurance, while 14.5% did not have insurance (7.7% stated that they did not have insurance because of cost, 4% because they did not want it and 3.8% did not have it for some other reason). The possession of home contents insurance remained similar across the age groups.

Table 1 Number and Percentage with Home-contents Insurance by Age (2006)

	<b>Age 54-59</b>	<b>% 54-59</b>	<b>Age 60-64</b>	<b>% 60-64</b>	<b>Age 65-70</b>	<b>% 65-70</b>	<b>Total</b>	<b>% Total</b>
<b>Yes, I have it</b>	2329	84.7	1566	84.4	1423	84.8	5318	84.5
<b>No, because I don't want it</b>	96	3.4	75	4.0	79	4.7	250	4.0
<b>No, because of the cost</b>	217	7.9	145	7.8	117	6.9	479	7.7
<b>No, for some other reason</b>	106	3.9	68	3.7	59	3.5	233	3.8
<b>Total</b>	2748	100	1854	100	1678	100	6280	100

The 2006 study participants completed the same questionnaire two years later in 2008 with reduced participant numbers (n=2379). The 2008 results, presented in Table 2, found that 88.7% of participants had insurance, while 11.3% did not (6.1% of those not insured stated they did not have it because of cost). Table 2 also shows that the trend over the 2006 and 2008 surveys suggests the proportion of older adults without home contents insurance is decreasing.

Table 2 Percentage of Older Adults with Home-contents Insurance

	<b>Percent (2006)</b>	<b>Percent (2008)</b>
<b>Yes, I have it</b>	84.5	88.7
<b>No, because I don't want it</b>	4.0	2.9
<b>No, because of the cost</b>	7.7	6.1
<b>No, for some other reason</b>	3.8	2.2

The descriptive statistics do not permit further comment, but it would be of interest to know whether the participants who had dropped out of the 2008 survey were less likely to have insurance due to 'cost', 'not wanting insurance', or for 'some other reason'. For those participants who stated they did not have home contents insurance, it is possible that these participants may not have considered loss and damage from environmental hazards as a reason for needing home contents insurance.

Further reasons for not having insurance may relate to the perceived difficulty in making an insurance claim. Research by Walker (2009) found that older adults who had experienced a flood in Sheffield, United Kingdom in 2007, experienced difficulties with insurance claims. Findings showed some participants in the Sheffield flood reported ageism, and that decisions they made about home refurbishment were not listened to. One year on from the Sheffield flood the participants described the financial impact of telephone bills; that their insurance did not cover the full replacement costs of items lost; and they had anxieties about the future costs of insurance premiums. The participants also assessed their physical and mental health as having deteriorated since the flood event. Recommendations from the Sheffield flood research included: the importance of service providers making early contact with disaster victims; providing a local advocate for older adults; making available liaison

representatives from victims' insurance companies who could provide advice regarding what could be claimed (Walker, 2009).

After a natural hazard disaster, those without home and contents insurance will be more likely to be adversely affected, and will take longer to recover from the effects of such losses. The added psychological stress and social cost of poor recovery for older adults without insurance in the months and years ahead is an important issue, as their quality of life may deteriorate through the effects of social, emotional and financial uncertainty. As a result older adults may no longer be able to cope independently. Furthermore, older adults who do not have home contents insurance not only face the added stress of losing household items, without having the financial resources to fully replace them, they must also cope with the loss of irreplaceable treasured possessions. Tapsell et al. (2002) found that loss of treasured possessions can be more significant than financial losses that are commonly recovered through household insurance policies.

### **3.3 Social support in disaster recovery**

Social support has been identified in social science literature as playing an important role in health and wellbeing and relates to the social integration and quality of social relationships (Lyons & Chamberlain, 2006). Social support is recognised as an important mechanism for psychosocial recovery; it is an extra-personal coping resource that can assist in maintaining health and wellbeing (Stroebe, 2000). Social support is an important resource that can assist older adults in recovery phase of a disaster and can function to minimise the perceived stress from a disaster. Assistance from family, friends, neighbours and communities can help people deal with stressful events. The knowledge that one is cared for, valued, and part of a network of mutual obligation can function to increase resilience and be a resource for coping strategies that help reduce the stressful experience (Stroebe, 2000). The cultural context of social support available to victims of a disaster is also salient to consider. It is likely that a country with strong social support systems and resources available to respond and assist disaster victims will help to reduce psychological distress (Shenk, Ramos, Kalaw & Tufan, 2009).

Social support has been hypothesized as providing a buffering mechanism, which helps protect individuals against the negative impact of stress on health either totally or to some degree (Stroebe, 2000). For example, the protective function of social support can act as a buffer for victims when a strong stressor such as when a disaster occurs. Stroebe (2000) suggests that levels of social support may influence how a stressful event is appraised. For example, with high levels of social support the stressor is perceived as being less stressful because there is the presence of supportive others for emotional and practical support. In this way, social networks play an important role in reducing the negative emotional impact of stress and trauma, which can help in the recovery from psychological distress from a disaster (Kaniasty & Norris, 1995). The availability of social support therefore can help to facilitate recovery.

Social support can be classified as structural or functional. Structural social support is related to the assessment of social networks or interpersonal relationships of individuals, and is a way of measuring the sources of social support that relate to an individual's social integration or embeddedness within a community (Stroebe, 2000). This information is quantifiable and measurable, for example, information about whether a person has a spouse/partner, lives alone, belongs to a church, organisation can provide valuable social

support information. Research by Kaniasty and Norris (1995) on patterns of social support mobilization following Hurricane Hugo found that in the post disaster phase “persons with larger support networks provided more support of all types” (p. 472). The authors presumed that those people who provided more support had more people in their network that needed assistance. The victims of Hurricane Hugo commonly expressed that their community was brought together. This suggests that in a disaster, victims that both receive help and help others may merge such experiences “into a communal process aimed at restoring their psychological and physical equilibrium” (Kaniasty & Norris, 1995, p. 469).

Functional social support is related to the functional nature that social relationships serve for the individual. Stroebe (2000) has described four types of functional social support: emotional support, which functions to provide a sense of caring, comfort, empathy and belonging; practical support, which includes assistance of tangible help, or provision of resources such as money or food; informational support, which relates to receiving advice and directions; and appraisal support, which relates to receiving information that helps to appraise an event or situation, or to learning what resources are available to assist in coping with the situation. Functional social support is salient when thinking about reducing vulnerability of older adults who experience a natural disaster, as it can minimise the perceived stress, increase resilience and facilitate psychosocial recovery.

Understanding factors that will promote individual psychosocial recovery must include knowledge of pre-disaster personal and social vulnerability factors that will influence how older adults recover from a disaster (Rodriguez, Quarantelli & Dynes, 2007; Perry, 2006; Sorensen & Sorensen, 2006; Tuohy, 2009). Socially created vulnerabilities such as decreased networks, and lack of social connectedness and social support need to be assessed and addressed within communities to ensure that recovery assistance is provided to older adults. Research conducted by Kaniasty and Norris (1995) on perceptions about social support mobilization in the context of disasters, found tangible support (receiving money, transportation, shelter or something else other than money) and informational support (feedback and suggestions, and information to understand a situation) was primarily provided by younger and middle-aged adults rather than by older adults. The authors suggested that, “the post-disaster helping community *recruited* younger victims to a greater extent than it recruited older victims for providing tangible support” (p.465). The type of help that was provided for those with the greatest losses included: help with cleaning property, meals and groceries, and being loaned tools and equipment. Information and guidance were also provided as to where to go for organised aid, protection of belongings, how to start clean-up efforts which included getting tools, and insurance forms (Kaniasty & Norris, 1995). The lower number of older adults recruited to provide recovery assistance suggested that under-utilising older adults as providers of social support, ignored the valuable role older adults have in recovery. The World Health Organisation (2008) has stated that the goal in a disaster is to:

“Enhance support for older people in emergencies to minimise harm and help them maintain the highest possible level of health and functional capacity or recover them as fast as possible. This requires that governments, emergency planners, and responders and the community at large – including older people – identify and integrate ‘age-responsive’ actions in planning for, responding to, and recovering from emergencies” (p.5).

Disaster assistance can encounter a diverse range of social support needs such as assistance with insurance matters. Research was conducted by Walker (2009) to assess older adult's experiences of a flood event in Sheffield, United Kingdom, 2007. Two important factors that were identified as having an influence on recovery after the Sheffield disaster included: the availability of social support from family, friends and neighbours, and the responsiveness of insurance companies and builders to older adults' requirements. The research also identified the importance older adults attached to having a good rapport with service providers. Good rapport was an indication that service providers were concerned about them, which helped to reduce older adults' sense of lack of control and to increase control and mastery in their endeavours (Walker, 2009).

Research by Tapsell et al. (2002) on the social impact of flooding in northeast England in June 2000 also found that older adults were more socially vulnerable in the recovery phase of a flood disaster: "Support for the elderly and disabled following the flooding was seen to be generally inadequate. The flood was perceived to have had significant impacts on children, women, the elderly and disabled, both physically and psychologically." (p. 1516). The summary points identified by Tapsell et al. (2002) in Table 3 describes stresses that participants (18-60+) experienced after the flood.

Table 3 Summary of Stresses Identified by Tapsell et al. (2002)

<ul style="list-style-type: none"> <li>• Key problems were experienced with loss adjusters and insurance companies, particularly regarding differing levels of service offered. Those without insurance faced additional problems.</li> <li>• Builders and contractors repairing properties were also heavily criticized for their poor standards of service, unreliability and unpleasant attitudes.</li> <li>• Strong feelings were expressed of having to 'fight' for any advice and assistance in the recovery process. The effects of this had significant implications for people's health and well-being.</li> <li>• The flooding was seen to have had differential impacts upon men and women. Women were seen to be particularly affected by the flooding, both physically and psychologically. Single women were thought to have been taken advantage of by insurance companies and builders.</li> </ul>
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### 3.4 The role of social support networks in recovery

Many older adults have social support networks such as family, neighbours, and friends who are able to provide practical, material, informational and emotional support, that play a vital role in assisting recovery. Such levels of support however, may be diminished due to those in a person's network also being a victim to the same disaster (Kaniasty et al., 1990). Research by Kaniasty and Norris (1995) found that the smaller the social support system a person had, the less practical support was available in terms of transport and accommodation during a disaster. Social support networks may also become strained because of the ongoing nature of providing care for individual and or family 'victims' over a sustained period of time (Hobfoll & de Vries, 1995). Factors such as age and illness can have an impact on reducing the quality of social relationships and networks available. Social networks can also become diminished due to deaths of friends, family and other social support people. As people age into their seventies and eighties there are fewer people to rely on in times of need (Tyler, 2006). Furthermore, neighbours or professionals outside an

individual's close support network may not be utilised due to older adults' reticence about making demands on others (Tyler, 2006). During the recovery phase of a disaster, older adults are at higher risk of becoming socially isolated compared to other population groups.

Research by Tanida (1996) found that older adults in the Kobe earthquake, 1995, suffered more fatalities, experienced more psychopathology than other victims, and tended not to express their needs directly. Natural disasters may negatively affect an older adult's personal sense of control and self-efficacy; their coping options may also be reduced if social relationships, loss of possessions and financial resources are affected (Freedly, Saladin, Kilpatrick, Resnick & Saunders, 1994). Cultural norms around maintaining independence in old age may become a barrier to recovery because older adults may not have the ability to access help, ask for help or know what assistance is available (DeWolfe, 2000; WHO, 2008).

Research by Kaniasty and Norris (1993) examined the importance of social support provision based on a longitudinal study of 222 older adults, who were interviewed before and twice after a severe flood. It was hypothesized that disaster exposure (stress) would influence depression through the deterioration of social support. Their findings indicated that post disaster declines in social embeddedness and non-kin support mediated the immediate and delayed impact of disaster stress. The role of kin support was not a mediating factor in reducing disaster stress. Kaniasty and Norris (1993) suggested that their findings are "in accord with conceptualisations of social support as an entity reflecting dynamic transactions among individuals, their social networks and environmental pressures" (p.395). Findings from this study showed support from friends rather family had a role in the promotion of psychological wellbeing. Kin support functioned to help older adults maintain their ordinary standard of living. However, once such basic needs were fulfilled, non-kin networks fulfilled a vital role of friendship and companionship that functioned to promote positive thinking and self-esteem, intellectual and spiritual self-actualization, and fun, which is what the elderly disaster victims were denied during the recovery stage (Kaniasty & Norris, 1993).

DeWolfe (2000) has identified factors promoting recovery in older adults. Table 4 outlines recovery guidelines for disaster mental health workers who work with older adults in the aftermath of a disaster event (DeWolfe, 2000, p. 25). Underpinning post- disaster recovery is the central role of social support.

Table 4 Factors Promoting Recovery

- Provide strong and persistent verbal reassurance
- Provide orienting information
- Provide assistance with recovery of physical possessions
- Make frequent home visits, arrange for social support
- Give attention to suitable residential relocation, ideally in familiar surroundings with friends or acquaintances
- Help re-establish familial and social contacts
- Assist in obtaining medical and financial assistance
- Provide and facilitate referrals for disaster assistance
- Help re-establish medication regimens
- Provide transportation, chore services, meals programme

### **3.5 Resilience as an adaptive social factor in post-disaster recovery**

Paton (2007) has linked resilience to the adaptive capacity “of a community, its members and the systems that facilitate its normal activities to adapt in ways that maintain functional relationships in the presence of significant disturbances” (p.7). The functional components of community resilience include: social networks that enable the collective strength of individual and community and organisational collaboration to develop and hold a common recovery and support focus. Individual, community and organisational collaboration in turn contribute to the facilitation of community resilience. “Achieving these outcomes requires a conscious effort on the part of people, communities, and societal institutions to develop and maintain the resources and processes required and to ensure that it can be maintained over time” (Paton, 2007, p. 7). It is essential therefore that agencies and institutions with a role in emergency planning and community development foster resilience through developing community networks and maintaining relationships with community members that will support recovery.

Resilience needs to be understood as a capacity that can be fostered in the pre-event and post-event disaster setting. Resilience would be enhanced if vulnerable older adults within the community are identified and given assistance to be better prepared for a disaster event (Perry, 2006). In the recovery phase, addressing factors such as self-efficacy, minimising resource losses such as shelter, food, water, medical care and money, would enhance resilience and the adaptive capacity of older adults (Freedy et al., 1994). Freedy et al. (1994, p. 269) also asserted “the impact of essential goods and services upon positive mental health should not be underestimated”. Again identifying vulnerable older adults prior to and post disaster would help improve recovery outcomes for this age group.

### **3.6 Social capital and its role in disaster recovery**

Social capital can be linked to factors that can enable a sense of community cohesiveness and community resilience. Network structures that facilitate reciprocal links, supportive interactions, new associations and co-operative decision-making are features of social capital (Norris, Stevens, Pfefferbaum, Wyche & Pfefferbaum, 2008). Functional features of social capital, which enable resources to be mobilized immediately following a disaster include: levels of community connectedness, social ties, and trust. Social capital therefore involves a broader understanding of the role of social structures, social processes and social linkages as they relate to people, community networks and leadership in disaster recovery. Social capital is an important factor in recovery because it can underpin and foster community competence and resilience. Therefore identifying, supporting, and developing community based networks and relationships prior to a disaster by emergency management organisations, would enable a greater on the ground effectiveness in promoting post disaster support and recovery.

Support provision to enhance recovery from a disaster needs to be multidisciplinary to offer both technical and social solutions. A collaborative recovery framework would therefore facilitate and enable individuals and communities to be brought together in the decision-making and reconstruction process. In this way, the presence of social capital within affected areas would facilitate organisations, agencies, groups, and individuals to meet the specific needs of affected communities. Research findings from the Great Hanshin-Awaji earthquake (also known as the Kobe earthquake) in 1995, found that for successful community recovery to happen, engineering and technical expertise needed to link with

people and communities in consultation to achieve community recovery: “It was individuals and their neighbours, who saved most of the victims right after the earthquake. And it was the community which determined whether each member was satisfied by the rehabilitation” (Nakagawa & Shaw, 2004, p. 5). The appropriate social network links developed between individual and social capacities within communities would contribute to disaster recovery. This is because community resources embedded in social networks can be used to fulfil and enhance community recovery. Investment in, and use of existing networked relationships prior to a disaster event, would facilitate and increase social capital as an effective resource in the post-disaster phase.

Social capital is a highly salient concept as it provides a way of understanding how cohesive and collaborative networks can become a mechanism for community recovery and well being. An inclusive and multidisciplinary approach between individuals, communities and organisations that assist in disaster recovery would optimise and promote the adaptive social capacities within communities. In this way the importance and facilitation of social capital is a vital paradigm for understanding disaster recovery. “Disaster recovery is not only about building houses but about the reconstruction of the whole community as a safer place. To mobilize each member of the community in this collective action (community development), social capital is a crucial need” (Nakagawa & Shaw, 2004, p. 5).

## **PART TWO - RESEARCH ON THE KAITAIA FLOOD DISASTER**

### **4.0 INTRODUCTION**

Part Two of this report is based on my Master of Arts thesis (Psychology) entitled: Older adults' experiences of a flood disaster: making sense of an extraordinary event (Tuohy, 2009). The flood disaster in Kaitaia occurred on July 10, 2007. Prior to this disaster event, twenty of the preceding thirty days had been wet. On the evening of July 9, 2007, rain had begun falling; the rain became more intense during the early hours of Tuesday July 10 and continued until 6pm that evening. Consequently, the storm arrived on top of already wet grounds, increasing runoff into elevated rivers and streams (Environmental Monitoring Report, 2007-2008).

The participants who consented to be in the qualitative study were all aged over 65 years. Narrative interviews were conducted in September 2008, 14 months after the flood. A total of nine participants were part of the study, five lived independently in the community, and four lived in a rest home. The five participants lived independently in a grouping of semi-detached rental flats for adults over 65 years (25 flats in total were flooded). These older adults were evacuated at about seven thirty in the evening with about thirty minutes warning time to leave their homes. The participants lost most of their possessions and were relocated to temporary accommodation for about six months. Two of the participants chose not to return to the refurbished flats because of fear of future flooding; the remaining three returned, once the flats were refurbished. From the beginning of the Kaitaia recovery response, there was ongoing practical and emotional social support available for these participants. The remaining four participants in my study were from a rest home that was evacuated as a precautionary measure on the evening of the flood. However, the floodwaters did not enter their rest home and the residents were able to return the following day.

Part Two provides an analysis of factors that influenced older adults recovery after a disaster, and links to the literature discussion and concepts discussed in Part One of this report. The results and discussion in Part Two include: the role of social support and social connectedness for the rest home participants; the role of social support and connectedness for the older adults whose flats were flooded; loss, recovery and restoration of treasured possessions; and insurance of household possessions. Lastly, future research directions are discussed.

### **5.0 METHODOLOGY**

The research about the Kaitaia flood disaster was based on narrative interviews with nine older adults. Narrative as a research methodology is able to explore "how individuals perceive, organise, give meaning to, and express their understandings of themselves, their experiences and their worlds" (Mishler, 1986, p. ix). Narratives are the stories that we tell about events and actions that enable experiences and meanings to be expressed. Narrative does not decontextualise the event from the context of the situated nature of events and experiences (Mishler, 1986). One of the strengths of narrative is that it produces the opportunity to be sensitive to the respondent in exploring understandings and meanings

generated from the interviewer's questions. Narratives can be analysed at the individual level, but also can provide representations of experiences and meanings that extend to the socio-cultural level. The use of narrative analysis as a research method to gather data about the Kaitaia flood has provided both an individual and socio-cultural perspective on older adults' experiences of a disaster, which can be used to further inform practice and research.

## **5.1 Participants**

In February 2008 I travelled to Kaitaia to explore the feasibility of doing a qualitative research project focused on the experiences of a population of older adults who were evacuated from a rest home. While in Kaitaia I became aware that there was an independent community population of older adults who had also been evacuated from their homes.

The participants in this study were a location specific sample of nine older adults from Kaitaia who were evacuated from their accommodation because of rising floodwaters in July 2007. Four participants lived in a rest home and five lived independently in a grouping of semi-detached rental flats. The two groups differed in their levels of independence in the community: the rest home environment provided 24 hour support to the residents, while the adults in the rental flats were independent in the local community. The two groups also differed in the effects of the flood disaster: the rest home was not flooded, although all residents were evacuated overnight and returned the following afternoon. The residents living in the rental flats were flooded; water reached about one metre inside the flats. The participants received a warning to evacuate from firemen who went door knocking in the early evening to alert the residents of the possible need to evacuate. All participants in the rental flats lost many of their possessions. Three of the participants were in temporary accommodation for six months waiting for their flats to be refurbished due to contamination from floodwater. Two of the residents chose not to return to the same area because of anxiety about future flooding from the nearby stream.

All participants from the rest home and rental flats met the criteria of being physically and cognitively able to be interviewed about their flood experiences. Participant distress in recalling their experiences of the flood was addressed by making available appropriate social support. Two participants from the rental flats requested a support person to be with them during the research interview. Eight participants consented to having their interviews audiotaped, and one rest home participant consented to me taking notes during the interview. Approval was gained from Massey University Human Ethics Committee to conduct this research.

## **5.2 Results and discussion**

### **5.2.1 The role of social support and social connectedness for rest home participants**

Recovery assistance in the immediate post impact phase has an impact on recovery in the weeks and months ahead. The buffering hypothesis suggests that social support acts to minimise the perceived stress through the provision of functional social support that is "linked to the specific coping needs elicited by a stressful event" (Stroebe, 2000, p. 251). In the context of the Kaitaia flood disaster, the role of social support and its role in their recovery from the disaster was an important feature of each participant's narrative.

The context of rest home social support in the recovery phase of a disaster is relevant to consider because vulnerable older adults are dependent on the assistance and support of others, particularly the staff. It is important to plan for the particular needs of the rest home environment so that co-ordination with local emergency services and responders can optimise recovery outcomes for older adults in institutional care (Shenk et al., 2009). Many of the staff working in rest homes will have additional workload burdens during a disaster event; they have the duty of caring for frail older adults, as well as being victims themselves and worrying about the personal needs of their own family and social networks. Therefore to ensure adequate protection for institutionalised older adults and optimise their recovery after a disaster, mitigation actions must include planning that would enable rest home staff to remain caring for the residents to ensure their wellbeing.

The rest home participants were frail and dependent and were highly vulnerable in a disaster. They received a high level of social support through the practical support available on the night of the disaster. This support was from the rest home staff and emergency personnel who assisted the residents to evacuate to emergency accommodation. Depending on their level of frailty residents either spent the night at the welfare centre that was set up at the local high school or were sent to the hospital. The residents had continuity of supportive nursing care during the night of the evacuation; emotional support, appraisal support, and informational support were all mentioned in the stories that the participants told. Within the rest home residents' stories were expressions of care, protection and trust in those assisting them during the disaster. There was a sense of being looked after, and being given information and advice about the flood and what was occurring. None of the residents experienced levels of anxiety that made them appraise the flood as a stressful event. This suggests that their appraisal of the disaster was mitigated through individual agency (each resident mentioned past personal challenges and how they had coped with them) and the high level of social support assistance they received.

At both the interpersonal and social level, the residents were recognised as a vulnerable group by the rest home and emergency management personnel who were responsible for their safety and care. The participants' location in a rest home meant that they had high levels of institutional social connectedness, which ensured they were a highly visible group in need of care and protection both during and after the disaster. The personal needs of this frail group included: ongoing health care, maintenance of routines, and continuity of nursing care during the night of the evacuation and on return to the rest home, as the following excerpts from some of the participants detail:

Miss K:

"We were well looked after...everything was taken care of."

Mr G:

"To be quite honest, I wasn't the slightest bit worried, you know how capable the staff were. It was quite pleasant for me, it was quite a change to spend the day up at the hospital with nothing wrong with you."

Mrs G:

"Everyone was so wonderful. They were all caring people making sure we were all OK. There was nothing missed for our comfort."

These excerpts give an understanding about how the residents experienced the disaster. The caring and supportive environment that they experienced had an influence on their perceptions of the event and their recovery from the evacuation.

The rest home staff together with emergency services and community welfare assistance worked together to enable a sense of community cohesiveness. The rest home narratives provided an understanding of the importance of supportive interactions within social networks. Importantly these networks helped to facilitate social support relationships, which functioned to ensure optimum recovery for the rest home residents.

Trust was also identified by the rest home residents as a factor that assisted them in coping with the disaster event. The rest home staff were present to care for the residents and alongside them were the emergency and welfare personnel. The staff ensured their wellbeing at the welfare centre by providing the residents with their own mattresses and a dedicated sleeping area separate from other flood victims. Additional to the rest home staff assisting the residents, there were also community networks operating that linked residents, rest home staff, emergency services and disaster welfare personnel together. The Kaitia flood disaster relief assistance was integrated to provide individual and community recovery for this group. At a conceptual level, the disaster assistance that was provided can be linked to social capital as a community resource that is available in times of social destruction and disruption, which can enhance individual and community disaster recovery.

### **5.2.2 The role of social support and social connectedness for older adults whose flats were flooded**

Social support networks can be an indicator of social connectedness for older adults in the community. A lack of social support networks may indicate social vulnerability in a disaster because the needs of older adults may become less visible in the community. Social vulnerability is relevant when considering the social connectedness of older adults living independently in the community. None of the participants evacuated from their flats were aware that the amount of rain that had fallen in the region over the three-day period posed a threat to them. No one had contacted them prior to the evacuation, and as a consequence these older adults were unprepared for the disaster; they had limited information and social support to assist them to prepare. However, after the disaster, social support played an important role in their post disaster recovery. For example, the Salvation Army hosted monthly social dinners for the flood victims, which continued for a year after the disaster. The dinners provided a chance for these older adults who were living in dispersed temporary accommodation to be reconnected together and support each other during the recovery phase. The dinner event was also a time for community relief facilitators to be able to meet with the victims and address any questions, as well as communicating progress reports on the clean up and future planning for relocating the evacuated residents to permanent accommodation. Assistance came from community welfare organisations, friends and family as the following excerpts tell:

Mr W:

“We were lucky because the Salvation Army went out of their way for us, and they got us a grant, which most people took, so you bought back your fridges and washing machines and that. They did a wonderful job, the old Salvation Army, and Work and Income New Zealand helped too, they gave us a food voucher.”

Mrs C:

“They supplied us with all the necessities of starting up a home again, there was the bed, the fridge, the washing machine, heater, I think you could have a TV, a sofa and if you needed pots and pans, cutlery, crockery, anything like that you could have it.”

Those who needed transport assistance to the dinners were picked up and taken to the venue and then returned to their temporary accommodation again. The role of friendship and companionship played an important role in their recovery. The adults in my study were active in creating their own support group that centred on companionship through monthly evening dinner outings. The following excerpts provide a sense of the importance of social support in their recovery:

Mr T :

“Oh it was marvellous, they would come and pick you up and bring you home again.”

Mr T:

“The lady that ran the dinners for us, she brought in different people who were talking. I was lucky, when I went down, I knew probably half of them, I had had something to do with them and it was easy for me.”

Mrs K:

“And a lot of people I didn’t know, now have become my friends, and some of them are in here (in neighbouring flats) most of us in here are flood victims and we have all got to know each other, we all have the same thing in common.”

Mrs K:

“Most of them (flood victims) live here and then some of them became my friends and we had a group at the Salvation Army called ‘Do Drop In’ and we met there, we’ve become good friends.”

Mr W:

“We (residents in the rental flats) all get along together, we all go out for dinner once a month. Tonight we go for dinner, every month - that was started since the flood.”

Research by Kaniasty and Norris (1993) has highlighted the role of social support in the recovery phase. Their findings are relevant to the Kaitaia disaster with regards to understanding the importance of social support and its role in the participants’ post disaster recovery. Welfare organisations provided social support for flood victims over the months following the disaster. The community support helped the flood victims to develop and maintain networks that assisted in their recovery. The ongoing grass roots support initiated by the victims themselves through forming a residents’ monthly dinner group, can be seen as a local community response that was an important part of the recovery process. The social support exchanges of mutual help that do occur have been described as altruistic communities; this is because there is a higher than usual level of community fellowship, which can create a sense of unity among the victims (Kaniasty & Norris, 1995). In the context of a disaster, “receiving help may not be self-esteem threatening because social

comparison processes enable victims to discover that many others share the same fate” (Kaniasty & Norris, 1995, p.449). Organisations who provide social support assistance in the post disaster recovery phase play a central role in creating a sense of unity and supporting community altruism. For example, the Salvation Army provided a regular meeting place for the flood victims that provided the opportunity for social support; the meal event gave victims the opportunity to receive informational and advocacy support from community based organisations. Mr T recalled the help he received with making an insurance claim, as this following excerpt shows:

Mr T:

“The social support worker came to me as I was having a bit of trouble with insurance, so I gave it to her and she went away, she probably stood on her head to get things done, but she got it done.”

Mrs K:

“The Salvation Army have been marvellous, and the people around, a lot of my friends have been good, they’ve been good. The only part that wasn’t good was the power board, we just got new meters in October and I got a bill for five hundred dollars the other day, and so one of my friends came in and she got on the phone ... so whether it will right itself out or not, I don’t know, but that is the only thing [problem] I have had since the flood is my power bill.”

These excerpts on social support also highlight the importance of maintaining social support assistance beyond the immediate weeks following a disaster. The long-term nature of social support was particularly important to the residents because they were faced with a multiple number of challenges. These included: loss of familiar home environment, loss of familiar networks, loss of possessions, and the challenges of making insurance claims. Disaster assistance can encounter a diverse range of social support needs that victims might require, for example, dealing with stressors such as administrative/bureaucratic tasks associated with daily life (as the excerpt from Mrs K about her high electricity bill revealed). The perceived availability of social support has been reliably associated with mediating appraisal and coping processes; that having supportive others to rely on suggests that it is “less likely that they will cope ineffectively and thus have a negative psychological or health outcome” (DeLongis, Folkman & Lazarus, 1988, p. 487).

Research on the 2003 Canberra bushfire recovery (Camillieri et al., 2007) found that the ongoing availability of social support, formalized in the ACT Bushfire Recovery Centre, set up by the Australian Government, was a successful resource for victims. The Recovery Centre, which housed government, non-government, charitable and community services under one roof, was a one-stop shop for the delivery of services to those affected by the bushfires. The services included, shelter, food, clothing, financial relief, personal support, and information, which were crucial in the early stages after the disaster. Psychological services and information to assist in the many problems that arose after the immediate recovery weeks were later added to the support services available. All households affected by the bushfires were allocated a recovery worker whose role was to assess social, emotional, financial and practical needs. The importance of social support being available to assist in facilitating recovery was described in Camillieri et al. (2007, p.92) where “85.7% of the bushfire respondents who attended the recovery centre found their recovery worker helpful or very helpful”. There was also a focus on enabling and facilitating access to

services, information, providing advocacy support, and community development via community events and activities. Arising from these social support initiatives were grass roots resident organisations that formed in the post disaster recovery phase. Similarly, the Kaitaia residents initiated their own support group during the recovery phase, which strengthened their social support networks.

### **5.3 Loss, recovery and restoration**

All the adults in this study who were evacuated from their rental flats experienced material loss because the floodwaters flowed inside their homes. The following section on loss, recovery and restoration, discusses the impact of the flood disaster in relation to older adults' loss of treasured possessions.

#### **5.3.1 Loss of material possessions**

The floodwaters rose to one metre inside the rental flats. As a result, the occupants lost treasured possessions as well as household items such as fridges, beds, and televisions. Loss of treasured possessions was an important part of each participant's story about the flood. The role of treasured possessions in an older person's life can provide a connection with the past through the meanings objects have for each owner. The objects that were lost in the flood included photographs, books and treasured furniture. The two male participants talked about the loss of important certificates and records associated with their careers and important personal possessions. The women talked about the loss of possessions in relation to connections with home and family. All items lost or damaged were a representation of personal history and were connected with personal identity. The following excerpts give an understanding about the importance of treasured possessions in later life:

Mr W:

"The thing that really hurt me the most was losing your personal papers and your photo albums and things like that. That was the hardest part when you sat down there and looked at the things that you had had for fifty years and all that was all gone, all gone...its the things that you had, like I had a lot books that I lost, but that's why I put them up high now, just in case it does flood again."

Mrs K:

"And then they [emergency personnel] said to me that the water has gone through the house, flooded everything ...The only thing they really saved was my TV because it was up high and the video, they were sort of up high luckily, but I lost everything [below 1 metre] bedding, everything, all my knitting, clothes, it was devastating."

#### **5.3.2 Recovery and restoration**

Recovery of treasured possessions after the flood was problematic for the participant group. First, they had to deal with the clean up of their homes, and second, they were expected to throw out possessions that had become contaminated by the floodwaters. These older adults not only had to face coping with losing many of their possessions, some also resisted obeying the instructions from clean up personnel to dispose of items. However, some older adults were not able to advocate for themselves and did not rescue possessions. The following excerpts give an understanding about the participants' experiences of saving their treasured possessions:

Mrs C:

"I saved all my photographs, I had a glory box and when they came to take all my stuff out that I was keeping, my son-in-law picked up the glory box and put it on his truck and the water was still running out of it, and somebody said, 'you can't take that away', he said (son-in-law) 'well I am'. And we took it out to my daughter's place and we went through all the photo albums and put all the photos out and dried every one of them."

Mr W told of how he actively resisted instructions by the clean-up personnel to discard all flood-damaged possessions. The following excerpt is about how he saved two flood-damaged armchairs that were very important to him because they had belonged to his mother:

Mr W:

"There was no way I was going to throw them away, so I just sat at home at my mate's place and hosed them all down and cleaned them all up, threw disinfectant all over them and stowed them ... but they [the authorities] came back looking for them, I wouldn't tell them where I'd hidden them, they were adamant they wanted this and that."

The impact on psychosocial wellbeing and the relationship with loss of treasured possessions symbolic of personal history and identity, has implications for practice. Flood damaged items will require decontamination if the floodwaters contain sewage. Decontamination procedures rather than disposal are an option for many items such as furniture, clothing, photographs, paper, books, discs and tapes (Australian Red Cross, 2009). If decontamination procedures are not put in place many treasured possessions will be disposed of unnecessarily, causing further distress in the recovery phase of a disaster. The role of treasured possessions in old age is relatively under researched in the literature. Further research is needed in this area that explores whether the rescue of treasured possessions from a disaster can facilitate positive relocation adjustments in the recovery phase.

#### **5.4 Insurance of household possessions**

The Kaitaia research did not specifically seek to explore reasons for not having insurance, rather it was to gain an understanding of how older adults made sense of the flood. However, some participants expressed stories about insurance matters when they talked about their experiences of the flood. The Kaitaia participants in the flood-affected flats were not homeowners; all lived in rental flats for older adults. Research by Tunstall, Tapsell, Green, Floyd and George (2006) on the health effects of flooding for residents in 30 locations in England and Wales affected by flood events since 1998, found that 59% of renters compared with 92% of home owners had any form of contents insurance to help with replacing damaged items. The trend for those in rental accommodation to be less likely to have contents insurance was also found in the Kaitaia flood research.

The responsibility for repairing the flood damaged Kaitaia flats lay with the owners of the rental flats. Only two out of five of the participants from the Kaitaia flood research had home contents insurance. One participant, Mrs B was able to independently negotiate the insurance claims process and replace all her lost possessions satisfactorily. She saw the replacement of her damaged possessions as an opportunity to upgrade and improve on

chattels that would be more tailored to her age related needs; for example, she upgraded her television to one with a larger screen. Mrs B talked about the importance of having insurance as making it easier to recover from the disaster:

Mrs B:

“If I hadn’t had insurance you’d be talking to a different lady, I’d be so angry with myself.”

A second participant, Mr T, also was insured. He had been encouraged by his home care worker to take out a home contents insurance policy. The home care worker was present during my interview with Mr T and it was evident that without her proactive advice and assistance in facilitating insurance cover, he may not have made the decision to have contents insurance. After the flood Mr T was given assistance to make his insurance claim. It is noteworthy that when asked about what stood out about the flood experience, Mr T talked about the problem he had with submitting his insurance claim. He was given support by a welfare worker involved with disaster welfare assistance for victims. One Kaitiaki participant who did not have insurance at the time reported that she felt she was better off receiving a monetary welfare grant as she had heard that some people had experienced difficulty in receiving compensation from their insurance company. Advocacy support for older adults to assist in negotiating insurance matters in the recovery stage needs to be considered as an important area where social support can positively influence recovery. Tunstall et al. (2006) found that the most significant factors associated with health and stress after flooding was when there were problems with insurers and loss adjusters. Furthermore having adequate insurance cover reduced stress, while having uninsured losses added to the health effects on flood victims (Tunstall et al., 2006).

#### 5.4.1 Risk perceptions about natural hazards and home contents insurance

The study participants lived in rental flats next to a flood protection stopbank (see Figure 1 below) yet none of the participants evaluated their environment as posing a risk.



Figure 1. Panorama of stream, stop-bank and housing

In the participants’ narratives, none had regarded the stream as a flood threat. One woman when told by a fireman that the stream was in flood stated: “that little creek, oh rubbish”. One participant, who did have insurance prior to the flood, stated that he had taken out insurance on the advice of his caregiver. The caregiver had urged him to get insurance

because he had recently purchased an expensive chair, and she was worried it might be stolen. The location next to a stop-bank as a natural hazard risk did not appear to be a rationale for having home contents insurance. The second participant had insurance for the 'unexpected', she stated that if she hadn't had insurance she would have been "so angry with herself". This woman was aware of the need to manage uncertainty. She was also aware that many older adults living in the rental flats did not have insurance due to cost.

Following the Kaitaia flood however, two out of three participants who were not insured prior to the 2007 flood took out home contents insurance. The participants also have taken measures to protect their possessions by shifting important items to higher areas. The protection of possessions after a flood was also identified in research by Tapsell et al., (2002) who found many people affected by flooding in northeast England had changed aspects of their behaviour after the flooding; this included moving possessions to higher areas within their homes, and future-proofing their homes against future floods.

## **5.0 CONCLUSION**

This report has outlined individual and social factors affecting the recovery of older adults after a disaster. Factors that will have an impact on recovery include exposure to trauma, loss, declining health, social inequalities and reduced social support networks. Social support was identified as a significant factor that assisted in post disaster recovery for older adults. Older adults' health and welfare will impact on their recovery without the provision of appropriate age specific support. Older adults are often less visible in the community; and often are reluctant to ask for help, despite having reduced personal social support networks due to illness and death. Therefore health and broader social conditions must to be considered in emergency planning for the recovery needs of older adults. The inclusion of older adults in disaster planning initiatives around recovery would ensure their age specific needs were heard, understood, and integrated into disaster services. In a post disaster environment, the life skills and experience of older adults will play an important role in assisting community recovery.

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