

# Psychosocial recovery from disasters: A Māori perspective.

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## Abstract

Psychosocial wellbeing considers the interaction between psychological and social factors which contributes to overall wellbeing for individuals, families and communities. Impacts of disasters vary and pose a serious risk to psychosocial wellbeing. The psychosocial recovery approach aims to reduce the psychosocial impacts of a disaster. This includes minimising the physical, psychological, and social impacts of an adverse event while supporting emotional, social, and physical wellbeing of individuals and groups. Māori are tangata whenua (indigenous people) of Aotearoa New Zealand. Māori are disproportionately impacted by poor psychosocial health outcomes compared to non-Māori. Research that examine Māori perspectives of psychosocial recovery following disasters is scarce. Using the 2016 Kaikōura earthquake as a case study, this Masters dissertation provides Māori insights of psychosocial recovery post-disaster. The objectives of this research are to explore the psychosocial mechanisms developed after the Kaikōura earthquake by both external agencies and Māori themselves. It identifies the difficulties, barriers, gaps, and successes encountered by Māori during their psychosocial recovery. The chosen methodology for this study was Kaupapa Māori research paradigms to represent Māori narratives about recovery following the Kaikōura earthquake. Te Tiriti o Waitangi (Treaty of Waitangi) principles also guided this research. This study is a descriptive qualitative piece and utilised semi-structured interviews of five Māori participants to gather information. The information gathered was then analysed thematically. The study finds that the earthquake affected the psychosocial wellbeing of Māori who developed different mechanisms to overcome the events. Psychosocial mechanisms positively and negatively impacted Māori. Te ao Māori (Māori worldview) mechanisms such as kaha (capabilities), manaakitanga (caring for others), kotahitanga (unity) and marae were key to positively affecting psychosocial wellbeing for Māori following the earthquake. This reinforces the view te ao Māori mechanisms should be embedded into disaster risk reduction activities within New Zealand to better support psychosocial wellbeing. Relationship building between Māori and external agencies such as the Red Cross and Civil Defence of New Zealand is noted as an area for improvement. Existing studies found social capital is a key mechanism to facilitating a response to an event, and supports reducing the vulnerabilities in a community. Māori perceived the way mental health support was offered as inadequate. Mental health support was offered too soon after the earthquake and no follow up action was provided. This negatively affected participants' psychosocial wellbeing. Participants said timely follow up, adequate to the person's needs is required. This entails a holistic approach that considers Māori individual wellbeing, in their context, whānau collectives and environment. The best practices this study recommends include addressing health in an individual's context, whānau and environment. Investing in indigenous-led solutions, increasing Māori representation in disaster risk reduction and long-term resilience. Te ao Māori mechanisms and principles should be incorporated to support long-term psychosocial wellbeing of Māori. The study considers implications of the findings for

disaster risk reduction policies and concludes there is a need to improve psychosocial wellbeing for Māori, by incorporating te ao Māori into disaster risk reduction.

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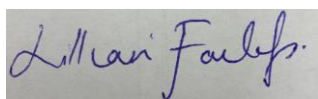
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## Attestation of Authorship

“I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.”



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Signature

22/08/2020

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Date

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This research was granted ethics approval by the Auckland University of Technology Ethics Committee. Application: 19/321, 21 October 2019 (Appendix A).

Ngā mihi nui kia kōutou.

## Glossary of Māori words in this research

Aotearoa	<i>New Zealand.</i>
Awhi	<i>Help.</i>
Hapū	<i>Sub-tribe.</i>
Hauora ahurea	<i>Historical concept of psychosocial wellbeing from a Māori point of view. Hauora - health/ wellbeing. Ahurea - the culture or surroundings that affects wellbeing.</i>
Iwi	<i>Tribe.</i>
Kaha	<i>Capabilities.</i>
Kaimoana	<i>Seafood.</i>
Kaitiaki	<i>Guardian role.</i>
Kanohi-ki-te-kanohi	<i>Meeting face to face.</i>
Kaumatua	<i>Elders.</i>
Koha	<i>Gift.</i>
Kotahitanga	<i>Unity.</i>
Māhaki	<i>Respectful conduct.</i>
Manaaki / manaakitanga	<i>Caring for others / show of respect / cultural and social responsibility.</i>
Mana	<i>Power and authority.</i>
Mana whakahaere	<i>Sharing of power and control.</i>
Marae	<i>Tribal or community-based communal and sacred meeting place.</i>
Matauranga Māori	<i>Māori knowledge.</i>
Ngā Pou Mana	<i>Support structures that illustrates four prerequisites of Māori health.</i>
Ngāi Tahu	<i>Pronounced Kai Tahu locally, is the South Island tribe of New Zealand.</i>
Ngāi Tahutanga	<i>Ways of knowing and acting that are specific to Ngāi Tahu.</i>

Pākehā	<i>Non-Māori.</i>
Poupatate marae	<i>Marae based in Manawatu-Wanganui region.</i>
Rangatahi	<i>Younger generation.</i>
Rangatiratanga	<i>Chiefly authority.</i>
Takahanga marae	<i>Marae based in Kaikōura.</i>
Taonga tuku iho	<i>Cultural heritage, prerequisite of Māori model of health; Ngā Pou Mana.</i>
Tamariki	<i>Children.</i>
Te ao Māori	<i>Māori worldview.</i>
Te ao tūroa	<i>The environment, prerequisite of Māori model of health; Ngā Pou Mana.</i>
Te taha wairua	<i>Spiritual dimension of Māori model of health; Te Whare Tapa Whā.</i>
Te taha tinana	<i>Physical dimension of Māori model of health; Te Whare Tapa Whā.</i>
Te taha hinengaro	<i>Mental and emotional dimension of Māori model of health; Te Whare Tapa Whā.</i>
Te taha whānau	<i>Family dimension of Māori model of health; Te Whare Tapa Whā.</i>
Te Whare Tapa Whā	<i>Māori model of health that depicts Māori wellbeing as four equal pillars of a house.</i>
Tūrangawaewae	<i>Land base, prerequisite of Māori model of health; Ngā Pou Mana.</i>
Waiora	<i>Overall wellbeing.</i>
Whakapapa	<i>Genealogy, relationships that connects the living, departed, the individual and their environment and means everything in the natural world shares a common ancestry.</i>
Whānau	<i>Family, groups, community, as defined by the individual.</i>
Whanaungatanga	<i>Relationships, prerequisite of Māori model of health; Ngā Pou Mana.</i>
Whare	<i>House.</i>

# Chapter One: Introduction

## 1.1. Introduction.

Aotearoa New Zealand is exposed to several hazards (such as earthquakes, tsunamis, cyclones, and pandemics) which can lead to disasters (Ministry of Health, 2016; Gaillard, Walters, Rickerby & Shi, 2019; Grant, Hart & Langer, 2019). The risk of a disaster increases when hazards interact with physical, social, economic, and environmental vulnerabilities (Wisner, Gaillard & Kelman, 2012; Gaillard et al., 2019). Psychosocial recovery following a disaster aims to reduce the physical, psychological, and social impacts of the event (Mooney, Paton, De Terte, Johal, Karanci, Gardner & Chambers, 2011; Ministry of Health, 2016). Local knowledge and indigenous world views is key to supporting psychosocial recovery, reducing vulnerabilities and building resilience to disasters (Derrick, Steel & Psychol, 2006; Dekens, 2007; Mooney et al., 2011; Macfarlane, 2015; Rey, Le De, Leone & Gilbert, 2017; Trogrlic, Wright, Duncan, van den Homberg, Adeloeye, Mwale & Mwafulirwa, 2019). Māori, the indigenous people of New Zealand, are disproportionately impacted by poor psychosocial health outcomes (Reid, Varona, Fisher & Smith, 2016; Came, McCreanor, Haenga-Collins & Cornes, 2019; Ministry of Health, 2019). Yet, little is known about Māori perspectives of psychosocial recovery following disasters. This Master dissertation is a step toward filling this knowledge gap. The aim of this study is to explore how psychosocial mechanisms developed post Kaikōura earthquake supported Māori through their recovery. Section 1.2 defines key concepts linked to disaster studies including vulnerability, capacity and resilience. Section 1.3 provides a general introduction to psychosocial wellbeing and recovery. Section 1.4 explains the research gap and intent for this research. The research question and objectives are then described. Section 1.6 introduces the case study of 2016 Kaikōura earthquake and finally, section 1.7 provides the structure of the dissertation.

## 1.2. Defining vulnerability, capacity and resilience.

A disaster is a serious disruption of a community or society's ability to function due to hazardous events interacting with conditions of exposure, vulnerability and capacity, causing widespread loss and damage (United Nations Office for Disaster Risk Reduction, 2005; Coppola, 2006). Hazards disproportionately impact vulnerable and marginalised groups (Inter-Agency Standing Committee, 2007; Wisner et al., 2012). Vulnerabilities are the conditions which increase individuals, communities, and society's susceptibility to the impacts of hazards (United Nations Office for Disaster Risk Reduction, 2005; Coppola, 2006). Individuals and communities may be vulnerable for a number of reasons. For example, they have inequitable access to resources existing within society, live in hazardous locations, or are marginalised as a result of continuing

colonisation effects, political systems and bad governance (Wisner et al., 2012; Harmsworth, Awatere & Robb, 2016).

The term capacity refers to the combination of strengths, attributes, and resources available within individuals, communities, or society to manage and reduce disaster risks (United Nations Office for Disaster Risk Reduction, 2016). Capacity is not necessarily the opposite of vulnerability (Wisner et al., 2012). Most people, including marginalised and vulnerable people, have capacities (Wisner et al., 2012). People have no or little influence over natural hazards or the factors that create vulnerability (Wisner et al., 2012). Strengthening capacities contribute to mitigating the risk of disaster and related impacts such as loss of homes and resource (Wisner et al., 2012; Paton & Johnston, 2017). Studies show capacities are the available resources, skills and knowledge people use to mitigate and cope from the impacts of natural hazards (Gaillard, 2010; Wisner et al., 2012; Le De et al., 2015). It is often easier to enhance capacities than reduce vulnerability (Wisner et al., 2012).

Vulnerability and capacity strongly relate to the concept of resilience (Gaillard, 2010). The definition of resilience has adapted over time (Alexander, 2013). Mileti (1999) said resilience is the opposite end of vulnerability and ability to resist change to natural hazards. Pelling (2003) suggested resilience is a component of vulnerability and the ability to cope with or adapt to hazards. Other studies describe it as being able to resist change and ‘bounce back’ to equilibrium after displacement (Bodin & Wiman, 2004; Gordon, 1978; Norris et al., 2008 as cited in Aldunce, Beilin, Handmer & Howden, 2014). The concept of ‘bouncing back’ in terms of resilience has been challenged as it could result in similar levels of risk after every disaster (Aldunce et al., 2014). It is generally emphasised that bouncing forward is more desirable (Manyena, 2006).

Despite difficulties in defining the term, strengthening resilience is a common priority for disaster risk reduction (DRR) frameworks at international and national levels (Gaillard & Jigyasu, 2016). The New Zealand National Disaster Resilience Strategy emphasises resilience is the ability to not only anticipate but resist the impacts of a serious disruption, respond effectively, maintain or recover functionality, and ‘grow’ through adversity (Ministry of Civil Defence & Emergency Management, 2019). An important aspect of this definition is that resilience is a capacity that develops over time (Fletcher & Sarkar, 2013). This supports studies that depict resilience as a process where people positively adapt to new realities (Fletcher & Sarkar, 2013; Ministry of Health, 2016). Furthermore, vulnerability, capacity and resilience are linked to the notions of psychosocial wellbeing and psychosocial recovery explored next.

### 1.3. Overview of psychosocial wellbeing.

Psychosocial wellbeing underscores the close relationship between individual psychological and social factors (Ministry of Health, 2016). Psychosocial wellbeing includes psychological, social, economic, and physical (including housing, infrastructure, and physical health) dimensions that contribute to an individual and group's overall wellbeing (Mooney et al., 2011; Inter-Agency Standing Committee, 2017). Despite growing understanding and acceptance of the importance of DRR increased disaster response capacities, disasters and in particular the management and reduction of risk continue to pose a global challenge (United Nations Office for Disaster Risk Reduction, 2005). Hazardous events include a range of issues such as economic, human, and environmental impacts (United Nations Office for Disaster Risk Reduction, 2016). These consequences include death, displacement, and loss of food, damage, human rights, and psychosocial impacts (Leon, 2004; World Health Organisation, 2011; Wilson, 2013).

Research shows disasters have a profound impact on the psychosocial wellbeing of affected groups (Weissbecker, 2009). Uncertainty, shock, depression, anxiety, anger, post-traumatic stress disorder (PTSD), phobic disorders, health risk behaviours (such as substance abuse disorders) are examples of the impact's disasters have on mental health (Leon, 2004; Silove, Steel & Psychol, 2006; Wilson, 2013). Leon (2004) states mental health issues may be experienced over an extended period of time after a disaster. People affected by such events generally experience higher rates of mental health issues, however the impact varies significantly from one to another (Inter-Agency Standing Committee, 2007). This means marginalised groups are more likely to suffer psychosocial impacts following a disaster due to their predisposition to vulnerability (Inter-Agency Standing Committee, 2007; Mooney et al., 2011; Wisner et al., 2012; Paton & Johnston, 2017).

There is a direct correlation between events (such as earthquakes) and the amplification of pre-existing issues of social injustice and inequality (Inter-Agency Standing Committee, 2017). Pre-existing psychological problems such as a severe mental disorder may be compounded by emergency-induced issues such as grief, depression, and PTSD (Leon, 2004; Silove et al., 2006; Wilson, 2013; Inter-Agency Standing Committee, 2017). Pre-existing social issues, such as poverty and marginalisation, may be coupled with emergency-induced social issues including family separation, disruption of social networks, destruction of community structures and resources (Inter-Agency Standing Committee, 2017). Predisposition of vulnerable people and groups means psychosocial wellbeing is more likely to be negatively impacted (Wisner et al., 2012; Paton & Johnston, 2017).

The Sendai Framework for DRR 2015 – 2030 asserts enhancing recovery schemes to provide psychosocial support and mental health services is an important component of DRR and resilience (United Nations Office for Disaster Risk Reduction, 2015). Psychosocial recovery should reduce the physical, psychological, and social impacts of an adverse event and enhance the emotional, social, and physical wellbeing of individuals, whānau (family) and communities (Mooney et al. 2011; Ministry of Health, 2016). The aim of psychosocial recovery is to help a community positively adapt to a new reality (Mooney et al. 2011; Ministry of Health, 2016). Supporting people to a new reality minimises denial, stress, anxiety and other maladaptive reactions that may occur when ‘bouncing back’ from disasters (Makwana, 2019). The psychosocial recovery approach considers people in the context of the combined influence that psychological factors and the surrounding social environment has on their physical, mental wellness and overall resilience (Mooney et al. 2011; Ministry of Health, 2016). The next part of this chapter introduces the research gap of this dissertation. To gain Māori perspectives of psychosocial recovery following disasters within New Zealand.

#### 1.4. Research gap.

Māori are tangata whenua (indigenous people) of Aotearoa New Zealand. Māori present with higher incidence, prevalence and mortality rates from chronic disease compared to non-Māori and are disproportionately represented in a range of socioeconomic issues (Ministry of Health, 2019; Rolleston, Cassim, Lawrenson, Keenan, Kidd & Hokowhitu, 2020). The life expectancy of Māori is approximately 10 years less than non-Māori (Rolleston et al., 2020). Studies found Māori suffer twice the rate of serious mental illness compared to non-Māori (Baxter, 2008; Oakley-Brown, Wells, & Scott, 2006 as cited in Maree Kopua, Kopua & Bracken, 2020). The most common disorders are anxiety (31%), substance abuse (27%), and mood disorders (24%) (Maree Kopua et al., 2020). These disparities are a deeply rooted prejudice and the result of ongoing impacts of colonisation and associated loss of culture and identity (Harmsworth et al., 2016; Came et al., 2019; Rolleston et al., 2020).

Poor health, along with complicated social and economic problems render Māori statistically vulnerable to disasters (Reid et al., 2016). Despite these persisting constraints, research suggests Māori possess a number of capacities (i.e. social networking and capability of marae) which were fundamental in responding to the Kaikōura earthquake as well as previous disasters within New Zealand (Hudson & Hughes, 2007; Kenney & Phibbs, 2014; de Bruin & Read, 2018). Ngāi Tahu (Kai Tahu pronounced locally) in the South Island iwi (tribe) of New Zealand utilised their strong sense of Ngāi Tahutanga (ways of knowing and acting that are specific to Ngāi Tahu), as key mechanisms in responding and recovering from the 2011 Christchurch earthquakes (Kenney & Phibbs, 2014). Research proclaims local knowledge, ways of life (for example te ao

Māori) and tribal development initiatives seem to shape long-term resilience of iwi members and local Māori by addressing factors such as financial hardship, unemployment and poor housing to enhance psychosocial wellbeing (Kenney & Phibbs, 2014).

Māori are framed in deficit discourses of poor mental health (de Bruin & Read, 2018; Maree Kopua et al., 2020). Scholars argue mainstream mental health treatments fail to consider the holistic view of health taken by Māori focusing on collective, whānau-based outcomes (Durie, 2003; Harmsworth et al., 2016; Kukutai & Taylor, 2016; Maree Kopua et al., 2020). Similar to Māori views of health, psychosocial wellbeing following a disaster should include security and safety such as interpersonal bonds and networks including family, groups, community, and society (Durie 2006; Harmsworth & Awatere, 2013; Wilson, 2013). A holistic approach to DRR is important and should incorporate local knowledge and world views (Gaillard, 2010; Kwok, Doyle, Becker, Johnston & Paton, 2016). Outcome measures targeted at Māori should be holistic (include cultural reconnection) and build on local capacities to better cope through disasters (Thornley, Ball, Signal, Lawson-Te Aho & Rawson, 2015; Warbrick, Came & Dickson, 2018). Initiatives should be culturally appropriate, thereby bringing Māori world views and knowledge into a modern society (Macfarlane, 2015).

An observation of the research about the Kaikōura earthquake suggests feedback and community involvement were crucial aspects of psychosocial recovery. Yet, little is known about the experiences of Māori and their psychosocial recovery following disasters within New Zealand. This provides an opportunity to explore the efficacy of psychosocial programmes that have been implemented following the Kaikōura earthquake, from a Māori perspective. This research intends to advance Māori narratives of their psychosocial recovery post-earthquake, which includes what psychosocial wellbeing means from Māori perspectives and the mechanisms that supported their recovery.

## 1.5. Research question and objectives.

This research intends to gain Māori perspectives of psychosocial recovery following disasters within New Zealand and has the following objectives:

- Explore the psychosocial mechanisms developed in the Kaikōura earthquake by both external agencies and Māori themselves.
- Discover difficulties, barriers, gaps, and successes encountered by Māori during their psychosocial recovery.
- Recommend best practices from a Māori worldview to better support Māori in psychosocial recovery post-disaster.

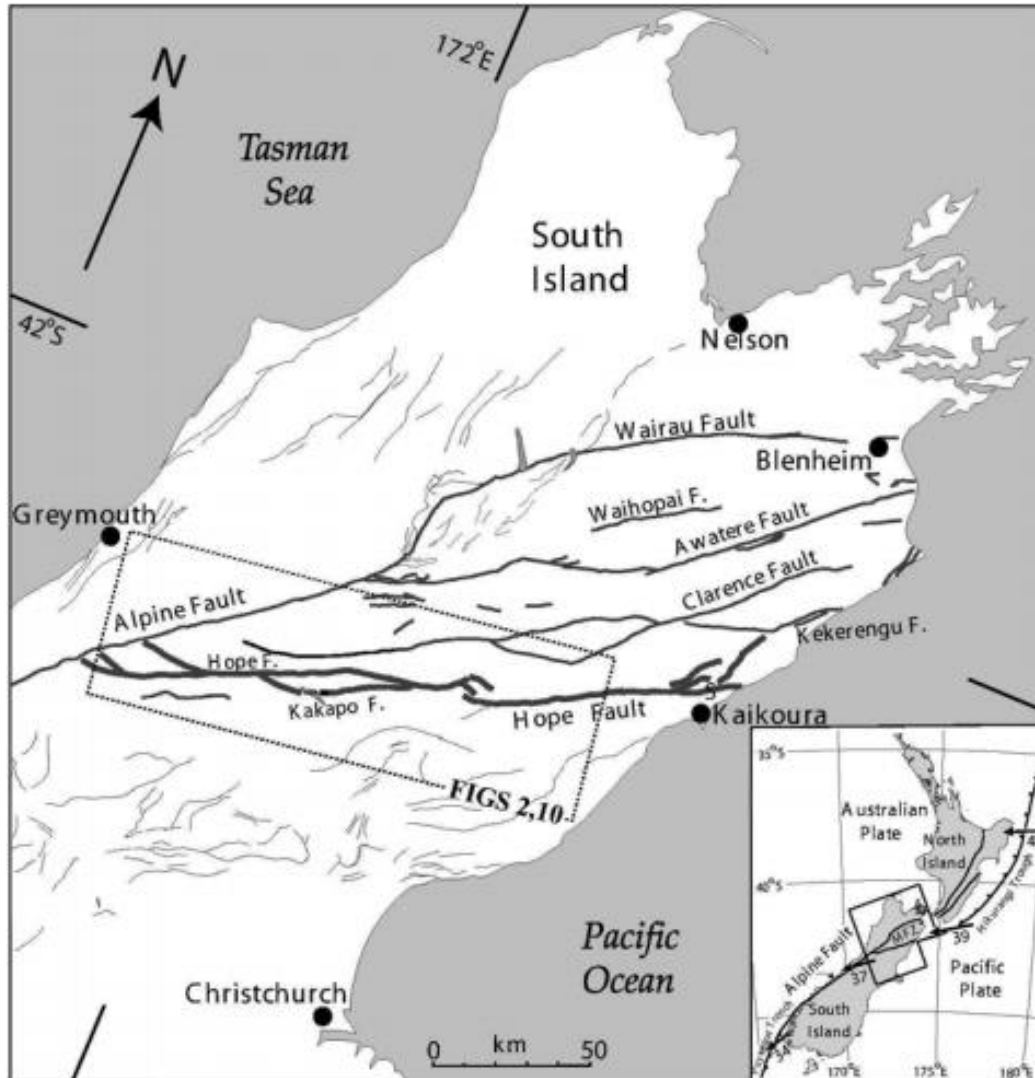
## 1.6. Case study.

The Kaikōura district is a popular tourist destination, has a resident population of around 3,500 people and more than 2,000 permanent residents in the township (de Bruin & Read, 2018). On 14th November 2016, a large 7.8 magnitude earthquake hit Kaikōura on the North-East coast of the South Island in New Zealand (Duputel & Rivera, 2017). The earthquake involved complex ruptures, multiple faults and caused strong shakes throughout the upper South Island leading to widespread landslides (Robinson, 2018). The earthquake generated tsunami threats and was felt strongly from Christchurch to Wellington (Duputel & Rivera, 2017; Woods, McBride, Wotherspoon, Beaven, Potter, Johnston & Becker, 2017). A map showing the location of Kaikōura within New Zealand is in Figure 1. The scale and strength of the earthquake impacted thousands of people, disrupted transport networks and other lifeline utilities such as the local hospital (Woods et al, 2017). The building and environmental damage was to such an extent the community and approximately 1,000 tourists were isolated (Carter & Kenney, 2018). There were two deaths, approximately 600 injuries and New Zealand \$1 billion in damage (Vinnell et al., 2019).

At the time of the earthquake approximately 600 Māori people lived in Kaikōura District (Statistics New Zealand, 2020). Evacuations for those trapped at the time (and once the tsunami threat subsided) occurred between late evening of 15 November and 20 November and were only possible by air and sea (Robinson, 2018). This meant residents and tourists stranded in Kaikōura were largely dependent on their own resources before emergency services could support evacuations (de Bruin & Read, 2018). Studies affirm this period of time was difficult for residents to cope with, negatively impacting their psychosocial wellbeing (Stevenson, Becker, Cradock-Henry, Johal, Johnston, Orchiston & Seville, 2017; de Bruin & Read, 2018). Research asserts DRR should build on local capacities to increase resilience (Wisner et al., 2012). Māori possess a number of capacities which is a key focus of this research.

**Figure 1**

*Map showing the location of Kaikōura in New Zealand*



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### 1.7. Dissertation outline.

This dissertation is separated into five chapters. Chapter one has briefly described the concept of vulnerability, capacity, and resilience. It has introduced the concept of psychosocial wellbeing and recovery in a disaster context. The research gap and objectives of this study has been explained to provide the rationale for this research. The cases study; 2016 Kaikōura earthquake was introduced. Chapter two will provide a critical review of the literature pertaining to the research question and discuss Māori world views. Chapter three will explain the qualitative methods used in this study, outlining the research methods and the principles such as

Kaupapa Māori that underpin this research approach. Chapter four will present the findings of this study, in order to address the objectives, set in this introduction chapter. Chapter five will discuss the significance of the results in relation to the existing literature. Limitations of this study will be provided, alongside recommendations for future research.

## Chapter Two: Literature Review

### 2.1. Introduction.

The constructs of a holistic approach to DRR is drawing increasing attention (Silove et al., 2006; Mooney et al., 2011; Ministry of Health, 2016). This approach looks at a person's waiora (overall wellbeing) including individual, social and environmental factors that contribute to resilience (Dar, Buckley, Rokadiya, Huda & Abrahams, 2014; United Nations Office for Disaster Risk Reduction, 2015; Ministry of Health, 2016). Local knowledge, such as te ao Māori, is perceived as invaluable in terms of building resilience to disasters (Phibbs, Kenney & Solomon, 2015). By drawing on scholarly peer reviewed literature, policies and documents emphasising international standards, this section explores current concepts of psychosocial recovery, te ao Māori health and its relevance to DRR in New Zealand. This chapter provides a conceptual framework by discussing psychosocial wellbeing, psychosocial recovery in general and examines psychosocial support in a disaster context. Te ao Māori frameworks are explored along with intrinsic dynamics of social capital. It draws upon the literature of other research focusing on disasters within New Zealand which have incorporated Māori world views in practice, and factors that contribute to resilience. The objective is to analyse different approaches to DRR with a Māori lens.

### 2.2. Psychosocial wellbeing in disasters and emergencies.

Psychosocial wellbeing has proven to be somewhat complex to define in the literature. The Inter-Agency Standing Committee (2017) defines psychosocial wellbeing as the interaction between two aspects (psychological and social) which Fulton and Drolet (2018) say contributes to an individual and societies' overall wellbeing. Some of the psychological aspects reported by the Inter-Agency Standing Committee (2017) include mental health, emotions, thoughts, knowledge, and coping strategies. Conversely, social factors include social connections and relationships, social resources, community, spiritual and religious life. Psychosocial wellbeing is therefore the interrelationship between individual psychological and social factors (Mooney et al., 2011; Ministry of Health, 2016). Psychosocial wellbeing should encompass social issues which include pre-existing problems (poverty and marginalisation as examples) and emergency-induced social issues (family separation, disruption of social networks, destruction of community structures and resources) (Inter-Agency Standing Committee, 2007). Equally, psychological issues include pre-existing problems (which may include severe mental disorders) and emergency-induced problems (grief, depression, and PTSD for example) (Inter-Agency Standing Committee, 2007).

### 2.2.1. Psychosocial recovery.

Research postulates disasters have profound impacts on the psychosocial wellbeing of the affected populations (Weissbecker, 2009). People affected by disasters suffer a range of mental illnesses such as PTSD over a prolonged period of time (Leon, 2004). Fullerton, Reissman, Gray, Flynn and Ursano (2010) found PTSD to be a recognised and well-defined result of impact to disasters. Silove et al. (2006) suggests populations are typically vulnerable to a range of problems including grief, depression, phobic disorders, and health risk behaviours such as substance abuse disorders. For example, an evaluation six and a half years after the 1986 Chernobyl disaster found more than 3,000 people suffered significant long-term mental health affects (Leon, 2004).

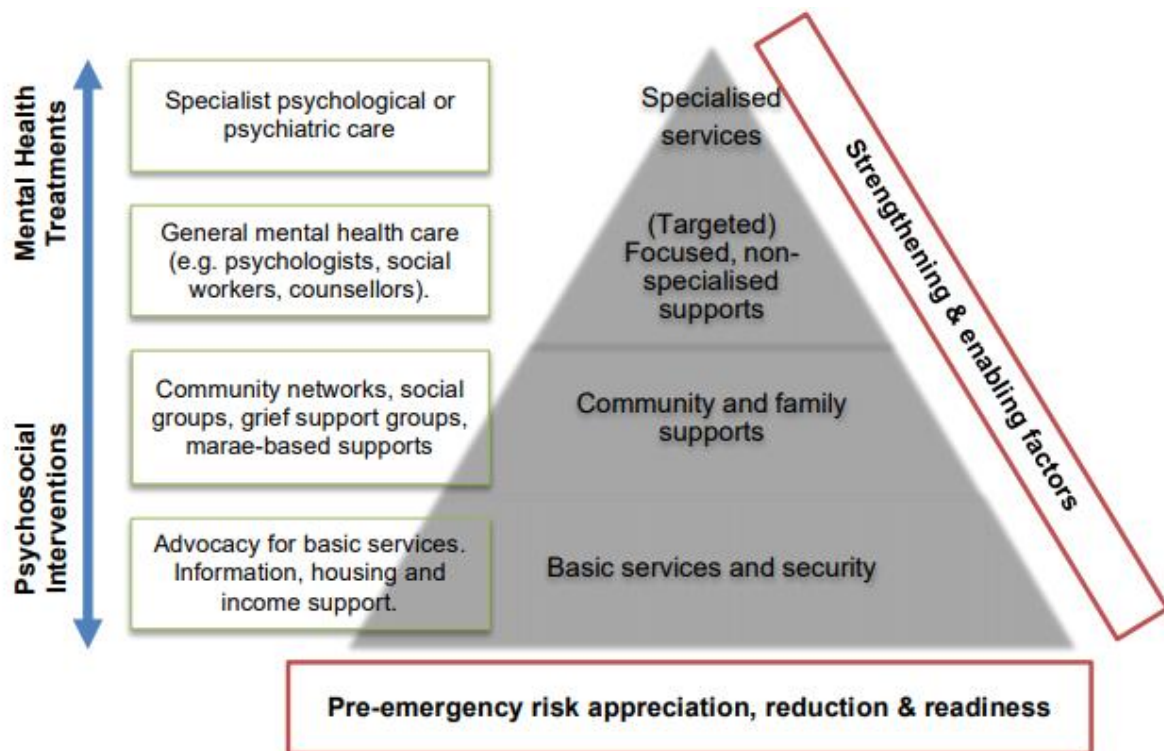
Following the devastating earthquakes in Christchurch, people suffered problems associated with feelings of uncertainty, fear of future tremors and an inability to plan for the future (Wilson, 2013). Crabtree (2013) makes reference to Bonanno's early research about psychological resilience, claiming the majority of people after disasters are 'resilient' if they have one or fewer symptoms of PTSD. Although PTSD is one of the most common post-disaster mental health effects, it is not the only problem (Hamblen, Norris, Symon & Bow, 2017). This is why only treating PTSD is not ideal for psychosocial wellbeing (Hamblen et al., 2017). A report by Professor Sir Peter Gluckman discussed the psychosocial consequences following the Kaikōura earthquake. He stated usually less than 5% of affected people will have on-going significant psychological morbidity requiring professional help but most people are resilient and will recover in time (Gluckman, 2016). Other studies found psychological distress was not limited to the immediate aftermath of an event (Norris, Friedman & Watson, 2002; Leon, 2004). Moderate impairment, indicating prolonged stress and distress was shown following events (Norris et al., 2002). Hamblen et al. (2017) says its important all of these issues receive adequate treatment they require. This builds on findings by Crabtree (2013) who asked whether this means mental health interventions will only be confined to those that have disorders or should they include all members of an affected population.

Psychosocial impacts of disasters include security and safety such as interpersonal bonds and networks including family, kinship groups, community, and society (Wilson, 2013). The literature has a heavy focus on immediate psychological response (albeit important), as Crabtree (2013) found following the 2008 Kosi River flooding, villagers' main priority was improving livelihoods which requires deep rooted changes in the social-cultural circumstances. Unmistakably psychosocial outcomes are complex and result in a range of challenges which requires a multi-faceted, holistic response (Silove et al., 2006; Mooney et al., 2011; Ministry of Health,

2016). This schematisation, showing the holistic approach required for DRR is illustrated in Figure 2 (Ministry of Health, 2016).

**Figure 2**

*Conceptual model schematising psychosocial support*



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Mental health assessments and treatments focus on treating individual illnesses whereas scholars state a new approach is required in order to promote wellbeing (Silove et al., 2006; Slade, 2010). Mooney et al. (2011) assert psychosocial recovery should encompass cultural, psychological, social, economic, and physical such as housing, infrastructure and physical health dimensions that are part of the regeneration of a community which has experienced adversity (Mooney et al., 2011; Ministry of Health, 2016).

Psychosocial recovery intends to reduce the physical, psychological, and social impacts of an adverse event and enhance the emotional, social, and physical wellbeing of individuals, family and communities (Mooney et al., 2011; Ministry of Health, 2016). Conversely, the aim of psychosocial recovery is to help a community positively adapt to a new reality rather than return it to normality (Mooney et al., 2011; Ministry of Health, 2016). This is because psychosocial recovery is about enhancing wellbeing and helping people to recover and

adapt after their lives have been disrupted (Ministry of Health, 2016). This is achieved by minimising the physical, psychological and social consequences of an emergency; enhancing emotional, social and physical wellbeing of individuals and communities; and helps develop individual and community resilience (Leon, 2004; Silove et al., 2006; Slade, 2010; Mooney et al., 2011). This empowers people to care for themselves and others by drawing on, and developing, their existing capacities, resource, and networks (Wisner et al., 2012; Ministry of Health, 2016).

Evidence suggests that when a disaster occurs, early psychological support is essential. The use of psychosocial first aid (PFA) for early intervention incorporates a sense of safety, calm, hope, efficacy, and connectedness to others (Fullerton et al., 2010). Effectiveness of PFA aims to adopt effective coping through compassionate contact, reunification with loved ones or other social supports and concrete problem solving such as securing resources to meet basic needs, managing disputes and taking steps to recoup losses (Fullerton et al, 2010). This proposes organisations should build on everyday mechanisms that build resilience rather than technical solutions. World Health Organisation (2011) says PFA should not be forced on people who do not want it. This is consistent with other studies affirming PFA should not be pushed onto people as it can make things worse (Schafer, Snider & Sammour, 2016). Studies found early phases of PFA practiced, among others, by the Red Cross to be beneficial (Bonanno et al., 2010 as cited in Crabtree, 2013). Scholars say systematic studies of PFA have not been undertaken because of the difficulty making assessments in disaster (Crabtree, 2013).

Studies suggest majority of people after disasters are somewhat resilient over time (Baranno et al., 2010; Gluckman, 2016). Crabtree (2013) says this may rule out the possibility of some people (with just one symptom of PTSD for example) getting help even though they may desire it. Providing immediate psychosocial support such as bringing people into safety, providing shelter and basic first aid, family reunification, and psychosocial services, enhances individual capacities to respond to events (Duckers, 2017). Research often focuses on the psychological impacts to health immediately after an event (Hamblen et al., 2017). All mental health issues following a disaster should be appropriately treated (Leon, 2004; Hamblen et al., 2017). As Mooney et al. (2011) points out, psychosocial recovery should include a holistic approach to wellbeing which entails all dimensions of health. The following section will examine psychosocial support following a disaster.

### 2.3. Psychosocial support following disaster.

Academic work related to DRR has drawn considerable attention to the need to build resilient communities (Kwok et al., 2016; Wisner et al., 2012). Understanding possible effects of a disaster is one thing, adequately addressing the impacts in relation to psychosocial resilience is another (Ducker, 2017). A key component of

psychosocial support post-disaster is a coordinated response by agencies (Silove et al., 2006; Slade, 2010). Psychosocial recovery support may operate vertically, from governing agencies to local groups and vice versa, as well as horizontally through effective collaboration and cooperation between groups involved in disaster response and recovery (Mooney et al., 2011). Stakeholders need to work together using an alternative approach that differs from their usual, specific-focused interventions (Silove et al., 2006; Slade, 2010). Psychosocial recovery will be negatively impacted if local community, government, and nongovernment bodies are not able to actively collaborate together in a cohesive way (Mooney et al., 2011). Competing priorities, lack of coordination or resource, unarticulated goals, or inconsistent approach for recovery, can negatively impact psychosocial wellbeing (Mooney et al., 2011; Eyre & Brady, 2013). Scholars agree a collaborative approach as well as a strategic coordinating group tasked with managing the overall recovery of local people is often key to effective psychosocial recovery (Silove et al., 2006; Slade, 2010; Mooney et al., 2011; Eyre & Brady, 2013).

Increasingly, research contradicts early perceptions that portray local people as vulnerable, helpless and act in a disoriented or irrational manner following a disaster (Quarantelli & Dynes, 1972; Perry & Lindell, 2003). The local community itself should be at the forefront in helping its own members since best support comes from people who generally know and share local knowledge, culture, beliefs and values (Derrick et al., 2006; Dekens, 2007; Trogrlic et al., 2019). Local knowledge enables communities to help themselves in the absence of, and prior to the arrival of, external agencies (such as Civil Defence) (Trogrlic et al., 2019). Strategic assistance from external agencies, in supporting response and recovery should avoid intrusion, cultural insensitivity or disempowerment of local leadership systems (Derrick et al., 2006).

In order to ensure holistic support to people affected by disasters, the onus should be on agencies to negotiate clear links between function areas and services, as opposed to individuals having to navigate multiple systems (Eyre & Brady, 2013). It is important to identify connections between elements of recovery planning to prompt a holistic approach that embraces psychosocial wellbeing. In essence, people affected by disasters should not be expected to segment and separate their needs following an emergency. Eyre and Brady (2013) state the systems designed to support them often do. For example, a study about homelessness in Australia found a key concern amongst participants was the challenge of easily accessing information about different services available to them (Garwood, 2012). It was recommended that improved communication and coordination among service providers would better support the affected people (Mooney et al., 2011; Garwood, 2012; Eyre & Brady, 2013). Coordination between national and local levels, incorporating local knowledge prior, during and after disasters help facilitate a cohesive response to an event and enhances psychosocial wellbeing (Silove et al., 2006; Slade, 2010; Mooney et al., 2011; Eyre & Brady, 2013). Following this section, Māori world

views and health as well as concepts of health and wellbeing are discussed. This aim is to connect Māori concepts of health and psychosocial wellbeing which is examined in section 2.6.1.

## 2.4. Māori worldviews.

To understand te ao Māori (Māori world views), it is important to clarify who Māori are. Māori are tangata whenua of New Zealand. Historically, the term ‘māori’ usually referred to something normal or ordinary and was adopted to differentiate between tangata whenua (Māori) and Pākehā (non-Māori) after the European settlement (Williams, 1997). Māori were expected to assimilate to Pākehā culture (Durie, 2003). This was because Pākehā norms was the standard all citizens should aspire to (Hill, 2010). Colonisation impacted Māori health, culture, language, social status, land, water, and natural resources (Harmsworth et al., 2016). As a result, the Māori culture and ‘way of life’ would no longer exist, typifying colonisation across the world (Hill, 2010).

Durie (2003) surmised this remained until 1975 when the Treaty of Waitangi Act was passed. Mika and O’Sullivan (2014) note the 1980’s and 1990’s saw the reassertion of Māori rangatiratanga (chiefly authority) and mana (power and authority). Fast forward, the Māori Land Act (among other statutes), has defined Māori as “a person of the Māori race and includes any descendant” (Kukutai, 2004). One of the challenges Statistics New Zealand seem to have come across when monitoring Māori outcomes is whether those claiming Māori ethnicity should be required to have Māori ancestry (Robson & Reid, 2001).

Studies found Māori are disproportionately impacted by dominant data integration activities due to the methodologies used to gather, use, and deploy information (Kukutai & Cormack, 2019). For example, typical statistics methodologies often measure the individual and does not include Māori in their collective entities, in a Māori world view (Kukutai & Taylor, 2016). Instead a Māori data sovereignty is proposed as an alternative to enable Māori to be the decision-makers around how data about them are used or deployed (Kukutai & Cormack, 2019). Macfarlane (2015) states policies should be developed in a way that integrates Māori and Pākehā views and thereby brings Māori world views and knowledge into a modern society.

Research overwhelmingly compares Māori to poor health outcomes (Durie, 2003; Harmsworth et al., 2016; Kukutai & Cormack, 2019). Te Hoe Nuku Roa report said it was difficult defining Māori as it is common to associate the population by socio-economic disadvantage (Durie, Fitzgerald, Kingi, McKinley & Stevenson, 2002). The bequest of ongoing colonisation has produced a society characterised by the presence of major ethnic and cultural disparities in health and wellbeing (Kearns, Moewaka-Barnes & McCreanor, 2009). Despite

significant changes made relating to reassertion of Māori culture, socioeconomic disadvantage, urbanisation, and cultural revitalisation are important to understand contemporary Māori experiences (Ware, Breheny & Forster, 2018). Western views tend to bias autonomy and personal adaptation as a means of ‘success’, Māori tend to lay emphasis on collective inclusivity (Sampson 1977, 1985 as cited in Williams, Rush, Simmons & Cairns, 2015). This means feeling part of a whānau (family or group), hapū (sub-tribe) and iwi (Cram et al., 2003; Mane, 2009; D. R. Thomas, 1995, Williams et al. 2015). The Ministry of Health released a Māori Health Action Plan: He Korowai Oranga Framework in 2014. The framework asserts the importance of prompting collaboration across sectors to address health inequities, while delivering high-quality and effective services that support Māori whānau, hapū and iwi aspirations for health and wellbeing (Ministry of Health, 2019). Such services do not discount the need for mainstream services (Brannelly, Boulton & Te Hiini, 2013). Such an approach should be holistic (as illustrated in Figure 4) (Williams et al., 2015). Where mainstream services are offered, treatments should be culturally appropriate and underpin Māori world views and approaches (te ao Māori) (Brannelly et al., 2013; Kukutai & Taylor, 2016; Maree Kopua et al., 2020).

Te ao Māori is underpinned by a set of traditional values and practices. For example, Kenney, Phibbs, Paton, Reid, and Johnston (2015) conjecture kaupapa as Māori values and principles which constitute moral rules. A key value underpinning the concept of kaupapa is whakapapa (Kenney et al., 2015). In 2001, Robson and Reid said that whakapapa is central to tangata whenua identity. A key part of understanding one’s whakapapa is being connected to and the concept of kanohi kitea (being present at their) marae (Te Rito, 2007). Professor Paul Tapsell says Marae can be tribal based (ancestral marae), or urban / community-based marae (Statistics New Zealand, 2014). Whakapapa may be used to connect with or differentiate one's individual identity from others (Te Huia, 2015; Harmsworth, Awatere & Robb, 2016). Whakapapa is a set of relationships with the living, departed, the individual and their environment and means everything in the natural world shares a common ancestry (Harmsworth et al., 2016). The interconnectedness of the world relies on nurturing of relationships with people and the land (Te Huia, 2015). Whakapapa provides a person with understanding about where they are from, who they came from, and where they are going (Te Huia, 2015). Knowledge of and sense of identity are very important to Māori and play a key role in keeping Māori resilient through adversities (such as earthquakes) (Te Rito, 2007; Kenney et al., 2015).

Further, Māori cultural identity involves understanding and connection to whakapapa, whānau, hapū, iwi and whenua. Waldon (2019) shares whenua, which can mean the placenta, birthplace, and land, are all important aspects of te ao Māori. Indigenous people tend to view themselves as a part of the natural world and not apart from it (Strathern, 1988; Bird-David, 1999; Strang, 2004; Ingold, 1995 and Willerslev, 2007 as cited in Reid, Varona, Fisher & Smith, 2016). Durie (2003) says this means the conceptualisation of Māori cultural identity

means everything in te ao Māori is interrelated. This idea is not new. In the early 1970's, a young Māori leaders conference was held. At the conference, topics such as Māori identity were discussed (Walker, 1977) which is still relevant today. Some of the points that were relevant to Māori cultural identity and this research included:

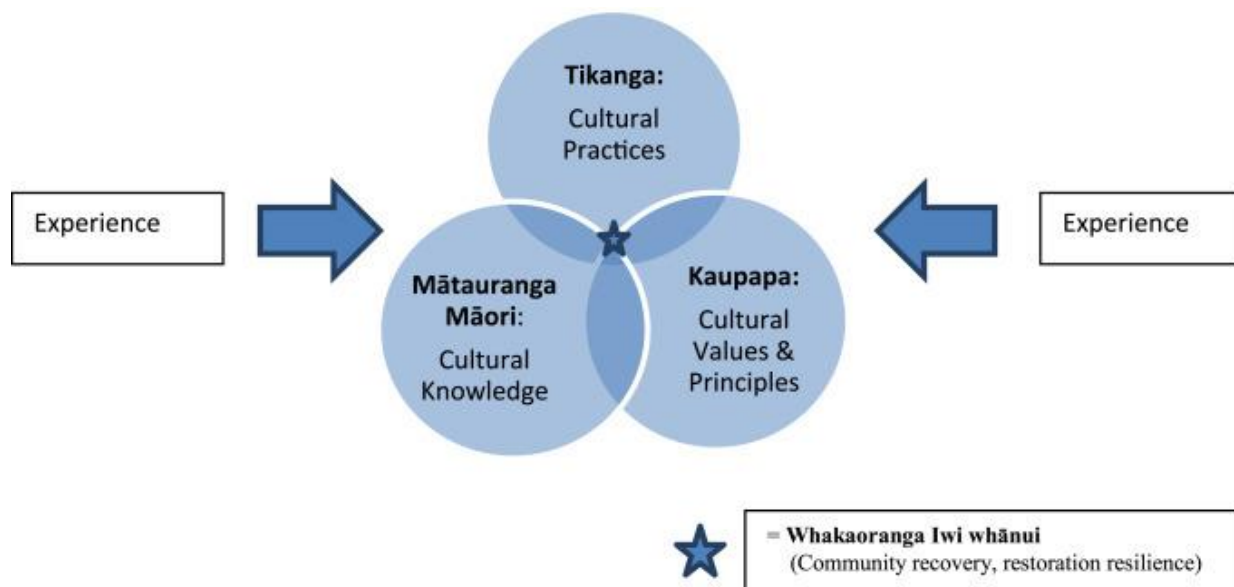
- Cultural identity is a feeling of belongingness of all things Māori (te ao Māori).
- Knowledge of te ao Māori (mātauranga Māori) is an important part of Māori cultural identity.
- Māori identity is unique and different to Pākehā views (Walker, 1997, p. 7-8).

Another principal Māori abide by is manaakitanga which essentially means to take care of people (Katene & Taonui, 2018). They share the below whakataukī (saying); “*manaaki manuhiri ahakoa ko wai te manuhiri, manaakihia. Tae mai he tangata ki tō whare, whāngaia (look after visitors no matter who the visitor, provide hospitality. When someone arrives at your house, care for them, feed them). Even if it is the last piece of bread you have left in your house, whangaia (feed them)*” (Katene & Taonui, 2018). Moreover, Kenney et al. (2015) define tikanga as a set of cultural practices and are the physical manifestation of Māori knowledge and values. Tikanga is a set of protocols or customs (Brannelly et al., 2013). Mead (2016) says ‘tika’ means to be ‘right’ or ‘correct’. Therefore ‘tikanga’ in literal terms can be a normative system which considers the right way to do things in society. Tikanga Māori in practice provides guidance about how Māori people meet, interact, and behave, and can determine how individuals identify themselves (Mead, 2016). Mātauranga Māori acknowledges the diverse perspectives and realities of Māori (Warbrick et al., 2018). Mātauranga Māori is ascertained from the senses, perceptual knowledge created through the interpretation of experience and local knowledge (Harmsworth & Awatere, 2013; Kenney et al, 2015). It recognises a natural order to the universe (Harmsworth & Awatere, 2013). Mātauranga Māori realises the diversities of life are interdependent on each (Harmsworth & Awatere, 2013).

The concept of being Māori has linked directly to their sense of self, community and enhances their resilience to “adapt” through adversities, including earthquakes. As illustrated in Figure 3, te ao Māori encapsulates tikanga (cultural protocols/ practices), kaupapa (cultural values and principles) and mātauranga Māori (Māori knowledge) (Kenney & Phibbs, 2015). As highlighted in the literature, a fundamental aspect of health programmes which involve Māori should be underpinned by te ao Māori (worldviews and approaches). Following this section, Māori health in context of New Zealand will be explored as well as Māori approach to health and DRR.

**Figure 3**

*Conceptual model of te ao Māori approach to DRR*



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## 2.5. Māori health in context.

In 2019, the New Zealand population was at an estimated total of just under 5 million people (Statistics New Zealand, 2020). The 2013 census, reports Māori comprised of approximately 690,300 (14.9%) of the New Zealand population (Coutts, Morris & Jones, 2016). The overall national portrait of Māori population however was most recently updated in the 2018 Census and estimates Māori population to now be 744,800 (Waldon, 2019) contravening early predictions the Māori race was dying and would not survive into the 20th century (Durie, 1999).

Māori historically, (and still tend to) suffer from poor health outcomes. For instance, in 1999, a research paper from Professor Mason Durie pointed out Māori have long suffered many health issues (Durie, 1999). Durie stated historically, Māori suffered from communicable diseases and malnutrition, overtime the prevalence of vehicle accidents and heart diseases become similar issues. Not to minimise the seriousness of other health issues, Durie points out that increasingly, the greatest threat to good health for Māori is poor mental health (Durie, 1999). This is consistent with the findings in the Wai 2575 Māori Health Trends Report which found that between 2011/12 and 2016/17, the percentage of Māori with a high psychological distress score increased

from 7.4 percent to 11.5 percent compared to non-Māori that found an increase of 4.0 percent to 7.7 percent in the same time-period (Ministry of Health, 2019).

Research exemplifies Māori do less well than non-Māori with diagnosing and treating such mental health issues, due to disproportionate burden of illness, lack of diagnoses, and frequent readmission to forensic care (Rangihuna, Kopua and Tipene-Leach, 2018). The impact of mental health disorders in the Māori community may relate to psychosocial adversity (Rangihuna et al., 2018). These examples are consistent with other studies indicating Māori suffer poor health along with complex social and economic problems compared to non-Māori (Ellison-Loschmann & Pearce, 2006; Reid, Taylor-Moore & Varona, 2014). Rangatahi (younger generation) are observed as leaders are increasingly being able to move in both te ao Māori (the Māori world) and the mainstream world (Katene & Taonui, 2018). Māori and Pākehā views should be integrated in a way that brings te ao Māori and matauranga Māori into a recent society, to benefit Māori (Macfarlane, 2015). With this concept in mind, the following sections of this chapter will discuss both te ao Māori and psychosocial health and how the two concepts may relate.

## 2.6. Māori concepts of health.

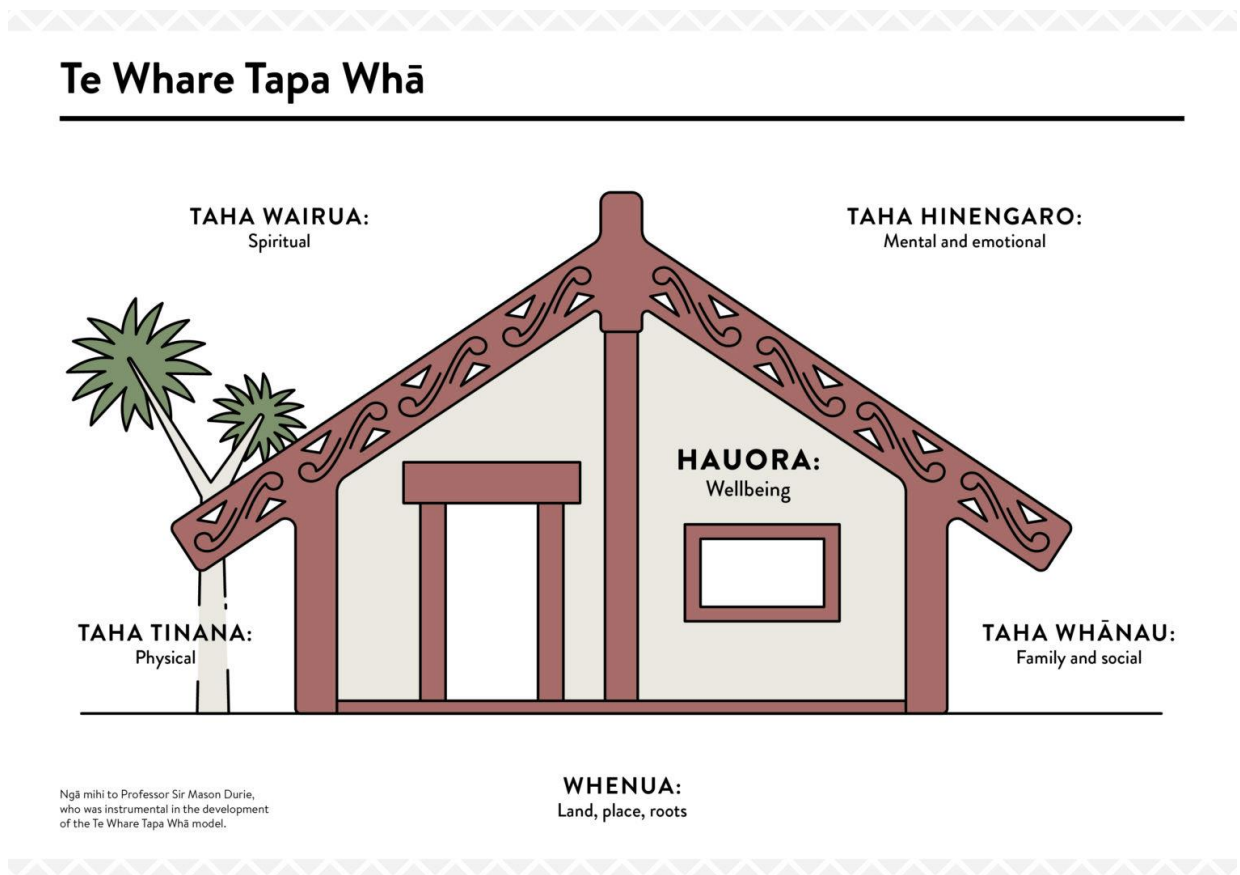
Similar to the way Māori view their sense of individual and cultural identity, Māori view health and wellbeing holistically (Durie, 2003; Harmsworth et al., 2016). Foundations of health are complex and not necessarily linked in a direct way to either physical or mental disorders (Ratima, Edwards, Crengle, Smylie & Anderson, 2005). It is impossible to address Māori health without understanding the wider environments within which health status takes shape (Rochford, 2004). Māori view health as the interrelationship between physical, mental, spiritual and whānau health (Waldon, 2019). Likewise, Ngā Pou Mana (support structures) illustrates four prerequisites of Māori health (Ratima et al., 2005). The prerequisites include whanaungatanga (relationships), taonga tuku iho (cultural heritage), te ao tūroa (the environment) and, tūrangawaewae (land base) (Ratima et al., 2005; Harmsworth & Awatere, 2013). These prerequisites are among the factors identified by a number of writers as central to a secure Māori identity and wellbeing (Durie 1998 as cited in Ratima et al., 2005). These can underpin Māori understandings of health.

Te whare tapa whā is a widely quoted Māori model of health (Durie 1998 as cited in Ratima et al., 2005). Te whare tapa whā describes good health as the balance between four interacting dimensions which include te taha wairua (spirituality), te taha hinengaro (emotions), te taha tinana (physical) and, te taha whānau (extended family). Health is likened to the four walls of a house, each wall representing one of the dimensions and each being necessary to ensure the stability of the house (Ratima et al., 2005). This means if one or more of the four dimensions are missing or in some way damaged, a person, or a collective may become ‘unbalanced’ and

subsequently unwell (Ratima et al., 2005; Harmsworth & Awatere, 2013). This model will be used as the framework for data collection in this research and is depicted in Figure 4 (Canterbury District Health Board, 2020).

**Figure 4**

*Te Whare Tapa Whā*



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An important consideration for Māori is the notion of whenua (environmental) wellbeing (Durie, 2006; Crow, Tipa, Nelson & Whitehead, 2020). Historically, survival of Māori was dependent on their knowledge of natural resources and ability to sustainably utilise natural resources (Mihinui 2002 as cited in Crow et al., 2020). Ngāi Tahu have long demonstrated their commitment to sustainability and understand its impact the whenua has on Māori wellbeing (Crow et al., 2020). As an example, Ngāi Tahu and Environment Canterbury partner to bring together traditional practices and statutory responsibilities to facilitate the sustainable management of natural resources in order to enhance wellbeing (Kenney & Phibbs, 2014). While there is a link between personal and

community wellbeing, there is also evidence that community (such as whānau) wellbeing may itself be a driver of personal wellbeing (Durie, 2006). The notion of collective Māori collaborations emphasises a community dynamic, where community cohesion is low, personal wellbeing is threatened (Durie, 2006). This means that Māori health should be viewed in a holistic context which includes their wider whānau, collectives, context, and their contribution to an individual's health (Durie, 2006; Crow et al., 2020). The following section will incorporate psychosocial wellbeing.

### 2.6.1. Connecting Māori concepts of health and psychosocial wellbeing.

Common themes between health and recovery constructs include the approach to recovery or health outcomes benefit incorporating a holistic world view. Kenney et al. (2015) said matauranga Māori has been fundamental in understanding natural hazards within New Zealand. Psychosocial recovery following an event should take into consideration people in the context of the combined influence that psychological factors and the surrounding social environment has on their physical, mental wellness and overall resilience (Ratima et al., 2005; Mooney et al., 2011). A psychosocial approach to recovery following an event should be tailored to and address the needs of the affected population (Rao 2006; Mooney et al., 2011). This approach to recovery aims to ease physical and psychological difficulties for individuals, whānau and communities, as well as bolstering social and psychological wellbeing (Ministry of Health, 2007). The broad nature of psychosocial recovery goals demands collaboration between a range of stakeholders (Mooney et al., 2011). Te ao Māori and mātauranga Māori refer to cultural concepts, values, knowledge systems, frameworks founded on local knowledge, practice, and values (Harmsworth et al., 2016). The modern Māori world view, based on a mix of traditional, historic, and modern elements, can be used to articulate modern perspectives and issues (Macfarlane, 2015; Harmsworth et al., 2016).

A key element to bridging positive health development between local (individual, family/household) and government (local, national, and international) level is the concept of social capital or networking (McPherson, Kerr, McGee, Morgan, Cheater, McLean & Egan, 2014). Similar to aforesaid constructs, social capital refers to the way in which individuals and groups (e.g. whānau) develop relationships, networks, trust and mutuality and share customs across the networks in order to work towards a common good (Matheson & Jones, 2016). This is particularly seen in terms of Māori response to previous disasters in New Zealand and will be further explained in the following sections.

## 2.7. Social capital.

Social capital is progressively identified as an important component of the response and recovery from disasters (Banwell & Kingham, 2016). Nakagawa and Shaw (2004) agree the concept of social capital is important following a disaster. They describe bonding social capital which includes the ties between the immediate family and close networks in the neighbourhood. Bridging social capital includes the links between different people from the wider community and lastly linking social capital is mentioned. Linking social capital is the bond or relationship between community and agencies for example (Nakagawa & Shaw, 2004). Studies observed people of lower socioeconomic background tend to have strong bonding social capital and some level of bridging social capital however disasters also require linking social capital in order to minimise vulnerabilities in a community (Nakagawa & Shaw, 2004, Aldrich. 2012). The absence of strong social capital may discriminate against some people (i.e. those who do not have strong networks) and result in failed attempts to overcome collective action problems which creates vulnerabilities in a community (Aldrich, 2012).

Western concepts of social capital seem to separate family from community and external agencies (Nakagawa & Shaw, 2004). In contrast the concept of whānau (from a Māori world view) moves seamlessly from the immediate family to the wider family network such as hapū and iwi or ‘bonding, bridging and linking’ social capital (Robinson & Williams, 2001; Nakagawa & Shaw, 2004). The extended family networks therefore become the community and the community is made up of (extended) family (Robinson & Williams, 2001). Social capital in te ao Māori is a result of the networks and relationships that are already within these expressions of whānau. Māori disaster management response following the 2011 Christchurch earthquakes, was an exemplar of best practice (Kenney & Phibbs, 2015). The Ngāi Tahu tribal development initiatives are shaping long-term resilience of iwi members and local Māori through addressing factors associated with earthquake vulnerability, such as financial hardship, unemployment, and poor housing (Kenney & Phibbs, 2014). These types of initiatives require a strong sense of social networking and as Nakagawa and Shaw (2004) indicated, effective linking social capital. This not only addresses the short-term recovery issues but also enhances Māori resilience in the future (Kenney & Phibbs 2014).

Kotahitanga (unity) is a characteristic of Māori families, which serve as the foundation of Māori wellbeing and the source of bonding social capital within Māori communities (Kenney & Phibbs, 2014; Nakagawa & Shaw, 2004). It is clear the principle of kotahitanga is central to responding to adverse conditions and involves setting aside agendas to facilitate a combined response (Kenney & Phibbs, 2014). Within the principle of manaakitanga, families with resources will offer them willingly (Katene & Taonui, 2018). For example, Kenney and Phibbs (2014) found that having a sense of responsibility for anonymous others was a reoccurring theme in the interviews following the Christchurch earthquakes. The marae offered services to ‘the whole of

the community' (not just to Māori) demonstrating kotahitanga and manaakitanga (Thornley et al., 2015). Hudson and Hughes (2007) note the importance of incorporating the marae into civil defence preparedness planning. Marae have survived through time due its continued ability to adapt to new contexts (Thornley et al., 2015; Hoskins, Lee-Morgan, Knox, Dennis, Henry, Nathan, & Ratana, 2019). Historically marae provided safe havens during events due to its capacity, cultural and physical infrastructure and cultural attributes (Kenney & Phibbs, 2015). The continued adaptability of marae demonstrates its capacity to act as key mechanisms for psychosocial recovery in contemporary contexts (Mooney et al., 2011; Hoskins et al., 2019). Kaumatua (elders) of Ngāi Tahu said iwi have struggled to influence disaster response initiatives and described the Ministry of Civil Defence & Emergency Management at the time difficult to approach (Phibbs et al., 2015). This is discussed further in the following section.

## 2.8. The role of the marae during disasters.

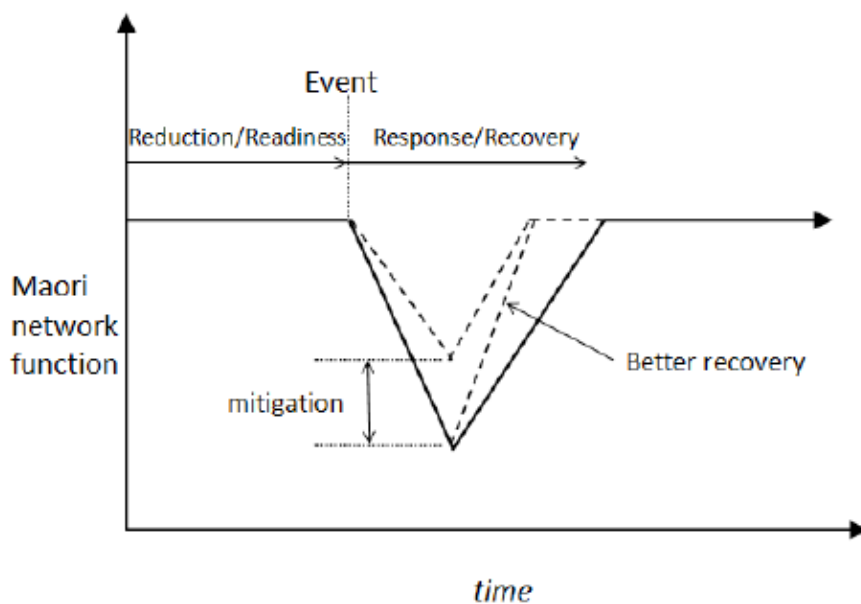
Marae (a traditional ancestral gathering places and contemporary meeting place for community activities), hapū, and iwi are key mechanisms for responding to disasters (Thornley et al., 2015). Practically, Hudson and Hughes (2007) state following disasters, marae is a convenient and well-equipped venue to evacuate to, with facilities for sleeping, cooking, shelter and so on. This is consistent with other studies who point out the marae played a significant role in addressing needs of the local community and supported regional recovery after the 2004 Manawatū floods and Christchurch earthquakes (Carter & Kenney, 2018). In contrast literature shows in the past, marae has a degree of capacity. Due to the natural hospitality of Māori marae took in more people than they could cope with (Hudson & Hughes, 2007). The role of marae following disasters has increasingly been portrayed as a fundamental aspect of response to disasters in New Zealand. As part of the commitment to supporting city residents, the Ngāi Tahu urban marae Rēhua was immediately designated an Earthquake Recovery Assistance Centre and instrumental to recovery (Kenney & Phibbs, 2014). Similarly, a report by Hudson and Hughes (2007) state the role of tikanga Māori practice and the local Poupatate marae was key in the response to the Manawatu-Wanganui region during the floods. Consistent with John Mackie's views following the Kaikōura earthquake, resources were limited for the local council and the challenge of responding to this crisis was taken up by Kaikōura's marae, Takahanga marae, with support from its iwi, Ngāi Tahu (Mackie, 2017; de Bruin & Read, 2018).

Lack of Māori representation in national disaster preparedness and response planning resulted in a lack of effective coordination during the Christchurch earthquake response (Phibbs et al., 2015). There were 12 Ngāi Tahu marae located in region and have the capacity to be able to feed and accommodate up to 4,000 individuals, situating them as an important disaster management resource (Phibbs et al., 2015). During the response,

kaumatua (elders) of Ngāi Tahu stated iwi have struggled to influence disaster response initiatives and described the Ministry of Civil Defence & Emergency Management at the time difficult to approach (Phibbs et al., 2015). This view is not new. In 2007, it was suggested the marae should be incorporated into regional civil defence preparedness planning (Hudson & Hughes, 2007). Despite multiple calls, this does not seem to be systematically integrated into more recent events. Literature shows there is consensus that marae is a key resource during the recent disasters in New Zealand. Due to a lack of planning, the utilisation of resources such as the marae were not used as effectively as they could have been. The concept of Māori customs and social capital is key to achieving this and is depicted in Figure 5 (Lambert, Mark-Shadbolt, Ataria & Black, 2012). Coordination between external networks and communities is an important aspect of reducing vulnerabilities and should therefore be incorporated to enhance psychosocial recovery and overall future resilience (Aldrich, 2012; Nakagawa & Shaw, 2004).

**Figure 5**

*Conceptual framework outlining te ao Māori and social capital role in overall recovery*



Copyright 2012 by Lambert, Mark-Shadbolt, Ataria and Black.

## 2.9. Summary.

Psychosocial wellbeing should consider people in the context of the individual and the surrounding social environment has on their physical, mental wellness and overall resilience (Ratima et al., 2005; Mooney et al.,

2011; Harmsworth & Awatere, 2013). Disasters pose a serious risk to mental health (Leon, 2004). Research asserts people should be treated appropriate to their needs (Norris et al., 2002; Crabtree, 2013; Hamblen et al., 2017). Psychosocial impacts are complex and result in a range of challenges, which requires a multi-faceted, holistic response (Silove et al., 2006; Mooney et al., 2011). Psychosocial recovery should reduce the physical, psychological, and social impacts of an adverse event and enhance the emotional, social, and physical wellbeing of individuals, family, and communities (Mooney et al., 2011).

Ensuring a cohesive and coordinated approach among agencies is key to ensuring psychosocial wellbeing following an event (Silove et al., 2006; Slade, 2010; Mooney et al., 2011; Eyre & Brady, 2013). Support from external agencies should build on community strengths, such as local knowledge and resource, and avoid intrusion, cultural insensitivity, or disempowerment of local leadership systems (Derrick, Steel & Psychol, 2006). It has been suggested agencies build on everyday mechanisms (such as compassionate contact, reunification with loved ones or other social supports and securing resources to meet basic needs) to enhance resilience rather than focus only on technical solutions (Fullerton et al, 2010; Duckers, 2017). On the other hand, PFA should not be forced on people who do not want it as it can make things worse (Schafer et al., 2016). It seems more empirical evidence is needed to measure the efficacy of PFA in supporting psychosocial recovery (Crabtree, 2013; Duckers, 2017).

Te ao Māori is underpinned by a set of traditional values and practices. Kaupapa is a set of cultural values and practices. For example, whakapapa is a set of relationships with the living, departed, the individual and their environment and means everything in the natural world shares a common ancestry (Harmsworth et al., 2016). Studies show Māori typically manaaki others before themselves and is a key value presented in studies following disasters (Thornley et al., 2015; Katene & Taonui, 2018). Tikanga Māori in practice is said to provide guidance about how Māori people meet, interact, and behave in society (Mead, 2016). Matauranga Māori acknowledges Māori have diverse perspectives and obtained through experiences and local knowledge (Harmsworth & Awatere, 2013; Kenney et al, 2015). These set of principles seem to underpin the successful recovery and responses to recent events. Traditional views are perceived as invaluable in terms of building resilience to disaster and improving psychosocial wellbeing.

Addressing health holistically is considered a crucial approach for Māori. Te whare tapa whā model depicts good health as the balance between four interacting dimensions (Ratima et al., 2005). A key approach to positive health is forming strong relationships between local communities and different government agencies (McPherson et al., 2014). From a Māori world view the concept of social capital is similar to the constructs of whānau. This means, relationships between immediate family to the wider family network such as hapū and

iwi is strong (Robinson & Williams, 2001; Nakagawa & Shaw). Research shows kotahitanga, manaakitanga and marae have been instrumental following events in New Zealand. The literature shows the importance of Māori world views in DRR to effectively build relationships/ networks and not only enhance immediate responses to disasters but address broader psychosocial issues. The works suggests this will increase a community's vulnerability to disasters.

The writings identified gaps when defining psychosocial recovery in the literature. This may be why there is an inconsistent framework towards psychosocial wellbeing. Currently, psychosocial frameworks note the importance of a holistic approach to health, yet, do not specifically incorporate Māori world views. Despite the importance of incorporating local knowledge and capacities into DRR to facilitate response, studies show there continues to be shortcomings when putting this into practice. This chapter has highlighted relationship building between local communities and government agencies, incorporating Māori world views and capacities, such as marae, to expedite a cohesive response to events. This will systematically reduce vulnerabilities in a community and enhance psychosocial wellbeing. The following section will discuss the research methods for this study.

## Chapter Three: Research Methods

### 3.1. Introduction.

This chapter outlines the methodology and method used in the study. This research uses a descriptive qualitative approach, which is pertinent in meeting the objectives of this research. It aims to explore the psychosocial support delivered as well as te ao Māori principles that are reflective of psychosocial mechanisms post Kaikōura earthquake. The research also examines difficulties, barriers, and gaps encountered by Māori during their recovery. Finally, this study aims to recommend best practices from a Māori worldview, to better support Māori in psychosocial recovery. Qualitative research allows the participants stories to be heard. It is the researcher's view that this could not have been done as extensively with quantitative methods. The qualitative method is also appropriate for research with Māori as it is respectful to meet kanohi-ki-te-kanohi (face to face). This is so the interviewee and researcher can see each other and respects tikanga Māori. The methodology of this study adopts Kaupapa Māori research designs and is guided by the key principles of Te Tiriti o Waitangi (Treaty of Waitangi). The first section of this chapter describes the ethics approval process to acknowledge its importance in the research process. Next, this chapter explains the epistemology and methodology used in this study. The methods, method of selection, researcher's role during the research and collection of data will then be explained, respectively. Section 3.5 will provide details about the participants and then the analysis for this study will be described. Reflexivity is done throughout the research to improve the rigour and trustworthiness of this study.

### 3.2. Ethical considerations.

Ethics can be defined as the norms for conduct that distinguish between acceptable and unacceptable behaviour (Resnik, 2011). When deciding how to conduct ethics in a world of competing values, Burton and Goldsby (2005) point out to do unto others as you would have them do unto you. Ethics plays a specific part in guiding key behaviours, processes and methods used in research and surmises tikanga Māori as part of formal ethical decision-making processes (Hudson, Milne, Reynolds, Russell & Smith, 2010). The set of values that underpin tikanga are important when considering ethics in practice (Mead, 2016). These are summarised below.

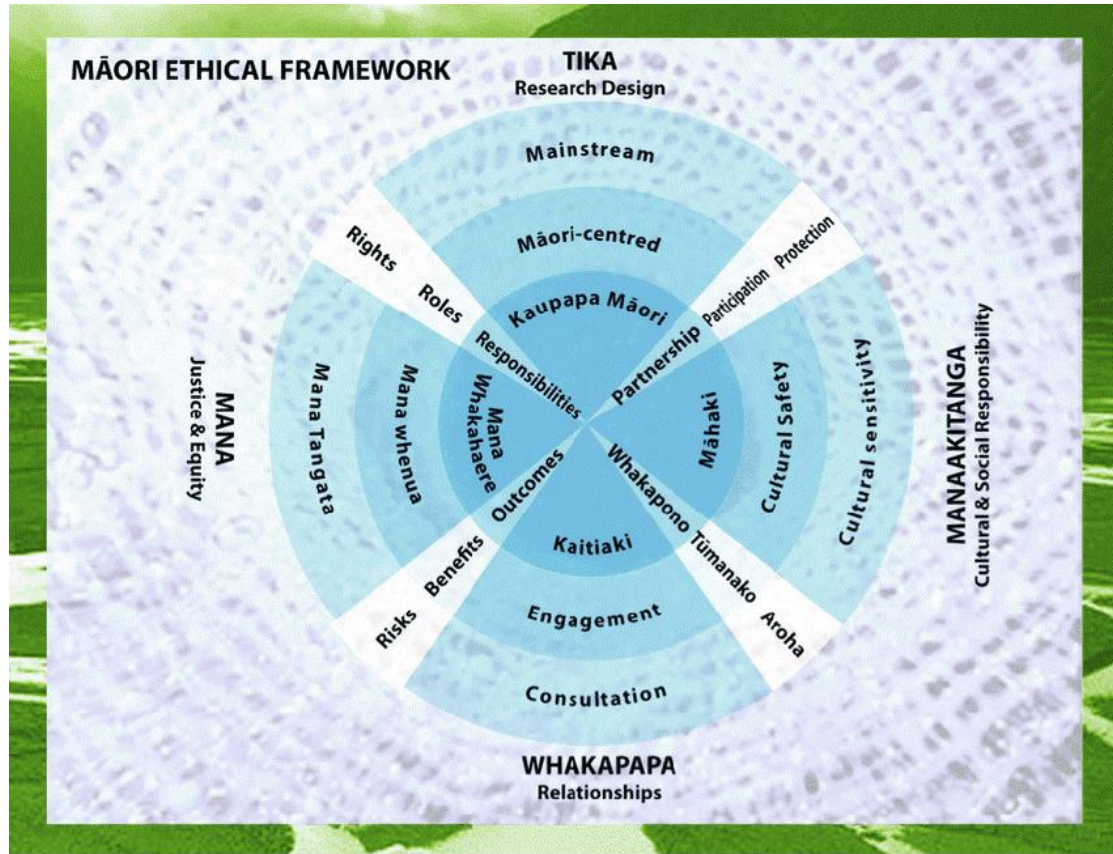
- Manaakitanga – respect for people who supply information for the research and the research itself. Manaakitanga ensures the researcher makes the right decisions throughout the research process.

- Mana – protects the way the information is used and ensures the rights of the participants are maintained. The way the research is conducted also holds the researcher accountable to upholding their own mana.
- Tika – a guiding principle ensuring the research processes, procedures and consultation are followed correctly. In doing so, all those involved should be empowered and enlightened from being involved.

Values mentioned are stipulated in the Māori Ethical Framework in Figure 6 (Hudson et al., 2010). The model illustrates the way research should be conducted with Māori, including tika (research design), whakapapa (relationships), mana (justice, equity, and rights) and manaakitanga (cultural and social responsibility). Kaupapa Māori ideologies are considered best practice (Hudson et al., 2010). Whakapapa (relationships) should empower Māori to take a kaitiaki (guardian) role within the research (Hudson et al., 2010). For example, Māori should play a significant role in the planning, development, and implementation of the research. Researchers should demonstrate manaakitanga, protect mana and uphold tikanga Māori to respect all involved with the research (Mead, 2016). This in turn, ensures tangible outcomes for Māori (Hudson et al., 2010). Mana whakahaere refers to the sharing of power and control in the research relationship with relevant Māori communities that have responsibility for the outcomes of the project (Hudson et al., 2010). The researcher strived to maintain best practice with Māori participants throughout the research process. For example, this research design practices tika by adopting a Kaupapa Māori framework in order to benefit Māori. Kaupapa Māori is further discussed in section 3.3. Likewise, this study acknowledges and is informed by diverse Māori realities of participants (Taiwhati, Toia, Te Maro, McRae & McKenzie, 2010).

**Figure 6**

*Māori Ethical Framework for research*



Copyright 2010 by Hudson et al.

The researcher applied for Auckland University of Technologies (AUT) ethics approval in September 2019. Beyond the ethics approval, what matters is the ethical behaviour throughout the research process. The researcher is Māori and familiar with te ao Māori. This provided the researcher with the capability to put these principles into practice, in a way the participants were comfortable with. Traditional research ethics that require researchers to maintain boundaries and keep an ‘outsiders’ perspective, have been challenged (Moeke-Maxwell, Nikora & Te Awekotuku, 2013). Mahuika (2015) says ‘outsiders’ have too frequently set themselves up as ‘experts’ and seem to negatively affect indigenous communities. The established whakapapa between the researcher and participants provided an ‘insiders’ perspective and allowed the researcher to seek access with participants’ whānau to propose the research (Taiwhati et al., 2010). A critical review of the researcher’s role in this study is examined in section 3.4.1.

Research with Māori should be driven by Māori needs, conducted by Māori, and negotiated by Māori communities (Tipa, 2019). Manaakitanga is associated with notions of cultural and social responsibility and respect for participants (Hudson et al., 2010). Māhaki (respectful conduct) empowers partnerships, faith and trust between the researcher, participants and all involved (including participants whānau) (Hudson et al., 2010). A hui (meeting) was held at the beginning of the research project to inform the participants whānau, in particular the participants, what the research was proposed to do, receive feedback on what they thought of this research being conducted and how they would like it to be conducted. It provided the opportunity to ask questions, raise issues and get common understanding of the research purpose. This example of māhaki provided the participants and their whānau with time to think about the research and their understanding of the research objective before replying. All of the responses were positive and supportive of the research. Cultural safety is not about following a specific method but creating research environments that optimise the responsiveness of Māori (Mahuika, 2015; Tipa, 2019).

Each hui allowed the research to be clarified in detail and time was given for feedback on the way the research will be conducted. The information sheets were given to all attending potential participants. The researcher stipulated the interviews would be at a place and time that the participants felt comfortable with. Participants chose group or individual interviews and were informed this research had gone through AUT Ethics Committee. There were no problems raised with how the research was planned. There were two requests from prospective interviewees for a copy of the questions to be made available prior to the interviews. As a result of this discussion, all participants requested copies of the questions prior to the interviews. A copy of the indicative questions was given. Two interviewees requested to be interviewed together and the other interviewees were happy with individual interviews which were arranged. This process optimised participants' engagement in the research (Tipa, 2019). Towards the final stage of the research, the researcher contacted the participants and offered them a copy of the final document as koha to their stories.

### 3.3. Epistemology and methodology.

It is crucial to ensure enquiry and methodologies used when conducting research with Māori are culturally appropriate (Swadener & Mutua, 2008; Mahuika, 2015). This is because historically, Māori have been subject to research which has denied tikanga and resulted in indigenous groups being portrayed negatively in research (Chilisa, 2012). Western or traditional research has been influential in the marginalisation of Māori knowledge and as such has contributed to colonisation within New Zealand (Walker, Eketone & Gibbs, 2006). Research methodology which is culturally sensitive usually accounts for the social norms, knowledge, language and tikanga of a group or community (Banister et al., p. 2014, 269 as cited in Wardale, Cameron, & Li, 2015).

Typical western research methodologies often include examining objects until they are broken down into smaller pieces and then examined. Māori approaches on the other hand usually involve looking outwards, developing relationships and connections (Durie, 1986 as cited in Milne, 2005). This approach is not merely a matter of following protocols that show consultation with Māori but ensuring that it more appropriately reflects and articulates Māori perspectives and mātauranga (Mahuika, 2015).

The methodology of this study utilised Kaupapa Māori research paradigms to represent Māori narratives about their recovery following the Kaikōura earthquake. The research paradigm challenges westernised notions of knowledge, culture, and research and provides an epistemology that help Māori researchers view the world and organise their research to benefit Māori (Bishop, 1999; Smith, 1999a as cited in Walker et al., 2006). Kaupapa Māori is a world view developed by Māori for Māori and an important part of this research (Walker et al., 2006). This research was also guided by the key principles of Te Tiriti o Waitangi (Treaty of Waitangi); partnership, participation, and protection as a framework to engage, build relationships and conduct research with and about Māori (Hudson & Russell, 2009). Principles include collaborating with Māori communities such as whānau to respect the individual rights (Hudson & Russell, 2009). Principles should involve Māori throughout the research design, implementation, and analysis, and actively protect individual and community Māori rights, values, and way of life (Hudson & Russell, 2009; Mahuika, 2015; Tipa, 2019). The researcher made every attempt to involve the participants in the research design, implementation, and analysis of the information collected. Time and resource constraints meant their participation in each stage of the research was not what the researcher had anticipated or hoped for. This research would benefit from a project plan that affords the opportunity for participants to be more included throughout the design, implementation, and analysis of the research.

The researcher believed it was imperative to be mindful of cultural considerations by using Kaupapa Māori research approach as well as using the principles of the Treaty of Waitangi as a framework. For example, Māori were partners in the research and respect for Māori cultural norms was upheld throughout the research. Māori participation was a significant part of the research project plan. Hui held at the beginning of the research to inform the participants about the research and provide an opportunity for feedback. Frequent conversations were held with the participants to ensure they remained informed about the research. This study also intends to protect Māori rights by ensuring the research benefits all Māori. This ensures Māori are respected, valued and the evaluation portrays an accurate reflection of the participants and their narratives. A strength of using this approach is the research aimed to learn how the participants feel about recovery through their Māori cultural identity. Further, the methods used for this research ensured the participants played an active role in

informing how the research would happen and when. It was also completed on their terms. This was also strengthened during the interviews by:

- Ensuring the participants were comfortable with the way they were interviewed and venue at a time that suited them (via videoconferencing which is explained in section 3.4.2 collection of data).
- Allowing the participants to answer the questions how they wanted to.
- Having time to inform their answer by looking at the questions beforehand. Some of the participants answered the questions directly and succinctly; others developed their answers with stories and increased their reasoning with examples.

By using qualitative methods of interviewing, the research received answers that are fitting to both the participant and the research. These answers have also fulfilled the aim of the research and the participants have been able to mould their level of participant depending on their answers.

The researcher endeavoured to prevent this research from being *on* Māori, instead this research has been developed *with* Māori and *for* Māori. Research involving Māori should identify the following basic requirements, including 1) research as partnership; 2) accountability, including what happens with the products of the research and; 3) self-monitored research (Spoonley, Teariki & Tomoama, 1992). An example of preserving partnerships with the participants was the hui that was held at the beginning to determine if all participants were happy with the research. Conversations during hui ensured participants were aware the research was for Māori and therefore flexible to their needs. Accountability has been maintained by having discussions at different times with the participants on the issues that have arisen throughout this research process. For example, a finding in this study was that ‘psychosocial health’ was not a common concept to participants. Conversations between the researcher and participants in the lead up to the interviews provided the interviewees with a deeper understanding of the concept, from a Māori perspective. This notion is developed further in section 3.4.2 collection of data and chapter four. Equally, this research is a product in itself that is presented back to the participants and their whānau for their information. Self-monitoring is adhered to by maintaining Te Ara Tika Guidelines for Māori Research Ethics.

### 3.4. Methods.

This study is a descriptive qualitative piece. In a broad sense, qualitative research approaches explore a phenomenon by collecting data typically through text or words by developing themes found in a study (Gelo, Braakmann & Benetka, 2008). A key difference between quantitative and qualitative methods is that

quantitative research tends to focus on causal effects between existing relationships whereas qualitative research attempts to understand or explore them rather than predict and control it (Gelo et al., 2008). Descriptive or qualitative methodologies allow participants to express their story which was key part of this research. In contrast to a quantitative approach where a survey may be distributed and collected at the end, the qualitative method is more appropriate for this research, as the researcher believed it was much more respectful to meet *kanohi-ki-te-kanohi* when the participants share their stories.

### 3.4.1. Method of selection and researcher's role.

The research intended to interview participants that are Māori and who could report their experiences and/or the impacts of living in, through and post the Kaikōura earthquake. The participant criteria were for participants to be wider *whānau* members (which means family members and people of the researcher that are not necessarily related but are considered *whānau*) that were affected by the Kaikōura earthquake. An advantage of the research is the relationships already held with the potential participants and the researcher's goal to ensure an accurate portrayal of their views to avoid misrepresentations. As mentioned, *whakapapa* made it easier to engage with the participants in time which would otherwise have been spent establishing and building a relationship.

An important aspect of these type of research designs is the establishment of trust between the researcher and the interviewee (Johal, Mounsey, Brannelly & Johnston, 2016). The researcher had existing relationships with the participants. This has given the researcher clear links to the participants of this research. This role can be recognised as both positive and negative. The researcher's role was conflicting at times. Previous research indicates only an 'outsider' can be objective (Russell, 2000, p. 4 as cited in Walker et al., 2006). On the other hand, studies suggest researchers with an 'expert' point of view result in indigenous groups being portrayed negatively in research (Chilisa, 2012; Mahuika, 2015).

Research asserts engaging with potential participants is more challenging if the community does not know the researcher. *Whakapapa* or 'insiders' perspective allow researchers to seek access with participants' *whānau* to propose the research (Taiwhati et al., 2010). Being connected to the participants' means the researcher is an insider and has an insider's perspective. The researcher has access to the elders of the participants and is able to relate to their views and knowledge (Taiwhati et al., 2010). This has given the researcher a depth of knowledge that has enriched the findings. And yet, this insider view can lead to blindness of aspects that outside researchers may see. It can cause an unconscious propensity to focus on the positives within the research and analyse the not-so-positives (Smith, 2007).

Being aware of this risk and attempting to evade this tendency helps to preserve the researcher's objectiveness (Smith, 2007). This has been a key task for the researcher. In these contexts, "outsiders" may not accurately reflect the views or reality of the participants (Taiwhati et al., 2010; Mahuika, 2015). Māori researchers often bring a more comprehensive view because of their subjective or insider perspective (Walker et al., 2006). It is the researcher's view that this has not been a problem, instead it has been an advantage by giving the research access to these participants. A high standard of research has been upheld to produce effective results that can be used to continue the growth of psychosocial wellbeing for whānau.

### 3.4.2. Collection of data.

The research was conducted primarily in English with Te Reo (Māori language) woven through. This research used semi-structured interviews with open-ended questions presented as prompts, to collect information. This research method allows flexibility for the participants to express their view while keeping the interview on topic (Jamshed, 2014; Chilisa, 2011 as cited in Moyle, 2014). Semi-structured interviews are designed to gather focused contextual data, through open ended questions that have been predetermined before the interview commences (Ellis, 2016; Jamshed, 2014). The objective was to understand the respondent's point of view in a controlled conversation. This is critical as it keeps the conversation on track but provides the opportunity for the interviewer to explore responses further (Cohen & Crabtree, 2006). On the other hand, Ellis (2016) points out that topics discussed could potentially be sensitive in nature, thus interviews and handling of information needs to be taken seriously.

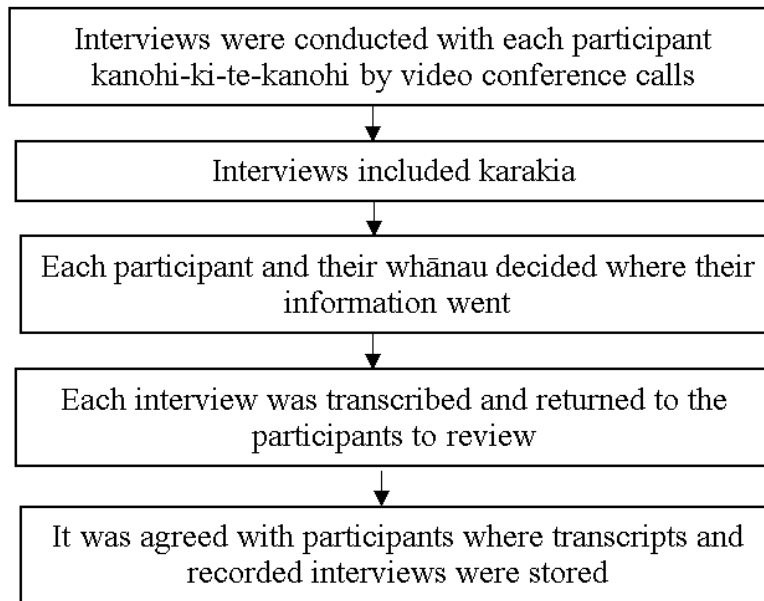
When this research was first planned, the researcher preferred to interview the participants in their hometown. COVID-19 travel restrictions meant the researcher was unable to travel to the participants' location. The communication between the researcher and the participants was well coordinated. All participants established dates and times for face to face interviews via video conferencing and were organised without any problems. An advantage of the semi-structured interviews and existing relationships held between the researcher and participants, was the freedom to express freely during the interviews (Jamshed, 2014; Moyle, 2014). Three of the five interviews were recorded because some participants preferred not to be recorded. Participants "B" and "C" felt more comfortable interviewing together. A summary of each participant is described in section 3.5.

The interviews ranged in length with the shortest being 60 minutes and the longest being 90 minutes. Each of the interviews were transcribed and returned to the participants. The interviews are secured and once the interviews concluded, the participants and their whānau decided where their information went. The

participants' views have been collected by video conferencing kanohi-ki-te-kanohi interviews. Prior to each interview, the researcher started with karakia. Being able to ask for the korero shared to be kept safe and respected ensures all parties are protected throughout the process. Figure 7 summarises the interview process.

**Figure 7**

*Summary of interview process*



There was a total of 15 questions that aimed to meet the objectives of this research. All research questions were framed under headings reflecting te whare tapa whā. Psychosocial wellbeing stresses the close relationship between individual psychological and social factors (Mooney et al., 2011; Ministry of Health, 2016). Similarly, Te Whare Tapa Whā is a Māori model of health that depicts Māori wellbeing as four equal pillars of a whare (house). These four dimensions include: te taha tinana (physical health), te taha hinengaro (mental and emotional health), te taha wairua (spiritual health) and te taha whānau (family health); all four being necessary to ensure strength and symmetry (Durie, 1994). The researcher decided to frame the research questions under headings of te whare tapa whā to gain an understanding of psychosocial health from a Māori world view. In order to ensure tikanga Māori was kept, the participants decided what was right for them in their context, in that point of time of the interview. The participants understanding of psychosocial health, similar to te whare tapa whā and its quadrants, is an individual's hinengaro health in the context of their tinana, wairua and whānau health. Discussing with kaumatua (elders), it is understood psychosocial wellbeing was similarly described as hauora ahurea. This essentially means the 'culture' you are

surrounded by, shapes your wellbeing. This notion and discussing what the term meant to all involved in the research, provided a deeper understanding of the concept from a Māori perspective.

Under each quadrant of te whare tapa whā, each participant was asked what being ‘healthy’ meant to them. For example, te taha wairua concentrated on the participants’ spiritual health. The participants were asked to describe what having a healthy wairua meant for them and their whānau and how they felt spiritually when the earthquake happened. This provided both participants and researcher a full impression of the participants’ view of health from their cultural identity, in comparison with how their psychosocial wellbeing was impacted. A summary of the participants’ perception of psychosocial health is surmised in chapter four. The researcher managed to gain within these interviews deep insights. The researcher aims to accurately reflect the participants and their views so that they can define themselves, their problems, their preferred solutions.

### 3.5. Participant information.

The participants spoke with strong emotion when reflecting on their psychosocial recovery and maintaining as much confidentiality as possible is important. Table 1 provides information about the participants, and some ways they were impacted by the earthquake. The research aims to maintain the privacy of the participants, therefore only basic information about the participants has been included. The information describing participants in Table 1 was reviewed by each participant to ensure they were happy with what was being shared.

**Table 1**

*Description of participants*

Participant	Age Bracket	Gender	How the participant was impacted
A	30-35	Male	<ul style="list-style-type: none"> <li>➤ House and contents were severely damaged</li> <li>➤ Unable to source kaimoana (seafood) for a period of time as their whānau normally did</li> <li>➤ Noticed long-term mental health effects of his whānau</li> </ul>
B & C	55-60	Female & Male	<ul style="list-style-type: none"> <li>➤ Long-term effects with feeling unsafe in large groups or travelling</li> <li>➤ Ongoing mental health support required for female participant</li> </ul>
D	55-60	Female	<ul style="list-style-type: none"> <li>➤ House and contents were severely damaged</li> </ul>

			<ul style="list-style-type: none"> <li>➤ Insurance claims were difficult to navigate</li> <li>➤ Families jobs were impacted by earthquake</li> <li>➤ Ongoing mental health support required</li> </ul>
E	45-50	Male	<ul style="list-style-type: none"> <li>➤ Financial strain on family due to cost of evacuating out of Christchurch</li> </ul>

### 3.6. Analysis.

As the research is primarily based on the participants' experiences, inductive thematic analysis (DeSantis & Ugarriza, 2000) was used to identify common themes and patterns across each interview. Thematic analysis is a method for identifying, analysing, and reporting patterns or themes within data (Braun & Clarke, 2006). Through its theoretical freedom, thematic analysis provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex, account of information (Braun & Clarke, 2006). Though it is not an intentional process, constructing evidence based on the researchers' 'assumptions' can be a common problem while interpreting information (Fereday & Muir-Cochrane, 2006). In order to maintain validity and rigour through analysing data, the researcher identified patterns through a rigorous process of data familiarisation, coding, theme development and revision, detailed below.

Phase	Description of the process
Familiarising yourself with your data	Transcribing data, reading and re-reading the data, noting down initial ideas.
Generating initial codes	Coding interesting features of the data in a systematic way across the entire data set, collating data relevant to each code.
Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Reviewing themes	Checking if the themes work in relation to the coded extracts, generating a thematic 'map' of the analysis.
Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.

Producing the report	Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a report of the analysis.
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(Source: Braun & Clarke, 2006).

The information collected through this research was analysed by developing four charts with sections of te whare tapa whā that participants were questioned on. The information was taken from the transcriptions made from each interview. These transcriptions had been given to the participants for feedback and approval. Each of the charts conveyed a section of questions and the participants’ answers to the questions. Comparisons were made between the participants’ views within each chart – highlighting similarities and differences. A separate code chart was developed to differentiate and follow code throughout the different charts. The four charts were then compared and analysed for similarities in views, re-occurring themes and influences between the sections.

### 3.7. Summary.

This chapter has summarised the methodology and methods of this study. It was identified that western or traditional research has been influential in the marginalisation of Māori knowledge and as such has contributed to colonisation within New Zealand (Harmsworth et al., 2016). This research adopted a qualitative research approach, utilised Kaupapa Māori research paradigms and was guided by the key principles of Te Tiriti o Waitangi. This research approach was considered beneficial in achieving the objectives of this research. The chapter mentioned the ethics approval process as well as the methods, method of selection, researcher’s role during the research and collection of data, respectively. Section 3.5 provided details about the participants and discussed how inductive thematic analysis was used to identify themes to present the findings in the following chapter. Reflexivity was important throughout this research to improve the rigour and trustworthiness of this study. The following chapter will present the findings of this study.

## Chapter Four: Findings

### 4.1. Introduction.

This chapter presents the results from interviews with five participants. The interviews aim to meet the objectives of this research. These interviews explored the participants' experience of psychosocial recovery post the 2016 Kaikōura earthquake, from a Māori worldview. As aforesaid in the methodology chapter, te whare tapa whā was used as the framework for the interview questions. Te whare tapa whā framework intends to conceptualise psychosocial health in a way that is understandable to Māori. As a result, the responses were rich in data and included strong emotions. As the research is based on the participants' experiences, inductive thematic analysis was adopted to identify common themes and patterns across each interview. A summary of the findings has been allocated into themes and are divided into three sections. The first section of this chapter covers te ao Māori mechanisms used for psychosocial recovery. The second and third sections then describe the short and long-term psychosocial recovery mechanisms following the earthquake, paying homage to the successes and challenges experienced by the participants.

### 4.2. Te ao Māori mechanisms used for psychosocial recovery.

Prior to each interview, the researcher started with karakia. Being able to ask for the korero shared to be kept safe and respected ensures all parties are protected throughout the process. Each interview began by asking the participants what they understood about psychosocial health. It was unsurprising that all of the participants had not heard of the term 'psychosocial' previous to this research. Conversations between all involved in the lead up to the interviews provided the interviewees with a deeper understanding of the concept, from a Māori perspective. Tikanga Māori dictates what was right for the participants in their context, in that point of time of the interview. The participants' understanding of psychosocial health, similar to te whare tapa whā and its quadrants, is an individual's hinengaro health in the context of their tinana, wairua and whānau health. In this study, the participants note their perception of the mechanisms in the Kaikōura earthquake. In addition, they speak of the challenges and successes they encountered during their recovery and how it has impacted their understanding of psychosocial health.

Using te whare tapa whā, the researcher coded the participants' responses about each of the frameworks quadrants into themes and summarised their perception of psychosocial health in Table 2. Māori view their health primarily in their context and whānau. For example, all of the participants used "we" and "whānau" when explaining their view of health. In brief, the responses suggest a person's hinengaro could not be healthy

if the context in which that individual lived in was “unhealthy”. Although the participants were unsure of the word psychosocial, the themes demonstrate the participants have a strong understanding of the concept from a Māori perspective. The participants’ perception of psychosocial health provides the foundation for this chapter.

**Table 1**

*Summary of the participants’ perception of health*

Taha Tinana	<ul style="list-style-type: none"> <li>• Eating the right kai and keeping fit.</li> <li>• Being confident with who we are.</li> <li>• Whānau are capable of taking care of themselves.</li> <li>• Teaching whānau to care for themselves and others.</li> </ul>
Taha Wairua	<ul style="list-style-type: none"> <li>• Feeling good about who we are.</li> <li>• Feeling spiritually well and connected.</li> <li>• Attuned to the environment.</li> <li>• Drawing on higher beings to help cope through adversity.</li> </ul>
Taha Hinengaro	<ul style="list-style-type: none"> <li>• Keeping tamariki on “good paths”, different to our own.</li> <li>• Being in a “good space” and mentally well.</li> <li>• Able to cope when things go wrong and grow stronger.</li> <li>• Making sure wider whānau are taken care of.</li> <li>• Managing stress and anxiousness.</li> <li>• Teaching kids about good wellbeing.</li> </ul>
Taha Whānau	<ul style="list-style-type: none"> <li>• Whānau have a good sense of identity.</li> <li>• Whānau are capable of taking care of themselves and others.</li> <li>• Whānau are spiritually, physically, mentally, and emotionally well.</li> <li>• Able to cope when things go wrong, learn, and grow stronger.</li> <li>• Setting examples so whānau remain healthy.</li> <li>• Whānau are “connected” to each other.</li> </ul>

Being well meant having a healthy tinana, wairua, hinengaro and whānau. It means having a good overall wellbeing for the individual but particularly their whānau. From the discussions, the term whānau often included their community (such as their neighbours). The responses showed that the participants not only viewed health as being able to take care of themselves and their whānau, but also as setting an example so future generations maintain the values that underpin health from a Māori worldview, as illustrated in this quote:

*“[Having a healthy whānau is] when everyone in my whānau is healthy and they’re able to look after themselves. I think that means they’re secure, they know who they are and how to take care of not only themselves but others too... Mental health wasn’t really a thing when we were growing up but looking back, I try to keep my kids on a different path to what I was on because I know some of those things don’t make you happy...” (Interviewee A).*

Conversely, manaakitanga was a common theme the interviewees mentioned about the local community in Kaikōura following the earthquake. This is shown in the below quotes.

*“After the earthquake, we just had to get through it. It was not really about being sad or none of that, we just had to make sure our kids were ok, had kai. Even our neighbours who is a kuia (elderly lady), we needed to make sure she was ok too” (Interviewee A).*

*“[Following the earthquake] we had about 30-40 people on our lawn. So, I dragged the mattresses out, dragged all my blankets out and it was a beautiful night of all things. The next day I came home from work, we had a karakia... We cooked kai and I said to the guys go in my shed and get the tent, go down to the park (just two doors down) and we dragged all the mattresses down to the park area and that’s where we stayed, we pitched camp there so that no one stayed in their homes” (Interviewee D).*

*“[The local community] were all really supportive at the time. No one was greedy with kai, everyone just helped each other out even the tourists because there were heaps of them, all really stressed out I thought. But yeah, I thought what really kept our spirits up was the supportiveness of the whānau we were with. We all helped each other get through those first days. Once we got home safely and seeing our kids and family, they were really supportive” (Interviewee E).*

All the participants spoke about how everyone in the community came together to look after each other. It was interesting to see the gratitude in their faces when they reflected on this notion. It is clear from the responses the manaaki they felt from whānau (including the local community), had a significant impact on their experience of the earthquake and their psychosocial health. Further, respondents inferred to manaaki others was a natural phenomenon. It was suggested that the concept of manaakitanga correlated to the way in which they were raised. As interviewee D put:

*“I suppose the love that I have for people. You know sometimes I actually put them before myself. You know my nanny taught me that, it is the Māori way. And if I did not listen you know... I always make sure everyone is comfortable; it makes your group feel better. I like to make sure everyone is cared for. A lot of the way I was brought up helped [the days following the earthquake]” (Interviewee D).*

*“I think my background helped a lot during the earthquake. Im not really one to panic (well I have been told anyway). So same for our kids, teaching them how to have a good wellbeing... and having those tools to help you cope through things and grow stronger” (Interviewee E).*

The examples about manaakitanga during the earthquake seem to attribute to Māori world views of being healthy, as outlined in the beginning in this section. Instinctively Māori supported each other during the earthquake, and this was clearly portrayed by all five respondents. Evidently, manaakitanga the participants felt played a noteworthy role in keeping their tinana, wairua, hinengaro and whānau balanced. In short, this minimised the impact to their psychosocial health. The notion of manaakitanga continues in the next section, which provides insight into the short-term psychosocial recovery mechanisms experienced by the participants.

### 4.3. Short-term psychosocial recovery mechanisms.

This section aims to explore the psychosocial recovery mechanisms developed by the interviewees during and after the earthquake. Some of the respondents acknowledged they felt scared and anxious. As a result, their wairua was unbalanced. For example, Interviewee A mentioned his recollection of being at a local park with his wife when the earthquake happened and how he felt in the following days.

*“When we looked back the next day at the spot we were parked at, the ground was pretty much destroyed, and I just thought man lucky we were awake, and we got [back home] to our kids.... Will not forget that... Even over the next couple of days, I remember the mountain across from us [while we were] at the hospital was shaking and that really frightened me... I just remember thinking you know if that breaks open, we are gone I reckon. So yeah that was scary at the time” (Interviewee A).*

The respondents surmised that they drew on their own ‘kaha’ (capabilities) or support mechanisms to help bring balance to their health. For example, as respondents B and C indicated in their interview, they looked for help with their wairua to alleviate some of the initial stress they felt.

*“In a time of crisis, you can draw on something higher and feel closer to that higher being” (Interviewee B & C).*

Similarly, Interviewee D reflects on her experience of the initial shakes and speaks about an unbalance in her whānau health. She alludes to drawing on her own kaha or personal mechanisms while responding to the earthquake. Irrespective of the advice to evacuate, ensuring her whānau were safe was fundamental to her psychosocial wellbeing.

*“To me, looking at it now, I think it was like adrenalin rush that went through me. So, my first instinct, was ‘were my kids alright’ so I did a roll call going through them... They were there. When the next door neighbour came over it was the same thing... They had told me to get outside... but I thought I wanted to come back in. Because for me it was time to prepare. You know this was going to go on for a long time because it was a real big shake. With everything I had seen with my home, I knew not only had it wrecked everything in my home it would have wrecked a lot of things out there as well. So yeah I was not scared of it at all... the first thing was*

*to make sure my kids were fine and when the neighbours come over to make sure her and her kids were fine” (Interviewee D).*

It is clear from the responses the earthquake affected the equilibrium of the participants’ tinana, wairua, and hinengaro and whānau health. These responses show the participants felt stress, as a result their hinengaro health was unbalanced. Comparatively, the responses show the participants drew on their kaha or personal mechanisms to support themselves and others through the earthquake.

The abovementioned participants highlight the foundation of their health lies within their whānau collectives or context. This infers that in order to support the individual’s hinengaro health, the participants required support for the other elements of their health such as their wairua and whānau health. Drawing on their own support mechanisms helped support their psychosocial wellbeing. This reinforces the notion that the participants view their health in their whānau and context. An ‘unhealthy’ context equates to a diminished individual hinengaro and psychosocial health.

The short-term support mechanisms presented throughout the interviews refer to the support each participant felt from the local whānau (community). All of the participants talked in depth about the manaakitanga the community displayed following the earthquake. Many of the participants reflected that without the support of the community, the days following the earthquake may have been a lot harder to deal with. Manaakitanga seems to have minimised the negative impact on the participants’ psychosocial health. A summary of the participants’ perception of community support is listed in Table 3.

**Table 3**

*Participants’ perception of support from the community*

<p>Kai as a means of support.</p>	<ul style="list-style-type: none"> <li>• Although some people did not have enough kai for everyone, whānau ensured everyone was fed.</li> <li>• Some whānau were prepared with kai to look after those that were stranded.</li> <li>• No one was greedy with the kai they had.</li> <li>• Everyone worked together to cook kai for everyone including for the tourists.</li> <li>• Kai was set up outside so everyone ate together.</li> </ul>
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Whānau support.	<ul style="list-style-type: none"> <li>• Whānau (including neighbours) came together to support each other.</li> <li>• Participants felt cared for.</li> <li>• Whānau network ensured everyone was taken care of and helping to minimise the stress that was felt.</li> <li>• The support helped keep the participants spirits up.</li> <li>• That type of support and collaboration is exemplary of how it should be all of the time.</li> <li>• The support demonstrated was a vivid memory.</li> </ul>
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Another common perception was the support participants felt from the marae. Consistent across all of the participants, Takahanga marae was said to be a key aspect of support for them and others in the days following the earthquake. Participants mentioned the food, shelter, and amount of work the marae put into looking after all of those that were stranded, including the large number of tourists. Participants spoke about the marae setting up food and resting areas for many of the tourists and worked hard to ensure everyone was cared for. It was clear that the participants thought the marae was a significant support during that time. For example, Interviewee E noted:

*“The marae did an awesome job looking after everyone as well but there were a lot of people to awahi (help)... The marae did a really good job with what they had. Just really good people that just supported each other, didn’t let anyone you know go with nothing” (Interviewee E).*

On the other hand, it was evident that the number of people and tourists was a challenge for the community to support alone. The interviewees suggested the community was not necessarily resourced for an emergency of that scale. A participant noted although the earthquake was not as fatal as the Christchurch earthquakes, there was a high number of injuries. This compounded with the number of tourists to care for, crowded the community, particularly the marae and hospital. This posed a challenge for the community as the number of people seemed to be overwhelming.

*“I probably would’ve liked to see more support in the community. Down at the hospital I remember going down there and talking to one of the doctors and he was pretty overwhelmed. He was just like ‘we’re just not prepared for something like this’. That was intense and I will not forget that. I mean we did not have a lot of deaths, but the hospital was not coping well with all the people that were hurt as well as the tourists coming through. It just made me realise how big [the earthquake] was, how much it was affecting everyone and how much it should have been sorted out before the earthquake...” (Interviewee A).*

Similarly, as Interviewee D points out, the number of stranded people put pressure on the community's resources.

*“So, for all those days before hand it was just us guys, but we were kind of lucky because we had power and we had water and everything... We were lucky but we never really told too much people (after a while) because you sort of had the tourist people coming in knocking on the door for water and stuff and I would give it but they would start to be a bit demanding... The [emergency] services were awesome... Marae, Civil Defence, Red Cross but yeah it did take a few days. I think it is because no one knew what had happened to us until they realised it was in Kaikōura. Yeah hard one” (Interviewee D).*

Māori primarily view their health in the context and whānau. Each component of health (tinana, wairua, hinengaro and whānau) is interconnected. When there is unbalance, this has an impact on an individual's overall health. Responses show the community were strong in manaakitanga. The number of people that required manaakitanga put pressure on local resources. Ensuring a balance of health and minimising the impact to psychosocial health requires support for each component. In this instance, the participants all mentioned there were not enough resources for the community to support people alone.

Participants mentioned the length in time before ‘services’ or ‘external support’ such as the Red Cross and New Zealand Army arrived in Kaikōura. The respondents said there were a number of days before they arrived which seemed to cause frustration. The participants felt isolated and unsure about when help would arrive. Interviewee D talked about the relief she felt when she saw help arriving which demonstrates the amount of stress, she was feeling beforehand.

*“I remember being in the patient's room [at the hospital], it was foggy morning and you looked out his window and there was this low fog... Above that was this beautiful blue sky. When the fog lifted, we had the helicopters, the ships come in and they were out in the waters. We looked out there, all of us nurses and said look there's our help, and we couldn't help but cry because knew that help was here” (Interviewee D).*

*“The next day I came home from work we had a karakia, I said to everyone there, I want you to go home get all your food and come back. I remember Jay said I have only got 4 sausages... I said well get your 4 sausages and he might have 6 sausages and we can make a kai. So, we cooked the kai... we dragged all the mattresses down... that is where we stayed, we pitched camp there... I think that is when the services started like all the porta-loo toilets come and then army turned up at the hospital... So, for all those days before hand it was just us guys, but we were kind of lucky because we had power and water...” (Interviewee D).*

Other participants mentioned that the response time was an area they would have liked to have improved.

*“I have to say I think the response was slow. I would have liked them to come earlier but I think the problem was that they could not get in or something. Anyway, if there was one thing, I would want to see different, would be the response to getting in to help the community was in there quicker. I think it took two or three days to get in there and then Civil Defence came in” (Interviewee B & C).*

It was clear through the discussions the number of days before support arrived was a key challenge to the participants' recovery. The interviewees were grateful when the support arrived and helped evacuate some of the participants. The examples provided reinforce the notion the local whānau network were a key source of food and shelter. Equally it is the researchers view this information demonstrates when basic needs such as shelter, food, water were met, helped minimise the stress the participants felt after the earthquake. For example, all of the participants mentioned they were supported with food and a place to rest. This begs the question as to how the participants would have been affected if these needs were not taken care of and how this would have impacted their perception of their psychosocial health. The next section will discuss the participants' perceptions of long-term psychosocial recovery.

#### 4.4. Long-term psychosocial recovery mechanisms.

The aim of this section is to explore the long-term psychosocial recovery mechanisms the participants experienced. As a result, key sub-themes arose. Following some of the points raised in the earlier sections, some long-term areas for improvement were mentioned. Several challenges arose which postulated an impact on their psychosocial wellbeing. A participant stated the communication with external support was difficult to navigate. Equally, there was a perception there was a lack of coordination with local people and this made facilitating support a challenge. As Interviewee D pointed out:

*“I would say with the Red Cross and the Civil Defence, in my eyes needed to have bit more communication... The Red Cross would say [to the tourists] ‘you go down to the hospital, they’ll look after you’ so everyone would come down to us and I’d say no you’ve got to go up to the Red Cross... It is about having that communication and relationships. You train for it; you do everything but when it happens have you actually put all of that into place? So, I think with Civil Defence and Red Cross, I felt they thought what they say goes...” (Interviewee D).*

Similarly, challenges arose while evacuating Kaikōura. For example, Interviewee D mentioned the helicopters only seemed to be evacuating people to Christchurch. Due to the lack of communication during the evacuation, his family panicked to buy emergency flights from Christchurch to his hometown which seemed to put a strain on the whānau financially.

*“After a couple of days, the Civil Defence and Army came into help. They were a big help actually, but I personally think it was a bit of ‘us and them’ at times. I felt like they came in and took over the show a bit when actually we were doing ok. But we were more worried about just getting out of there. They finally got us a helicopter out of there and I remember the army just yelling at everyone to only take one bag with us which made sense but you know I think it could’ve gone a bit better if we worked together a bit more... [The lack of communication] scared our whānau back home into purchasing return tickets for us from Christchurch, which were expensive. That put a bit of stress on us because they were not cheap flights, but we were exhausted by then and when we got home, we were all just happy to be safe and together” (Interviewee E).*

Equally, some participants felt inferior to the tourists as there was a perception that they were prioritised.

*“It made me realise having money is necessary during that type of event. The tourists were somehow getting their own helicopters in those first days but there wasn’t a lot of communication to us about when or how we were going to leave” (Interviewee E).*

*“[The external support] should look after the community before they look after the tourists” (Interviewee D).*

Points raised by the participants make it clear there was a perceived lack of communication and coordination between the community and external support. Discussing these issues with the participants infers there are long-term effects on their hinengaro health. The participants indicated they were relieved with the external support. It seems that improving the communication and coordination between the community and external support would have improved the participants experience and minimised the impact on their psychosocial health.

In addition, the participants indicated that mental health support was an area that required further support. The participants stated immediately following the earthquake there was some mental health support offered. For example, a register was taken with all of participants details and they were contacted approximately a week following the earthquake. Of the respondents, it became apparent the response time for the support was ‘too soon’. As interviewees B posited:

*“They held a register and then texted us like a week later (I can’t remember). It was a text [saying] ring us if you need help. I think there should have been another follow up text after that. Because you know the week after, you are still trying to get over it. You are not really ready (still a bit freaked out). You are still getting back to some type of normal life, but if they had of followed up a bit later on like a month or so... That was the only sort of other support we were offered is the text. I didn’t end up calling but probably if they had of followed up like a month later, I might’ve taken it up, but even now they haven’t followed up” (Interviewee B).*

The responses from three of the interviewees state they were struggling with mental health issues. They inferred there was no long-term mental health support provided from the service offered during the response. The other two interviewees did not explicitly state they sought the mental health support. It is unclear whether they would have used the support if it were offered in a timely manner. Conversely, the respondents mentioned they felt the need to seek out mental health support themselves.

*“I thought there should’ve been a little bit more of a follow up around support for you know emotional support and trauma... We had to go seek our own support out” (Interviewee B).*

The respondents revealed they pursued mental health support from their employers or doctor. For instance, Interviewee B mentioned feeling uneasy and subsequently was offered support from her employer.

*“To get help, I went through work and got help from EAP (Employee Assistance Programme.) You know it was not until I went to EAP did I realise that I had been traumatised and there were certain behaviours I had that were because of the [earthquake]. So as an example, I could not for a little while be in a big group of people and was not very engaged or connected. Those were some of the things I did not realise were the consequence of [the earthquake]. And actually, it should have been named for what it was... a traumatic event and people did suffer. That is probably what I would have wanted to see happen without having to seek it out myself. Being able to understand what it was and being able to name it and all that...” (Interviewee B).*

Interviewee D mentioned although she was offered support, she also spoke about it being ‘too soon’.

*“I had to go to my doctor, and they put me onto the [mental health] services and I’ll tell you what, it was a big relief because I couldn’t talk to my own family. You know part of me wanted to hide it from them, you know because I am meant to show them the big picture that I am the brave mother. Because I was nurse aiding at the hospital there was the services there at the hospital where they gave you a list of names that if you wanted to talk to someone you could but to me I didn’t need it at that time. I did not feel I needed it then, I felt ok, just carried on. It wasn’t until I came away from there and that little earthquake where I was home alone, and it just set it off big time” (Interviewee D).*

Interviewee D mentioned the on-going effects of the she feels from her experience of the earthquake.

*“Even today if there is any little creek in the home, I jump. Even my cats, I watch them, and they will give me a ‘sign’ every now and then. It is not a nice feeling at all... I still cry about the earthquake and that’s why I had to go and see the mental health services to talk about it because I talk to my husband and he’s like “oh yep” but that’s not what I wanted to hear” (Interviewee D).*

Although not all of the participants mentioned suffering from on-going mental health issues that required treatment, participants inferred experiencing some form of on-going mental health issues. For example, a participant noted some re-occurring memories. Likewise, another participant noticed their daughter may still be affected from the earthquake. The information from the participants demonstrate the way mental health support is offered is an area for improvement. This will likely have minimised the impact on these participants psychosocial health.

#### 4.4.1. Long-term whānau health.

On-going support for the participants’ whānau was a fundamental aspect of the participants continuing psychosocial wellbeing. A key theme throughout the results was maintaining good relationships. The participants talked about the significance of their whānau collectives. Further there was a strong desire to pass down their learnings, to enhance their whānau collective’s psychosocial resilience. The interviewees stated it was very important for them to teach their whānau to be prepared for an emergency. The researcher has summarised the interviewees view on long-term preparedness below.

- Ensuring whānau understand how important it is to be prepared for an emergency such as an earthquake.
- To be self-sufficient and not rely so heavily on external support (such as kai).
- Ensure whānau know where to meet in the case of an evacuation.
- Ensure whānau and mentally and physically prepared for emergencies.
- Having a strong sense of hinengaro and wairua to cope through emergencies.

Equally, long-term preparedness stemmed to the wider whānau (community in Kaikōura). All of the participants mentioned how supportive the marae and hospital were, particularly in terms of providing kai, shelter, and support. As aforementioned, a challenge which impacted the short-term psychosocial recovery was the community’s physical resource to manaaki the high number of people that were stranded. For instance, Interviewee A spoke in detail about how supportive the marae and hospital were in ensuring everyone was looked after. In hindsight, Interviewee A mentions some of the support he would have liked to see in the community.

*“The earthquake showed how much pressure our local hospital and marae were under and it would be good if they had better resources to handle another earthquake (if it were to happen, who knows really). Even with the current crisis were in [COVID-19], you know we just need to get better at getting ready for emergencies” (Interviewee A).*

The response alludes to the idea if another earthquake were to occur the impact on the community’s resources would be detrimental. This would inevitably impact the psychosocial health of the people in the community. As demonstrated throughout the findings, each component of health from a Māori worldview is intertwined, each having an impact on an individual and whānau health. It seems likely supporting the physical aspects of the community’s health would better support their overall psychosocial health from a Māori perspective. This would be a key area for further research.

#### 4.5. Summary.

**Table 4**

*Summary of findings*

Psychosocial health.	Psychosocial mechanisms.	Psychosocial challenges.
• Participants have a strong understanding of	• Kaha, manaakitanga and kotahitanga demonstrated by	• High number of stranded people put pressure on the

<p>psychosocial health from their point of view.</p> <ul style="list-style-type: none"> <li>• Psychosocial health, similar to te whare tapa whā, is an individual’s hinengaro health in the context of their tinana, wairua and whānau health.</li> <li>• A person’s hinengaro could not be healthy if the context in which that individual lived in was “unhealthy”.</li> </ul>	<p>the individuals and community correlates to Māori view of health and had a positive impact on the participants’ view of psychosocial recovery.</p> <ul style="list-style-type: none"> <li>• Basic needs such as food and shelter that were provided by the community minimised the impact on the participants’ psychosocial health.</li> <li>• Marae was a key mechanism to support psychosocial recovery.</li> </ul>	<p>local community (including the physical infrastructure) particularly given the length in time it took for external support to arrive.</p> <ul style="list-style-type: none"> <li>• Communication and coordination with external support and community posed a challenge during the response.</li> <li>• Mental health support was not offered in a way that was receptive to the participants.</li> <li>• No long-term support was perceived to be offered.</li> <li>• Participants were forced to seek their own mental health support.</li> </ul>
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The researcher has summarised the key findings in Table 4 above. Each component of te whare tapa whā model are important aspects of health for the participants. From a Māori world view, psychosocial health is viewed as an individual’s hinengaro health in the context of their tinana, wairua and whānau health. Each quadrant is interconnected, meaning their health is viewed holistically. Te ao Māori mechanisms such as manaakitanga were key to the participants’ psychosocial recovery. All of the participants spoke about their own experience with the community’s response. Each person discussed how the community demonstrated manaakitanga with food, shelter, and support. It was clear that the participants associated the manaakitanga portrayed during the response to a natural phenomenon. This meant participants viewed this trait with ‘who they are’ (te ao Māori). There was a correlation between the community’s manaakitanga, kaha and positively impacting the participants’ perception of psychosocial resilience.

Participants stated there were notable challenges. For instance, there was a high number of people that were stranded. The community were put under immense pressure to support all of the people following the earthquake. This was particularly evident given the length of time before external support arrived to support the community. Equally, there was an apparent breakdown in communication and coordination between external support such as the New Zealand Army, Red Cross and Civil Defence and the community. Additionally, there was a perceived lack of adequate support for mental health. These have not only impacted the participants' perception of short-term recovery but have impacted the participants' psychosocial health, long-term.

Participants agreed the marae played an important role in providing support to all those that required help. Building better infrastructure in the community (such as the marae and hospital) will support the response of potential future emergencies. Relationship building, improving communication and coordination between external support and the community is an area for improvement. Although on-going mental health support that required treatment is not necessarily required for all of the participants, there was a lack of perceived support for some of the respondents. Instead, participants felt imposed to seek mental health support themselves. It seems clear that providing on-going psychosocial support of individuals in the context of their whānau and context is important. This will provide a strong foundation for the participants' long-term overall health. These findings, and how the participants' perception of psychosocial recovery can be included in DRR and actions, will be discussed in chapter five.

## Chapter Five: Discussion

### 5.1. Introduction.

Hazards like earthquakes disproportionately impact vulnerable and marginalised groups (Inter-Agency Standing Committee, 2007; Wisner et al., 2012). Both hazards and disasters can have a profound impact on the psychosocial wellbeing of the affected population (Weissbecker, 2009). Colonisation and its ongoing effects have created disparities in health and wellbeing for Māori (Kenney & Phibbs, 2015; Kearns et al., 2009). The psychosocial approach considers the psychological factors and the social environment surrounding an individual's wellbeing and her/his ability to function (Ministry of Health, 2016). Te ao Māori acknowledges all living things are interrelated and there should be equilibrium in all things including health (Durie 2006; Harmsworth & Awatere, 2013). Similar to psychosocial wellbeing, Māori health should be considered in the wider context or environments within which health takes shape (Rochford, 2004). The findings perpetuate the psychosocial wellbeing of Māori were impacted positively and negatively as a result of the mechanisms utilised to deal with the Kaikōura earthquake. This chapter discusses the psychosocial support delivered as well as te ao Māori psychosocial mechanisms developed post-Kaikōura earthquake. These insights include the difficulties, barriers, and gaps encountered by Māori during their recovery, including recommendations on how to best support Māori recovery. To do this, the findings presented in chapter four are confronted with the literature. Section 5.2 discusses psychosocial mechanisms following the Kaikōura earthquake. Mental health support, infrastructure, social capital, and the impact these mechanisms had on psychosocial wellbeing are discussed, respectively. Section 5.3 then discusses te ao Māori mechanisms for psychosocial wellbeing following the earthquake. Section 5.4 recommends best practices from a Māori worldview, to better support Māori in psychosocial recovery. The limitations, scope of the study and recommendations for further research is explained.

### 5.2. The impact of psychosocial mechanisms following the Kaikōura earthquake.

The literature related to DRR has drawn considerable attention to the need to build resilient communities (Kwok et al., 2016; Gaillard, 2010). The Sendai framework for Disaster Risk Reduction 2015-2030 recommends the perseverance and persistence of substantial DRR in economic, physical, social, cultural, and environmental perspectives of people and communities (United Nations Office for Disaster Risk Reduction, 2015). The disaster resilience framework is informed by the Sendai Framework within New Zealand. Ministry of Civil Defence & Emergency Management administers the Civil Defence Emergency Management Act 2002, as well as the associated Disaster Resilience National Strategy, at a national level (Becker, Paton, Johnston,

Ronan & McClure, 2017). They have responsibility for improving resilience and preparedness as outlined in the legislation. At a local level there are many agencies (such as the Earthquake Commission) that have an interest in improving resilience. However, the Civil Defence Emergency Management Groups are responsible for regional resilience and preparedness. Under the National Civil Defence Emergency Management Plan, the Ministry of Health is the lead agency for the planning and delivery of psychosocial support after national level events (Gluckman, 2016) and developed the 2016 Framework for Psychosocial Support in Emergencies (Ministry of Health, 2016).

The Psychosocial Response Committee was formed as a result of the 2011 Christchurch earthquakes and the Ministry of Health lead the response following the Kaikōura earthquake. The Ministry of Health sought to roll out the learnings from the psychosocial response to the Christchurch earthquakes. Following the Kaikōura earthquake the committee were as a result, tasked with sharing the lessons learned from the 2011 Christchurch earthquakes to support Kaikōura (Gluckman, 2016). A part of their support was said to be delivering programmes such as the Community in Mind Strategy's Shared Programme of Action which included a variety of initiatives, services and supports, including the 0800 Canterbury Support line, the Earthquake Support Coordination Service, free counselling, and the 'All Right?' programme (Gluckman, 2016).

As part of the national coordinating role, the Ministry of Health links with DHB coordinators to determine local versus national needs (Gluckman, 2016). Many aspects of what has been implemented for Christchurch may have broader applicability, but it is also clear that very local responses are often necessary (Gluckman, 2016). For example, Red Cross has provided a centre operating in Christchurch for people who have been evacuated from their homes following the Kaikōura earthquake. Despite this being available, participants in this study did not mention a facility for long-term evacuation. Studies note the importance of such facilities following a disaster (Bashawri, Garrity, & Moodley, 2014; Schafer et al., 2016). It is important to ensure people are safe, provide shelter and basic first aid and psychosocial services (Duckers, 2017). Ministry of Health (2016) states basic physical needs such as need for safety and shelter are key to minimising psychosocial impacts on individuals, families, whānau and communities. Losing a house means losing one's dignity, identity, and privacy as well as lack of physical safety (Bashawri et al, 2014). This increases the likelihood of a range of illness (Bashawri et al, 2014). Findings indicate participants were unaware that this mechanism was available. This may have had long-term negative implications on the participants' psychosocial wellbeing.

Homecare Medical was used to run the Help Line with counsellors and mental health professionals to support those affected by the earthquake if required (Gluckman, 2016). The participants' view of the mental health approach following the earthquake will be discussed further in section 5.2.1. There are only few studies that

measured the efficacy of how these programmes were delivered. This is in accordance with the Ministry of Health (2016) inferring many of the psychosocial interventions currently in use are not supported by empirical evidence. Gluckman (2016) perceived the committee to already be very busy from the recovery of the Christchurch earthquakes. This view is consistent with a report by John Mackie of the Christchurch City Council who shared his experience of the Kaikōura earthquake response. The local council 'coped well' through the initial response, but, the local council in scale are very small and the earthquake put enormous strain on their limited resources (Mackie, 2017). Mechanisms designed to support psychosocial wellbeing after the 2011 Christchurch earthquakes seemed to be utilised following Kaikōura's event. The findings indicate participants were unaware these were available, negatively impacting the participants psychosocial wellbeing.

The framework for Psychosocial Support in Emergencies indicates delivering appropriate psychosocial interventions to support individuals and communities is imperative (Ministry of Health, 2016). Accurate assessments of psychosocial problems are crucial to effectively coordinate and deliver interventions designed to provide psychosocial support (Ministry of Health, 2016). This builds on the views of Gluckman (2016) suggesting responses to events need to be tailored to the community. The Psychosocial Response Committee should utilise strengths of Kaikōura. Engaging with local iwi Ngāi Tahu and Takahanga marae (discussed further in section 5.3) will facilitate better communication and engagement with Māori about psychosocial programmes (Kenney, & Phibbs, 2014). This will provide an opportunity to measure the effectiveness of these mechanisms to Māori psychosocial wellbeing in future. The next section will examine the mental health support delivered following the earthquake.

### 5.2.1. Mental health support and the impact on psychosocial wellbeing.

Two participants indicated mental health was an area that required further support. Evidence submits the need for continued efforts to provide more effective mental health support to affected individuals and groups (Leon, 2004). The participants stated immediately following the earthquake there was some mental health support offered. As an example, a register was taken with all of participants' details and they were contacted approximately a week following the earthquake. Of the respondents that required mental health support, it became apparent the response time for support was 'too soon'. Participants still felt the impact of the earthquake and were largely focusing on settling into their homes, when mental health support was offered. This suggests long-term follow up was required and yet, not offered.

The effect of the earthquake still had a large impact on these participants psychosocial wellbeing. In hindsight, they mentioned that if there was a long-term follow up process, they would have pursued the support. The

impacts of disasters can have long-term mental health implications on individuals (Leon, 2004). The Inter-Agency Standing Committee Guidelines on Mental Health and Psychosocial Support in Emergency Settings states one of the priorities in emergencies is to protect and improve people's mental health and psychosocial wellbeing (Inter-Agency Standing Committee, 2007). Achieving this requires coordinated action among all stakeholders (Silove et al., 2006; Inter-Agency Standing Committee, 2007; Slade, 2010). The framework for Psychosocial Support in Emergence recommends practising a surveillance approach to mental health impacts following an event as it allows time to pass before beginning any treatment (Ministry of Health, 2016). The findings affirm this was required. Furthermore, the study indicates that long-term follow up of people that were impacted may have positively impacted the participants' psychosocial wellbeing.

This present study found two out of five participants required follow up mental health services and had to seek the intervention themselves. The findings fit with the theory that while most people make a good recovery from psychological and social effects of significant disasters, others are at risk of experiencing more severe and long-lasting problems (Bonanno, 2008; Crabtree, 2013; Gluckman, 2016; Ministry of Health, 2016). Rangihuna et al. (2018) state Māori do less well than non-Māori with diagnosing and treating such mental health issues. This is largely due to disproportionate burden of illness, lack of diagnoses, and more frequent readmission to criminological care. Further to this, Rangihuna, et al. (2018) postulate the impact of mental health disorders in the Māori community may relate to psychosocial adversity. This reinforces Māori suffer poor health along with complex social and economic problems compared to non-Māori (Ellison-Loschmann & Pearce, 2006; Reid et al., 2014).

Equally, the findings indicate the method for long-term follow up; such as registering participants to be contacted approximately a week following the earthquake, was inadequate. Two participants sought mental health services by themselves. Studies purport there should be monitoring within the context of the affected communities so that trends are identified early (Colpe, Freeman, Strine, Dhingra, McGuire, Elam-Evans, Perry, 2010; Kobau, DiIorio, Chapman & Delvecchio, 2010; Gluckman, 2016). The participants were not able to be monitored as they did not agree to the mental health support when it was offered. This in turn, resulted in no follow up intervention. This notion, coupled with Māori being typically unlikely to be diagnosed and treated for mental health issues (Rangihuna et al, 2018), may indicate why there are not a significant number of Māori requiring mental health intervention following a disaster. Arguably, a change of approach in providing mental health support, may change the statistics of those requiring it (Slade, 2010). Importantly, it may ensure those that require it, receive it. This will minimise long-term mental health impacts on individuals and groups (Leon, 2004).

Not all of the participants mentioned suffering from on-going mental health issues that required treatment. Participants did mention they experienced some form of ongoing mental health issues. For example, a participant noted some reoccurring memories. Another participant noticed their daughter may still be affected by the earthquake. This may have affected the participants' taha hinengaro aspect of health. Crabtree (2013) infers mental health problems suggest different responses which include professional help and psychosocial interventions. This study builds on such findings. The information from the participants demonstrate the way mental health support is offered is an area for improvement. This indicates a new approach to traditional mental health assessments and treatments will promote wellbeing (Slade, 2010). Mental health interventions should provide clear links between function areas and services in order to ensure holistic support to people affected by disasters (Eyre & Brady, 2013). Improving this process and approach is likely to have minimised the impact on these participants psychosocial wellbeing. Following this section, a discussion about the local infrastructure and the impact it had on psychosocial wellbeing is made.

### 5.2.2. The impact of local infrastructure on psychosocial wellbeing.

Participants mentioned people in Kaikōura were isolated. This was a result of complex ruptures and multiple faults which lead to widespread landslides (Robinson, 2018). The number of people and tourists was a challenge for the people in Kaikōura to support alone, impacting their psychosocial wellbeing. This finding is similar to studies indicating the complex nature of the earthquake exposed the community's vulnerability to hazards and disasters (Thornley et al., 2015; de Bruin & Read, 2018). The literature highlights the importance of infrastructure during hazards and disasters and aspect of psychosocial resilience (de Bruin & Read, 2018; Mooney et al., 2011; Phibbs et al., 2015). Despite this, the findings demonstrate local infrastructure needs to be improved and could not cope with another hazard of a similar scale.

Along with residents, a reported 1,000 tourists were stranded so people could not leave the area for respite (Carter & Kenney: 2018; de Bruin & Read, 2018; Stevenson et al., 2017). Evacuations for those trapped at the time of the earthquake were only possible by air and sea so residents and tourists stranded in Kaikōura were largely dependent on their own resources (de Bruin & Read, 2018; Stevenson et al., 2017). Although key health services remained operational throughout the event (Stevenson et al., 2017) participants stated the impact of the earthquake (as well as the high number of tourists to care for), added pressure to the local community, particularly the marae and hospital. A participant maintained the earthquake was not as fatal as the Christchurch earthquakes, there was a high number of injuries. This participant articulated the pressure the local hospital was put under during the response and the impacts on psychosocial recovery. This posed a challenge for the community as the number of people stranded was overwhelming. This is consistent with

Hudson and Hughes (2007) view that it is common for Māori to provide support to others when there is not the capacity to do so.

Hudson and Hughes (2007) note the importance of incorporating the community (such as iwi and marae) into a region's civil defence preparedness planning. During the response to the 2011 Christchurch earthquakes, however, kaumatua (elders) of Ngāi Tahu said iwi have struggled to influence disaster response initiatives and described the Ministry of Civil Defence & Emergency Management at the time difficult to approach (Phibbs et al., 2015). Participants mentioned the marae and hospital were key resources. The community infrastructure seemed not equipped to cope with the earthquake. The findings suggest this caused frustration. The participants felt isolated and unsure about when help would arrive, impacting their psychosocial wellbeing. This affected the physical aspect (taha tinana) of people in the community, ultimately impacting the psychosocial wellbeing and balance of the participants' health. These findings should be considered when considering how to reduce the community's vulnerability to hazards in future. Strengths such as the social capital demonstrated within the community should also be considered to build capacity during a response and minimise the impact on psychosocial wellbeing. This, and the challenge of communicating and coordinating with emergency services will be discussed in the following section.

### 5.2.3. Coordination between the community and emergency services following the Kaikōura earthquake and the impact on psychosocial wellbeing.

The emergency services approach during the response seemed to negatively impact the participants' psychosocial recovery. Similar to existing studies, findings indicate psychosocial recovery will be impacted if local community, government, and nongovernment bodies are not able to actively collaborate together in a cohesive and coordinated way (Mooney et al., 2011; Thornley et al., 2015). A key component of psychosocial support post-disaster is a coordinated response by agencies. Psychosocial recovery structures need to work together using a cross-cutting approach that differs from their usual, specific-focused interventions (Mooney et al., 2011). Challenges arise when there are competing priorities, a lack of coordination or where there fails to be a clearly agreed, overarching goal for recovery (Eyre & Brady, 2013). When a variety of agencies attempt to address a range of aspects of recovery with inconsistent approaches or goals, there is increased risk that psychosocial recovery will be undermined (Mooney et al., 2011; Eyre & Brady, 2013).

It is unclear whether the issue of coordination stemmed from a failure to reach a common goal. Evidence suggests effective communication with those affected by emergencies is fundamental to effectively reduce and manage psychosocial impacts of emergencies (Ministry of Health, 2016). Despite this, the participants

mentioned the approach and coordination of emergency services during the response could improve. *“After a couple of days, the Civil Defence and Army came into help. They were a big help actually, but I personally think it was a bit of ‘us and them’ at times. I felt like they came in and took over the show a bit when actually we were doing ok...”* (Interviewee E). This point demonstrates the lack of cohesion this participant felt between the community and emergency services. Emergency services might consider their approach, how it may be perceived and how it could impact the psychosocial wellbeing of those affected by disasters. The participants indicated they were relieved with the external support. The findings suppose better coordination between the community and external support may have improved the participants’ stressful experience. Building on local resources and strengths (social capital for example) and physical resources (such as Takahanga Marae) shall contribute to increase the community’s capacity to respond to disasters and minimise the impact on psychosocial wellbeing.

Findings indicate that local people worked together to support each other. Participants stated they shared food and worked together to cook and find resources, including shelter. There seemed to be no issues with the local community working together to achieve their common goal of remaining safe. The participants indicated this positively impacted their psychosocial wellbeing. Studies state social capital involves individuals and groups maintaining relationships, networks, trust, and mutuality and working towards a common good. These groups include the immediate family and the wider family network (hapū and wider iwi) (Robinson & Williams, 2001; Matheson & Jones, 2016). Bonding social capital was demonstrated in the findings. This included the ties between immediate family and close networks in the community (Nakagawa & Shaw, 2004). Bridging social capital includes the links between different people from the wider community (Nakagawa & Shaw, 2004). The findings state the community supported tourists. The responses suggest there was strong bonding and bridging social capital. This seemed to have a positive impact on the participants’ psychosocial recovery. On the other hand, linking social capital, typically bonds a community and local government (Nakagawa & Shaw, 2004).

The communication and coordination between community and government agencies was an area of discussion that required improvement. *“I would say with the Red Cross and the Civil Defence, in my eyes needed to have bit more communication... It is about having that communication and relationships... So, I think with Civil Defence and Red Cross, I felt they thought what they say goes...”* (Interviewee D). A participant of the study working in the hospital struggled to coordinate effectively with emergency services and as a result people were anxious. Communication and coordination between people in the community and emergency services seemed to have a negative effect on the community’s taha whānau aspect of health. This brought unbalance to the participants’ psychosocial wellbeing. Aldrich (2012) points out this form of social capital entails communities and government agencies working together to address systemic collective action problems which in turn reduce

vulnerabilities in a community. These findings appear consistent with studies conjecturing social capital within the different concepts of whānau, is important (Nakagawa & Shaw, 2004; Aldrich, 2012). This may help address systemic collective action problems, reducing vulnerabilities in a community. It may improve coordination and cohesion when responding to an event. The long-term implications of this will include positively impacting the community's psychosocial wellbeing. This indicates te ao Māori mechanisms following the earthquake, had a positive impact on psychosocial wellbeing. This is examined in the next section.

### 5.3. Te ao Māori mechanisms for psychosocial wellbeing following the earthquake.

#### 5.3.1. Kaha as a te ao Māori psychosocial mechanism.

Te ao Māori mechanism kaha (capabilities) was a key theme in the findings. Consistent across all of the participants, Takahanga marae was said to be a key aspect of support for all people isolated following the earthquake. A participant mentioned the food, shelter, and support Takahanga marae provided to those stranded, including the large number of tourists. *"The marae did an awesome job looking after everyone as well but there were a lot of people to awahi (help)... The marae did a really good job with what they had. Just really good people that just supported each other, did not let anyone you know, go with nothing"* (Interviewee E). This is similar to finding of de Bruin and Read (2018) asserting although the resources of the Kaikōura's local council were limited following the event, the challenge of responding to this crisis was taken up by Takahanga marae and the iwi Ngāi Tahu. It was estimated 700 people spent the night of the event at Takahanga Marae and approximately 200 people (mainly tourists) spent the following night (Stevenson et al., 2017). This finding is in line with previous studies that state the marae is key in providing resource for people to evacuate following hazards and disasters (Hudson & Hughes, 2007; Thornley et al, 2015).

Marae typically have large facilities for sleeping, cooking and shelter (Hudson & Hughes, 2007). Studies portrayed marae as fundamental in responding to disasters such as the 2004 Manawatū floods and 2011 Christchurch earthquakes (Kenney & Phibbs, 2014; Carter & Kenney, 2018). Phibbs et al. (2015) stressed following the 2011 Christchurch earthquakes, there were 12 Ngāi Tahu marae located in region that could feed and accommodate up to 4,000 individuals. Consistent across all of the participants, Takahanga marae was a key aspect of support for them and others in the days following the earthquake. This finding is comparable to the Ngāi Tahu urban marae Rēhua whom immediately designated an Earthquake Recovery Assistance Centre following the 2011 Christchurch earthquakes (Kenney & Phibbs, 2014; Thornley et al, 2015). The findings

contribute a clearer understanding that participants perceived the marae as a significant support mechanism following the earthquake which should be considered in DRR policies.

Two of the respondents surmised their own kaha or support mechanisms help bring balance to their health. The earthquake brought about feelings of stress and as a result unbalance to the participants psychosocial wellbeing. There is a perception that local people act as passive and weak bystanders following a crisis (Perry & Lindell, 2003). Capacity within DRR context includes the resources and tools local people utilise to cope with an event. For example, local knowledge, social networks, skills, and technology (Davis et al., 2004 as cited in Rey, et al., 2017; Gaillard et al., 2019). People usually gathered their own kaimoana (seafood), were not be able to due to the tsunami threat. In accordance with other studies, the findings indicate this added to the participants stress (Stevenson et al., 2017 as cited in Fleisher, 2019). This meant they were not able to use this resource for a number of days following the earthquake. There was no mention of the participants acting in a socially disorganised or disoriented manner, typifying early perceptions of disaster victims (Perry & Lindell, 2003).

Sir Peter Gluckman's report which examined the psychosocial consequences of the Kaikōura earthquake states the first phase after an event, people typically act heroically (Gluckman, 2016). The participants' reflection of this period was altruistic, pro-social and rational, reflecting the capabilities and capacity of local people. Several people utilised a nearby house as a marae, sleeping on mattresses outside to alleviate the crowd at Takahanga marae. Responses show the community were strong in kaha. Findings demonstrate a correlation between te ao Māori mechanism kaha and positively impacting the participants' psychosocial wellbeing. Findings show Māori in Kaikōura possess a number of capacities and resources. Takahanga marae, for example, positively impacted the participants' perception of psychosocial recovery following the earthquake. Psychosocial mechanisms should build on the community's capacities and resources (such as Takahanga marae) to positively impact wellbeing.

### 5.3.2. Manaakitanga and kotahitanga as a te ao Māori psychosocial mechanism.

Te ao Māori mechanisms such as manaakitanga and kotahitanga were key to the participants' psychosocial recovery. Māori were expected to assimilate to Pākehā culture because Western psychosocial paradigms for example, was perceived as the standard people should aspire to and te ao Māori was redundant (Durie, 2003; Hill, 2010). Despite assimilating to Pākehā culture, it was clear from the findings that Māori ways of knowing and doing (tikanga) were the very components that expedited the participants psychosocial recovery following the earthquake. Katene and Taonui (2018) say within the principle of manaakitanga, Māori care for others even

if it means taking care of others before themselves. This was shown in the findings. The participants said there was not always enough food to share and yet demonstrated manaakitanga by offering it anyway. Some people did not have a lot of food in their homes. Conversely, the tsunami warning caused confusion and frightened many people who were already stressed (Stevenson et al., 2017 as cited in Fleisher, 2019). Local people were not able to source their own kaimoana for a period of time. In spite of this, a participant stated people gathered what they could from their homes and made meals for everyone. All participants mentioned how the community demonstrated manaakitanga by providing each other, including the high number of tourists with food, shelter, and support.

Findings propose manaakitanga supported the participants' taha tinana and taha wairua, and positively impacted their psychosocial wellbeing. This adds to existing evidence that kotahitanga (unity) is a key characteristic of Māori. It entails facilitating a united response to adverse conditions which Māori culture are typically accustomed to (Kenney & Phibbs, 2014). Many of the participants reflected without the support of the community, the days following the earthquake may have been a lot harder to deal with. It was clear the participants associated te ao Māori mechanisms portrayed during the response to a natural phenomenon. A participant correlated the manaaki they offered to their tikanga. *"I suppose the love that I have for people. You know sometimes I actually put them before myself. You know my nanny taught me that, it is the Māori way... A lot of the way I was brought up helped [the days following the earthquake]"* (Interviewee D). This participant viewed this trait with 'who they are' (te ao Māori). This contravenes early perceptions that te ao Māori mechanisms were redundant. Te ao Māori mechanisms were necessary to support the participants' psychosocial wellbeing and bring balance to their health following the earthquake.

The findings assert resource such as food and shelter were sparse, but what was available was shared. Additionally, emergency services were unable to help for a number of days following the earthquake. Interviewee D stated: *"so for all those days before hand it was just us guys, but we were kind of lucky because we had power and we had water and everything.... The services were there were awesome... Marae, Civil Defence, Red Cross but yeah it did take a few days..."*. This is consistent with the view that a component of early intervention (such as psychological first aid) is securing resources to meet basic needs (Fullerton, Reissman, Gray, Flynn & Ursano, 2010). The Ministry of Health's framework for psychosocial support also emphasises the requirement for basic services and security (Ministry of Health, 2016). Research by Perry and Lindell (2003) state it is common people affected by a disaster provide key resources during a response. The community seemed able to address the basic needs given the high number of people.

Te ao Māori mechanisms such as kaha, manaakitanga and kotahitanga were key in ensuring everyone was supported and enhanced the participants' psychosocial wellbeing. This is consistent with a study that found

having a sense of responsibility for others was a reoccurring theme in the interviews following the 2011 Christchurch earthquakes (Kenney & Phibbs, 2014). These values support Māori and marae to successfully and innovatively adapt cultural practices to deal with adverse events (de Bruin & Read, 2018; Kenney & Phibbs, 2014). Kaha, manaakitanga and kotahitanga demonstrated by people in the community positively impacted the participants' psychosocial recovery following the earthquake. This supported the participants' perception of psychosocial recovery. How the participants would have perceived their psychosocial wellbeing, had the community not been able to meet these basic needs, was a key question raised from the findings. Findings suggest te ao Māori mechanisms should be embedded into DRR policies within New Zealand to positively support psychosocial wellbeing.

#### 5.4. Best practices from a Māori worldview, to better support Māori in psychosocial recovery.

Findings indicate participants were unfamiliar with the term 'psychosocial'. Tikanga Māori dictates what was right for the participants in their context, in that point of time of the interview. Themes demonstrate although the participants were unsure of psychosocial health, the participants have a strong understanding of the concept from a Māori perspective. For example, the responses suggest a person's hinengaro could not be healthy if the context in which that individual lived in was "unhealthy". From a Māori world view, psychosocial wellbeing, is an individual's hinengaro health in the context of their tinana, wairua and whānau health. This demonstrates a correlation with te whare tapa whā framework. This model depicts good health as the balance between four interacting dimensions; te taha wairua, te taha hinengaro, te taha tinana and, te taha whānau (Ratima et al., 2005). This builds on findings advising appropriate measures for success in wellbeing programmes should align to tikanga and matauranga Māori practices. This will acknowledge the diverse perspectives and realities of Māori (Warbrick et al., 2018). Harmsworth and Awatere (2013) indicate Māori world view acknowledges a natural order to the universe. When part of this system shifts, the entire system is put out of balance (Harmsworth & Awatere, 2013). This means the system is interrelated, and Māori seek to understand the total system and not just parts of it (Harmsworth & Awatere, 2013). When there is an imbalance in an individual's health, Māori health should be addressed holistically (Ratima et al., 2005). When a pillar of health (such as taha hinengaro) is disrupted or unbalanced, the participants overall health is impacted. Consistent with the views of Ratima et al. (2005) a holistic psychosocial approach which considers individuals in the context of their whānau and environment is therefore required.

Māori, culture, and identity are fundamentally built on the reciprocal relationships formed with whānau (extended family and connections) and whenua (land/place) (Harmsworth & Awatere, 2013). This was a key

finding from the responses. All of the participants used “we” and “whānau” when explaining their view of health. Addressing the issues that impair psychosocial wellbeing in the individual’s whānau and context is key in improving Māori health outcomes. When participants spoke about their psychosocial wellbeing, their whānau and environment was at the forefront of the discussion. On-going support for the participants’ whānau was a fundamental aspect of the participants’ psychosocial wellbeing. The participants talked about the significance of their whānau collectives. There was a strong desire to pass down their learnings, to enhance the collective psychosocial resilience of their whānau. The findings signify the importance of addressing psychosocial wellbeing with Māori in the context of the whānau and environment. This is consistent with Wilson (2013) stating psychosocial impacts of disasters also include security and safety such as interpersonal bonds and networks including family, kinship groups, community, and society. Developing outcome measures targeted at Māori should include cultural reconnection, and will build strong, engaged communities to better cope better with crises (Thornley et al., 2015; Warbrick et al., 2018). This will require sufficient resource and investment in culturally appropriate solutions (Warbrick et al., 2018).

The literature has a heavy focus on immediate psychological response (albeit important), as Crabtree (2013) found following the 2008 Kosi River flooding, the villagers’ main priority was improving livelihoods would require deep rooted changes in the social-cultural situation. Kenney and Phibbs (2015) note the Māori disaster management response following the 2011 Christchurch earthquakes was an exemplar of best practice. Ngāi Tahu tribal development initiatives shape longer term resilience of members and local Māori through addressing factors associated with earthquake vulnerability such as financial hardship, unemployment and poor housing (Kenney & Phibbs, 2014). As mentioned, this requires communities and government agencies addressing systemic collective action problems together to reduce vulnerabilities (Aldrich, 2012) in Kaikōura. Psychosocial impacts are complex, result in a range of challenges (Silove et al., 2006) and require a holistic response. Te ao Māori acknowledges that all living things are interrelated and in order to improve health, the context in which the individual lives in must also be considered (Harmsworth & Awatere, 2013).

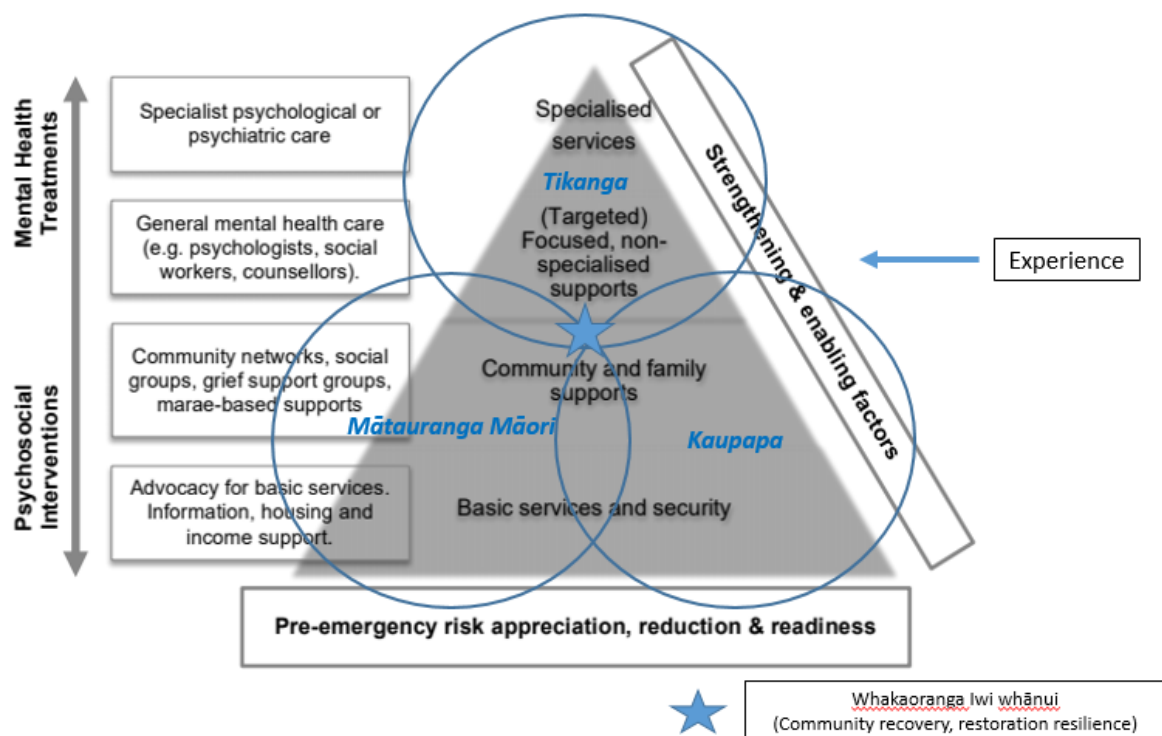
This study emphasises the importance of coordination between international, national, and local levels prior to disasters to ensure the facilitation of a cohesive response to an event. The Sendai framework 2015-2030 acknowledges the need for more community-based and cultural-sensitive DRR policies and actions (United Nations Office for Disaster Risk Reduction, 2015). Research emphasises the need for local, culturally acceptable initiatives that are compatible with the customs of local communities (Gaillard, 2010). This study found effective communication and coordination between stakeholders such as government agencies and the Kaikōura community was an area for improvement. This is consistent with the finding of Phibbs et al. (2015) who pointed out lack of Māori representation in national disaster preparedness and response planning resulted

in a lack of effective coordination during the Christchurch earthquake response. It is important to consider these learnings and ensure there is effective Māori representation in national disaster preparedness and response planning. This may improve and ensure community-based and cultural-sensitive DRR policies and actions are implemented at a local level.

People affected by disasters should not be expected to segment and separate their needs following an emergency (Eyre & Brady, 2013). Instead a psychosocial approach which considers the social and economic determinants of health will improve psychosocial wellbeing for Māori (Mooney et al, 2011; Ministry of Health, 2016). The findings suggest psychosocial impacts following an event are complex. To minimise negative impacts to psychosocial wellbeing, a holistic approach is important. This includes a holistic approach, incorporating te ao Māori values. Te ao Māori acknowledges that all living things are interrelated and in order to improve health, the context in which the individual lives in must also be considered (Harmsworth & Awatere, 2013). This study proposes a model that builds on existing frameworks by Kenney and Phibbs (2015) and the Ministry of Health (2016) to support psychosocial wellbeing for Māori. This is depicted in Figure 8 below.

**Figure 7**

*Conceptual framework schematising psychosocial support utilising a te ao Māori lens for DRR*



This model is adapted from Kenney and Phibbs (2015) and Ministry of Health (2016) and combines the psychosocial approach utilising a te ao Māori lens. It provides a conceptual model schematising psychosocial support requiring integrated, multi-layered, targeted initiatives, activities, and service coordination to address the complex, dynamic needs of individuals and communities and that can be scaled up or down as needed (Ministry of Health, 2016). Equally, it encompasses values such as tikanga, Kaupapa and matauranga Māori (Kenney & Phibbs, 2015). This framework considers the norms of Māori, from their point of view and aims to shape long-term psychosocial resilience of Māori.

## 5.5. Summary.

The objective of the study was to gain Māori perspectives of psychosocial recovery following disasters within New Zealand. It explored psychosocial wellbeing of Māori as a result of the 2016 Kaikōura earthquake. Discovered the difficulties, barriers, gaps, and successes encountered by Māori during their recovery. Findings suggest the psychosocial wellbeing of Māori were impacted positively (te ao Māori mechanisms such as kaha demonstrated by people in the community) and negatively (inadequate mental health support, for example) as a result of the mechanisms utilised.

The study highlighted post-disaster, there was a perceived lack of adequate support for mental health due to the way support was offered. For example, support was offered too soon after the earthquake. This has not only impacted the participants' perception of short-term psychosocial recovery but impacted the participants' long-term psychosocial wellbeing. This study affirmed evidence that long-term surveillance approach to mental health is required. This supposed participants would not have needed to seek out mental health support by themselves. The findings align with the view that while most people make a good recovery from the psychological and social effects of disasters, some experience long-lasting problems (Bonanno, 2008; Crabtree, 2013; Gluckman, 2016; Ministry of Health, 2016). All participants' mental health was impacted to different extents. Different responses are required which include professional help and psychosocial interventions (Crabtree, 2013). Mental health interventions should provide clear links between function areas and services in order to ensure holistic support to people affected by disasters (Eyre & Brady, 2013). Improving this process and approach is likely to enhance long-term mental health and psychosocial wellbeing following a disaster.

The findings demonstrate local infrastructure such as the marae and hospital need to be improved and could not cope with future disasters of a similar scale. Complex ruptures and multiple faults lead to widespread landslides. This meant Kaikōura as a community was isolated following the earthquake and exposed the

community's vulnerability to hazards and disasters (de Bruin & Read, 2018; Robinson, 2018). Residents and the high number of tourists stranded in Kaikōura were dependent on their own resources (Stevenson et al., 2017; de Bruin & Read, 2018). This added pressure to the local community, particularly the marae and hospital. It was noted the earthquake was not as fatal as 2011 Christchurch earthquakes, there was a high number of injuries which crowded the hospital. The community was put under immense pressure to support people following the earthquake. This was particularly evident given the length of time before emergency services arrived to provide support such as evacuations. Previous studies indicating the importance of embedding local infrastructure such as marae into DRR, was explored.

Furthermore, a key finding was the breakdown in communication and coordination between emergency services and community. Emergency services approach with people in the community negatively impacted the participants' psychosocial recovery. There is increased risk that psychosocial recovery will be undermined when agencies such as local community, government, and nongovernment bodies, attempt to address a range of aspects of recovery with inconsistent approaches or goals (Mooney et al., 2011; Eyre & Brady, 2013). Relationship building, trust, improving communication and coordination between emergency services and the community, such as the marae, is considered an area for improvement which will enhance psychosocial wellbeing. Building on social capital would help with a future response to an emergency and minimise the impact to psychosocial wellbeing. Likewise, it reduces the vulnerability's in a community by addressing systemic collective action problems and improve coordination and cohesion when responding to an event (Aldrich, 2012). Building on local resources and strengths such as social capital, iwi and Takahanga Marae will increase the community's capacity to respond to disasters and enhance psychosocial wellbeing.

Historically te ao Māori was decided as redundant (Durie, 2003; Hill, 2010). This study highlighted the significance of te ao Māori mechanisms, such as kaha in enhancing psychosocial wellbeing following the earthquake. The responses indicate Takahanga marae was a key aspect of support, food, and shelter for the high number of people that were isolated. Previous studies comparing the capabilities of marae following a disaster was discussed. Psychosocial mechanisms should build on the community's capacities and resources (such as Takahanga marae) to positively impact wellbeing. Contrary to the perception that vulnerable people are passive and weak, the findings suggest that Māori were altruistic and active following the earthquake. Local people were not able to gather kaimoana which meant they were not able to use this resource for a number of days following the earthquake. Local people utilised a nearby house as a marae, sleeping on mattresses outside to alleviate the crowd at Takahanga marae. Instead of acting in a socially disorganised manner (Perry & Lindell, 2003) the participants reflection of this period was altruistic and active, reflecting the kaha of local people.

Despite assimilating to Pākehā culture, the findings purport tikanga Māori was key following the earthquake. Te ao Māori mechanisms such as manaakitanga and kotahitanga were fundamental to the participants' psychosocial recovery. Existing studies state Māori care for others even if it means taking care of others before themselves (Katene & Taonui, 2018). This study asserts these findings. The participants said basic needs such as food and shelter were sparse. This was a challenge because emergency services were unable to help for a number of days following the earthquake. The people in the community demonstrated manaakitanga by providing support anyway. A key question raised from the findings was how the participants would have perceived their psychosocial wellbeing, had the community not been able to provide basic needs. Findings correlate mechanisms such as manaakitanga with te ao Māori (who they are). It was noted these principles supported their psychosocial recovery following the earthquake. This defies early perceptions that te ao Māori mechanisms were redundant. Te ao Māori mechanisms should be embedded into DRR policies within New Zealand to positively support long-term psychosocial wellbeing.

This study recommended best practices from a Māori world view, to better support Māori in psychosocial recovery. Findings demonstrate each component of te whare tapa whā model are important aspects of health for the participants. From a Māori worldview, psychosocial health is viewed as an individual's hinengaro health in the context of their tinana, wairua and whānau health. Each quadrant is interconnected, meaning their health is viewed and should be addressed holistically. From a Māori world view, best practice entails addressing the individual's health in the context of their whānau or environment to better support Māori in psychosocial recovery. An investment in indigenous-led solutions is required to align wellbeing initiatives to tikanga and matauranga Māori practice (Warbrick et al., 2018).

Best practice noted from the 2011 Christchurch earthquake was examined (Kenney & Phibbs, 2014). Increased Māori representation in DRR is required. This will allow local, culturally acceptable initiatives to be incorporated into disaster management planning. Coordination between international, national, and local levels prior to disasters ensures the facilitation of a cohesive response to an event (Thornley et al., 2015). The findings conjecture long-term resilience is achieved by addressing environmental factors associated with vulnerability to disasters (Aldrich, 2012; Kenney & Phibbs, 2014). This shall provide a strong foundation for long-term psychosocial wellbeing and overall health.

There was a strong correlation between te ao Māori mechanisms kaha, manaakitanga and kotahitanga demonstrated within the community and positively impacting the participants' perception of psychosocial resilience following the earthquake. These mechanisms underpin key Māori principles such as tikanga (cultural practices), kaupapa (cultural values and principles) and mātauranga Māori (cultural knowledge). This study

has adapted existing studies and proposed a reformed model of psychosocial wellbeing utilising a te ao Māori lens (Figure 8, section 5.4). The aim of this model is to ensure psychosocial wellbeing initiatives are culturally appropriate and consider tikanga, kaupapa and matauranga Māori practice. This will support long-term psychosocial wellbeing of Māori.

## 5.6. Limitations, scope of study and recommendations for future research.

This study provides interesting findings on Māori psychosocial recovery. It is based on a small sample due to the nature of the dissertation. The effects of COVID-19 travel restrictions impacted data collection. Little research has previously been done on the experiences of Māori and their psychosocial recovery following the Kaikōura earthquake. This study is based on the perceptions of the participants involved. The findings from this study may provide insight for DRR to improve psychosocial wellbeing of Māori following disasters such as earthquakes. Research could expand to other regions to investigate Māori experiences of disasters and psychosocial recovery in different areas of New Zealand. This research may also have benefited from interviewing emergency services such as the Red Cross and New Zealand Civil Defence to provide a diverse perception of psychosocial recovery following the Kaikōura earthquake. It was also noted, measuring the efficacy of psychosocial programmes is a key area for further research.

A participant called the researcher to say that after her interview, she later remembered about the difficulty she experienced with her insurance claims. The semi-structured interview approach allowed the participants' narratives guide the conversation to avoid researcher bias. Research more specific on this aspect might deserve attention, based on this element and the literature. The study conducted was a considerable time after the event occurred. It may have been beneficial to conduct research soon after the earthquake and compare the findings to understand the participants short-term versus long-term psychosocial effects. This may have highlighted frustrations felt by the participants over time. At the same time, the longer timeframe within which this research took place ensured the researcher did not add pressure to people who were already struggling to recover.

Finally, the researcher is Māori. It is the researcher's view that being Māori has been an advantage to conduct the research. It provided an "insider's perspective", in that the experiences narrated by the participants resonated with the oral narratives of the researcher's whānau. This also provided the opportunity to follow up with conversations that helped go more in-depth about the researcher's understanding of their psychosocial recovery. Equally, being aware of the risks entailed with this point of view and attempt to preserve the researcher's objectiveness. Every attempt has been made to design and construct this research with ethics and rigour.

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## Auckland University of Technology Ethics Committee (AUTEC)

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## Appendix A: Ethics Approval

**21 October 2019**

Loic Le De

Faculty of Health and Environmental Sciences

Dear Loic

Re Ethics Application: **19/321 Psychosocial recovery from disasters: A Māori perspective.**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 21 October 2022.

### Standard Conditions of Approval

1. The research is to be undertaken in accordance with the [Auckland University of Technology Code of Conduct for Research](#) and as approved by AUTEC in this application.
2. A progress report is due annually on the anniversary of the approval date, using the EA2 form.
3. A final report is due at the expiration of the approval period, or, upon completion of project, using the EA3 form.
4. Any amendments to the project must be approved by AUTEC prior to being implemented. Amendments can be requested using the EA2 form.
5. Any serious or unexpected adverse events must be reported to AUTEC Secretariat as a matter of priority.
6. Any unforeseen events that might affect continued ethical acceptability of the project should also be reported to the AUTEC Secretariat as a matter of priority.
7. It is your responsibility to ensure that the spelling and grammar of documents being provided to participants or external organisations is of a high standard.

AUTEC grants ethical approval only. You are responsible for obtaining management approval for access for your research from any institution or organisation at which your research is being conducted. When the research is undertaken outside New Zealand, you need to meet all ethical, legal, and locality obligations or requirements for those jurisdictions.

Please quote the application number and title on all future correspondence related to this project.

For any enquiries please contact [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz). The forms mentioned above are available online through <http://www.aut.ac.nz/research/researchethics>

Yours sincerely,

A handwritten signature in black ink, appearing to read 'K O'Connor', written in a cursive style.

Kate O'Connor

Executive Manager

**Auckland University of Technology Ethics Committee**

Cc: lilyfoulds26@hotmail.com; Margaret Williams

## Appendix B: Participant Information Sheet

### Date Information Sheet Produced:

26 August 2019.

### Project Title

Psychosocial recovery from disasters: A Māori perspective.

### An Invitation

*Nā tō rourou, nā taku rourou, ka ora ai te whānau”*

*With your contribution and my contribution, collectively we can take care of our family.*

Tēnā koe, my name is Lily Foulds. I am a post-graduate student of Emergency Management at Auckland University of Technology in Auckland. As part of my degree in a Master of Emergency Management, I am conducting research into Māori perspectives of psychosocial recovery in disaster, in particular the 2016 Kaikōura earthquake. By talking to Māori who have been affected by the earthquake, I am hoping to find out about their experiences with psychosocial recovery. My interest in this area touches the pulse of Māoridom by providing me a forum to discover the difficulties, barriers, gaps and successes encountered by Māori during their recovery. Importantly, this research intends to use these experiences to recommend best practices from a Māori worldview to better support Māori in psychosocial recovery. Therefore your contribution to this research reiterates the philosophies of our tīpuna in the whakatauki above. I invite you to take part in this research.

### What is the purpose of this research?

Aotearoa New Zealand is exposed to several hazards (for example, flooding and earthquakes) and has been subject to several disasters such as the 2016 Kaikōura earthquake. Disasters are harmful worldwide events that inflict multiple psychosocial impacts on affected individuals. Psychosocial recovery intends to reduce the physical, psychological and social impacts of an adverse event and enhance the emotional, social and physical wellbeing of individuals, whānau and communities. Psychosocial support is the process of meeting the physical, emotional, social, mental, cultural and spiritual needs of an individual and community. This approach considers people in the context of the combined influence that psychological factors and the surrounding social environment has on their physical, mental wellness and overall resilience.

On November 14th, 2016 an earthquake struck North Canterbury causing widespread damage and the coastal town of Kaikōura was impacted. Although research suggests feedback and community involvement is a crucial aspect of psychosocial recovery, little is known about the experiences of Māori and their recovery following the disasters. This leaves room to investigate the efficacy of psychosocial mechanisms that have been implemented following the Kaikōura earthquake from a Māori worldview. This research intends to understand your experiences and recovery post-earthquake. What recovery means and any contributing factors (such as the effectiveness of the psychosocial programmes you experienced post-disaster) that affected your recovery. The findings of this research may be used for academic publications and presentations.

### **How was I identified and why am I being invited to participate in this research?**

You have been invited to participate in this research because, this is insider research and you are known to me. You are also Māori, an adult (18 years or older) and were affected by the Kaikōura earthquake. Your experiences are invaluable to tautoko the objectives of this research.

### **How do I agree to participate in this research?**

Once you agree to be a possible participant, you will be invited to hui to discuss the purpose of the research, the process, and your rights and a chance to offer feedback. You will then sign a written permission form, consenting to participation in the research. Your participation in this research is voluntary (it is your choice) and whether or not you choose to participate will neither advantage nor disadvantage you. You are able to withdraw from the study at any time. If you choose to withdraw from the study, then you will be offered the choice between having any data that is identifiable as belonging to you removed and allowing it to continue to be used. However, once the findings have been produced, removal of your data may not be possible.

### **What will happen in this research?**

Once you agree to be a possible participant, you will be invited to hui to discuss the purpose of the research, the process, and your rights and provide a chance to offer feedback. From there, I will schedule a time to interview you (in a place of your choice) for up to 1.5 hours.

As outlined in the consent form, notes will be taken during the interviews and that they will also be audio-taped and transcribed however you can opt out of this. Once the interviews with each participant is complete, I will analyse the data, offer you the chance to read and approve your transcript, then I will complete the dissertation and submit it to AUT.

### **What are the discomforts and risks?**

There is no requirement to share any identifiable information about you or share any information that you do not feel comfortable with. Although the research does not intend to cause any discomfort or risks, at times I recognise that disclosing personal experiences may be uncomfortable.

### **How will these discomforts and risks be alleviated?**

The strategies I will use to address the disclosure of information that may cause discomfort is provided in two ways: Taha Wairua and Taha Tinana.

#### Taha Wairua:

1. All interviews will begin with a karakia. This way the interview will begin with peace.
2. The participants will be reminded of the whakatauki and the importance of their experiences may be to Māori.
3. Should information be disclosed that is discomfoting, I will suspend the interview and address their Taha Wairua.
4. Addressing their Taha Wairua involves asking the participant to korero without having this process recorded in research or moving the discomfort to a situation that the can feel comfortable to continue.
5. Following tikanga Māori gives guidelines to address discomfort.

#### Taha Tinana:

1. I will advise participants if they feel uncomfortable about information that is disclosed, they have the right to withdraw from the project or that part of their information can be deleted.
2. I will move to the next question.
3. I will remind participants that this research contributes to the wider knowledge of whānau and take the emphasis away from the korero that caused discomfort and reassert to the participant that their well-being is important and their contribution to the research.
4. Provide kai and refreshments and take a break.
5. Shorten the interview.

In addition, you may free call or text 1737 any time to talk (or text with) a trained counsellor.

AUT Health Counselling and Wellbeing is also able to offer three free sessions of confidential counselling support for adult participants in an AUT research project. These sessions are only available for issues that have arisen directly as a result of participation in the research, and are not for other general counselling needs. To access these services, you will need to:

- drop into our centres at WB219 or AS104 or phone 921 9992 City Campus or 921 9998 North Shore campus to make an appointment. Appointments for South Campus can be made by calling 921 9992
- let the receptionist know that you are a research participant, and provide the title of my research and my name and contact details as given in this Information Sheet

You can find out more information about AUT counsellors and counselling on <http://www.aut.ac.nz/being-a-student/current-postgraduates/your-health-and-wellbeing/counselling>.

### **What are the benefits?**

At the heart of this project is the whakatauki: Nā tō rourou, nā taku rourou, ka ora ai te whānau”

*With your contribution and my contribution, collectively we can take care of our family.*

This whakatauki was chosen because it illustrates the significance of your contribution to this research and the impact this research can have on Māori in general. By allowing me the opportunity to explore and understand your experiences of psychosocial recovery, these experiences will be used to better support Māori by identifying gaps and recommending best practice in future. This means this research provides you an opportunity to influence research that is about Māori, for Māori – so collectively, we can take care of our family.

At the end of the research project, I will offer this research as koha to your contribution so that you may keep this with your whānau in the future.

In addition, this research will assist me in completing my Masters qualification.

### **How will my privacy be protected?**

Information provided by you will be stored securely by myself in a locked cabinet (paper files) in Dr Loic Le De’s office for six years or in password-protected electronic files, accessible only to myself and my supervisors. After a period of six years, all data will be deleted in compliance with AUTECH protocol. Location of the data and Informed Consent Forms will be kept separate.

**What are the costs of participating in this research?**

There will be no financial costs to you as a participant in this research however the interview requires up to 1.5 hours in total.

**What opportunity do I have to consider this invitation?**

You will have up to 1 month to consider this invitation.

**Will I receive feedback on the results of this research?**

Yes, I will be contacting all participants and offer a copy of the final dissertation and I will make available to all participants a summary of findings.

**What do I do if I have concerns about this research?**

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor, Dr. Loic Le De, [Loic.le.de@aut.ac.nz](mailto:Loic.le.de@aut.ac.nz), 022 092 6718.

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTEK, Kate O'Connor, [ethics@aut.ac.nz](mailto:ethics@aut.ac.nz), 921 9999 ext 6038.

**Whom do I contact for further information about this research?**

Please keep this Information Sheet and a copy of the Consent Form for your future reference. You are also able to contact the research team as follows:

***Researcher Contact Details:***

Lily Foulds, [lilyfoulds26@hotmail.com](mailto:lilyfoulds26@hotmail.com).

***Project Supervisor Contact Details:***

Loic Le De, [Loic.le.de@aut.ac.nz](mailto:Loic.le.de@aut.ac.nz) and Margaret Williams, [margaret.williams@aut.ac.nz](mailto:margaret.williams@aut.ac.nz).

**Approved by the Auckland University of Technology Ethics Committee on 21 October 2019, AUTEK Reference number 19/321.**

## Appendix C: Consent Form

*Project title:*                    *Psychosocial recovery from disasters: A Māori perspective.*

*Project Supervisor:*        *Loic Le De and Margaret Williams.*

*Researcher:*                    *Lily Foulds*

- I have read and understood the information provided about this research project in the Information Sheet dated 26 August 2019.
- I have had an opportunity to ask questions and to have them answered.
- I understand that notes will be taken during the interviews and that they will also be audio-taped and transcribed however I can opt out of this.
- I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- I agree to take part in this research.
- I wish to receive a summary of the research findings (please tick one): Yes     No

Participants' signature:

.....

Participants' name:

.....

Participants Contact Details (if appropriate):

.....

.....

Date:

***Approved by the Auckland University of Technology Ethics Committee on 21 October 2019 AUTEK***

***Reference number 19/321. Note: The Participant should retain a copy of this form.***

## Appendix D: Research Questions

Research Title: Psychosocial recovery from disasters: A Māori perspective.

I am now going to ask you questions about wairua, hinengaro, tinana, and whānau, and the earthquake in Kaikōura.

What do you understand about psychosocial recovery?

### Te taha wairua

What does having a healthy wairua mean for you and your whānau?

When the earthquake happened, how did you feel spiritually?

### Te taha hinengaro

What does having a healthy Hinengaro mean for you and your whānau?

Who/what helped you cope through the earthquake and the recovery?

### Te taha tinana

What does having a healthy tinana mean for you and your whānau?

How has the earthquake changed the way you and your whānau physically take care of yourselves?

How did you feel about the support you received with providing/ receiving kai and resources (such as shelter and facilities) following the earthquake?

Te taha whānau

What does having a healthy whānau mean to you?

How has the earthquake changed the relationships in your whānau/ community?

What types of support would you like agencies to provide you and your Whānau? During the earthquake and now?

What in your opinion, were the mechanisms used to overcome the disaster and how this relates to psychosocial recovery?

What were the barriers for you and your whānau's resilience and recovery?

In your opinion, what are the key messages/ learnings for you to tell your whānau post-earthquake?

What in your opinion, are the key aspects to essential to psycho wellbeing?

Is there anything else you want to talk about?