The Effect of Embodied Historical Trauma on Long-Term Musculoskeletal Pain in A Group of Urban Māori Adults

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Declaration

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This Thesis/Dissertation/Research Project entitled: The Effect of Embodied Historical Trauma on Musculoskeletal Pain in a Group of Urban Māori Adults is submitted in partial fulfillment for the requirements for the Unitec degree of Master of Osteopathy.

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Candidate’s declaration

I confirm that:

- This Thesis/Dissertation/Research Project represents my own work.
- The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.
- Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.
  
  Research Ethics Committee Approval Number: 2014 - 1105

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Tihei mauri ora!

E ngā mana, e ngā reo rangatira mā
Tēnā koutou tēnā koutou, tēnā tatou katoa

Ko Kurahaupo te waka
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Abstract

Māori people experience higher rates of long-term musculoskeletal pain compared with European New Zealanders, despite being a demographically younger population. Like other indigenous colonized peoples Māori people also experience disproportionately high rates of trauma across a range of indicators from accidental injury, to domestic abuse and self-harm. This research explores the lived-experiences of a small group of urban Māori adults who have long-term musculoskeletal pain. The group is unique in that they are using an urban Māori healing service to address their pain and this thesis explores whether participants’ long-term musculoskeletal pain may in part be an embodied effect of historical trauma. Historical trauma is a term that has been developed by American Indian Alaskan Natives to describe the spiritual (mental/emotional/psychic) soul pain and suffering that their people continue to endure as a result of the traumatizing events of colonization. Massive historical losses of indigenous land, people, culture and language has occurred across the world and the ongoing detrimental effects of contemporary colonising artifacts such as assimilation practices, social and economic marginalization and embedded systemic racism contribute to the poor health status of many colonized indigenous peoples, which includes Māori people. This thesis situates long-term-musculoskeletal pain within the broader context of Māori health inequity that may be linked to the historical and contemporary effects of colonization. This thesis argues that long-term musculoskeletal pain may be one of many disorders affected by dysregulation of the hypothalamic pituitary adrenal axis, which regulates the body’s neuroendocrine processes in response to physical, psychological, social and environmental stressors. Unequivocal evidence suggests that both prolonged and repetitive stress or a single cataclysmic traumatic event may lead to alterations in neuroendocrine function and if left unaddressed, may lead to changes in gene expression. Epigenetic research shows that such changes may be passed on to future generations of children whose poor social circumstances – low socioeconomic and education status and exposure to stressful environments – may predispose them to a host of diseases later in life. A Kaupapa Māori research approach and phenomenological methodology highlight Māori perspectives, Māori identity and te reo Māori language and culture as being highly salient to the meaning participants in this study make of their long-term musculoskeletal pain.
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Chapter 1 – Literature Review of Historical Trauma Theory, Māori Health Inequity, Racism and Long-Term Pain

A) Historical Trauma Theory, Māori and Trauma

Introduction ‘Kia whakatomuri te haere whakamua’

This research evaluates the thesis that ‘the experiences some Māori people have of long-term musculoskeletal pain may in part be an effect of embodied historical trauma’, which may be understood within the broader context of New Zealand’s colonial history. The following chapter is presented in three sections. Section A examines the literature pertaining to historical trauma theory, its origins and underpinnings. Historical trauma theory – developed by American Indian Alaskan Native scholars – draws upon research with the children and grandchildren of World War II holocaust survivors, which shows that extreme trauma experienced by previous generations may affect the mental, emotional, psychic and physical health and wellbeing of present and future generations. The devastation of colonization upon American Indian Alaskan Native peoples is identified and links cataclysmic events of the past with the present health inequity evident in American Indian Alaskan Native communities. An exploration of the New Zealand literature examining the impact of historical trauma upon the indigenous Māori population makes visible that similarities in health inequity exist within Māori communities. Section B examines the determinants of Māori health inequity, which raises the central issue of how historical trauma, marginalization and ongoing racism may affect Māori health and wellbeing and the incidence of long-term musculoskeletal pain. This is followed by Section C, in which a critical review of the limited New Zealand literature pertaining to long-term musculoskeletal pain in the Māori population is presented. In regard to Māori terminology, the meaning of the word is given once directly after the term is used and then if repeated the Māori term only is given.

Historical trauma theory and research

Historical trauma theory developed by American Indian Alaskan Native scholars draws attention to cataclysmic historical events in which genocide, ethnocide and
marginalization that occurred as a consequence of colonization has an ongoing detrimental effect upon many indigenous American Indian Alaskan Native people’s physical, spiritual and mental health (B. Duran, Duran, Braveheart, & Horse-Davis, 1998; Pihama et al., 2014). Research suggests that the current health inequity evident in American Indian Alaskan Native communities has historical origins and may in part be explained by ongoing trauma that is associated with an enduring sense of loss of American Indian Alaskan Native people, their land and culture (Brave-Heart, 2000; B. Duran et al., 1998; Walters, Beltran, Huh, & Evans-Campbell, 2011). Incomplete grieving for ancestors exists as a spiritual suffering within American Indian Alaskan Native people’s communities in which psychic pain that manifests at both the collective and individual levels has been termed the soul wound (B. Duran et al., 1998; E. Duran, 2006). Eduardo Duran maintains that while the soul wound has been known about in Indian country since the time of Columbus, its importance for healing emerged when traditional burial ceremonies were outlawed in the 1880s, which delegitimized the grieving processes of American Indian Alaskan Native peoples. While the ban on American Indian Alaskan Native funerary rituals was lifted in 1978, the soul wound continues to impact upon the health and wellbeing of current generations of American Indian Alaskan Native peoples (B. Duran et al., 1998). The soul wound contributes to the pathological ongoing social problems evident within American Indian Alaskan Native communities, which includes disproportionately high rates of suicide, domestic violence, child abuse and alcoholism (E. Duran, 2006). Unexpressed grief may affect sadness and anger, and may also lead to shame (J. Reid, Taylor-Moore, & Varona, 2013) and “grief covered by shame negatively impacts upon relationships with self and others” so that “the sacredness within oneself and one’s community’ is forgotten” (Brave-Heart and LeBruyn, 1998, p. 63).

The trans-generational aspect of historical trauma is considered central wherein the effects of trauma are believed to be cumulative over time, extending beyond the lifespan to future generations (Brave-Heart, 2000; B. Duran et al., 1998). American Indian Alaskan Native scholars such as Brave-Heart and Duran have drawn upon research conducted with survivors of the holocaust of World War II and their descendants (Kellerman, 2013) in which the ongoing effects of the holocaust have been found to “impact upon psychic structures, identification and fantasies” in subsequent generations of children of
holocaust survivors (B. Duran et al., 1998, p. 342). Studies have shown that first, second and third generations of children of holocaust survivors suffered from what has been termed the ‘survivors child complex’ in which a constellation of features including depression, frequent persecutory nightmares, suicidal ideation and behaviour, guilt, shame and stress intolerance are evident (B. Duran et al., 1998). Even though these generations of children did not experience the holocaust directly, it is as though they were reliving the experiences of their predecessors and Kellerman (2013) raises the possibility that traumatic memory may be heritable, as it appears as though traumatic memory is being passed from one generation to the next.

A similar constellation of features was found in early studies with Lakota people – descendants of the cataclysmic Wounded Knee Massacre – who suffered from persecutory and compensatory fantasies about a return to the old way of life, perception of the world as dangerous and feelings of shame, withdrawal and anxiety related to frequently experiencing aggressive impulses (as cited in B. Duran et al., 1998). Duran and Duran (1995) conducted research examining the dream content of people living within American Indian Alaskan Native communities and over 800 themes were recorded showing that American Indian Alaskan Native people overwhelmingly experienced both their dreams and the world as hostile (as cited in B. Duran et al., 1998). Maria Yellow Horse Brave-Heart (2000) conducted historical trauma research with her Lakota people, adopting both a quantitative and qualitative research approach. The quantitative arm examined the effectiveness of a culturally appropriate four-day psycho-educational program designed to initiate grief resolution for a group of 45 Lakota human services providers. Assessment at three intervals using the Lakota Grief Experience Questionnaire, semantic differential, self-report evaluation and a six-week follow-up questionnaire, was conducted. Results showed that: a) education about historical trauma could lead to increased awareness of its associated effects, and b) sharing these effects could provide cathartic relief. Participants affirmed the usefulness of the theory of historical trauma in facilitating a healing process (Brave-Heart, 2000).

In response to tensions found in research with holocaust survivors – wherein reports of the positive results of quantitative studies on coping behaviours failed to capture participants’ affective experiences – in the qualitative arm of her research, Braveheart (2000) purposefully sought to include Lakota participants who were high functioning,
successful adults. Braveheart’s (2000) qualitative findings reveal the terror that participants experienced in the boarding schools they were forcibly sent to as children as part of the assimilation policy of American Indian Alaskan Native peoples. Participants reported frequent physical and sexual abuse, broken bones and other terrible consequences such as those from having their hair washed with toxic DDT. Intergenerational familial sexual abuse of boarding school survivors against their children is also made evident in the study (Braveheart, 2000).

According to New Zealand scholars Pihama et al. (2014), Braveheart’s (2000) research – grounded within the collective experiences of her people – exemplifies the importance of developing culturally appropriate methods for addressing the pain and suffering of historical trauma associated with colonization at both the collective and individual levels (Pihama et al., 2014). Pihama et al. (2014) maintain that Braveheart’s positioning is critical because it considers both the historical and intergenerational effects of trauma and is aligned with a Kaupapa Māori research approach in which the construct of whakapapa/genealogy prioritizes the notion that the life-worlds of present generations are inextricably connected to those of their tupuna/ancestors. Braveheart’s (2000) research captures the cataclysmic impact of historical trauma upon her people as a collective group and provides contemporary factors suggesting that trauma and suffering originating in colonizing events affect the lives of many individuals and their families in the present. Historical trauma as an effect of colonization is considered an ongoing process in which acculturative stress may contribute to feelings of anxiety, depression, alienation and marginality, psychosomatic symptoms – which may include long-term musculoskeletal pain – and identity confusion (B. Duran et al., 1998). While research suggests acculturative stress may affect an individual’s physical, psychological and social health status (C. L. Williams & Berry, 1991), historical trauma may be considered a more in-depth and all-encompassing theory in which the effects of genocide and ethnocide, racism, assimilation policy and oppression may continue to be present in the psyche at both the individual and collective community level (E. Duran, 2006).

Colonization and pathologizing trauma
Research highlights that colonization is a major traumatic event that has a considerable and enduring negative impact upon the health of many groups of indigenous peoples, including Māori (King, Smith, & Gracey, 2009). King et al. (2009, p. 66) maintain that:

The fabric of traditional societies was shredded by colonisation. Traditional life was suppressed by alien regulations imposed on people who had lived, sometimes for many thousands of years, with well-established traditional laws, languages, dress, religions, sacred ceremonies, rituals, healers and remedies. This legalised disruption was made worse by socioeconomic and political marginalisation, and by racial prejudice, which was often entrenched and institutionalised. This process was hastened by the often brutal dispossession of traditional lands and the subsequent poverty, under-education, unemployment, exploitation by unscrupulous employers and landlords, and increasing dependence on social welfare or begging in cities and towns.

In mainstream psychology, it has long been recognized that humans may suffer great distress and a core wounding of the mind, body and spirit in response to major traumatic events (J. Reid et al., 2013) of which war and genocide, violence, displacement, environmental and natural disasters are but a few. Such events impact not only upon individuals but also upon families, communities and societies however mainstream theories regarding trauma presently tend to focus upon post-traumatic stress disorder at the level of the individual, which is considered an entirely inadequate framework for understanding the multiplicity of problems that indigenous colonized people currently face (J. Reid et al., 2013). While understanding the post-traumatic stress of the individual is important, focusing on the ‘symptoms’ or syndrome of trauma raises several issues: firstly, it pathologizes natural human responses in which the “inability to bear the unbearable” (J. Reid et al., 2103, p. 517) is categorized as an underlying dysfunction of the individual that is then managed within the dominant Western biomedical paradigm. Too great a focus on pathologizing trauma may obscure the larger socio-political and economic contexts within which indigenous people may be predisposed to experiencing ongoing trauma that may span generations (Kirmayer, 1996; J. Reid et al., 2013). J. Reid et al. (2013) maintain that “post-traumatic stress disorder is only really capable of describing people’s responses to relatively circumscribed traumatic events” (p. 517), whereas the trauma experiences of people who endure the ongoing effects of civil war,
environmental disasters and colonization fall “outside the purview of the post-traumatic stress disorder concept” (p.517). In focusing on post-traumatic stress disorder and the individual, the cumulative effect of intergenerational trauma occurring across generations and within communities is not addressed and the impact of colonization ignored. While there are variations in the impact of colonization and imposed assimilation policies for different indigenous groups such as Canadian, American Indian Alaskan Natives, Aboriginal Australians and Māori people (Armitage, 1995), the outcomes are similarly evident across these populations in the form of major disparities in physical, spiritual, mental and social health (King et al., 2009).

**Historical trauma as public narrative**

J. Reid et al. (2013) make evident that the scholarship of historical trauma is somewhat hampered, firstly by the use of much interchangeable terminology such as “the soul wound, unresolved grief, collective trauma, intergenerational trauma, intergenerational post-traumatic stress and multigenerational trauma” (p. 518). Secondly, the term ‘historical trauma’ is often not clearly defined by the researcher who is using it and it is evident that some writers feel the need to search for information that links past causal variables that may influence health in the present (J. Reid et al., 2013). Several authors suggest that historical trauma may be treated as public narrative that focuses discourse upon people’s present-day experiences and their corresponding life-stories in which health impacts are linked to public narratives of history and trauma for a particular group or community (Kirmayer, Gone, & Moses, 2014; Mohatta, Thompson, Thaib, & Tebesa, 2014).

Danielli (1998) points out that the ways in which trauma may be enacted across generations is incredibly complex and may not be understood by looking at just one level of analysis or through a single disciplinary lens, for example, clinical psychology (as cited in J. Reid et al., 2013). In order to fully understand the ongoing impact of historical cataclysmic events such as those associated with colonization, a theoretical framework that incorporates multiple levels of analysis of structures – biological, psychological, cultural, personal, family, community and nation-state – is needed (J. Reid et al., 2013). A developmental aspect must also be incorporated because historical periods, as well as location and social cultural contexts shape people’s lives in ways that are unique and profound. An ecological systems perspective considers the child and family from a multi-
temporal, multi-level and developmental framework, which is useful for tracing and exploring such mechanisms. Ecological systems theory was recently incorporated into research exploring chronic pain and social behaviour in children because both are complex fields of enquiry that may not be fully comprehended when examining the related subjects through a single lens (Logan et al., 2012). J. Reid et al. (2013) propose that when considering historical trauma, three stages of enquiry are needed. The first addresses the mass trauma event, the second considers the trauma response of first generations and the third considers the transmission of trauma through generations.

**Three stages of historical trauma in the context of New Zealand’s Māori history**

The current research explores the thesis that long-term musculoskeletal pain experienced by a group of urban Māori adults may in part exist as an effect of embodied historical trauma. It is possible that the experiences some Māori people have of long-term musculoskeletal pain is linked to historically traumatic events that occurred as part of the colonization process. For the purpose of this research, long-term musculoskeletal pain may be considered a present-day health impact and is investigated through a Kaupapa Māori research lens that prioritizes indigenous history, knowledge and practices. The present-day impact of long-term musculoskeletal pain upon Māori is therefore situated within the broader framework of the limited New Zealand research that incorporates historical trauma theory in the examination of core social health issues that lie at the very heart of historical trauma impact, at both the collective community and individual levels.

**The impact of colonization upon Māori**

Colonization requires the subjugation of a people and involves four elements: overwhelming physical and psychological violence, segregation and displacement, economic deprivation or the development of underdevelopment, and cultural dispossession of which land and language are central (Binney, 1983; J. Reid et al., 2013; Royal, 2003). In considering the second stage of historical trauma enquiry proposed by J. Reid et al. (2013), the impact of colonization upon ancestors may be considered. It is proposed that the initial trauma of colonization upon Māori people involved the disestablishment of ancient indigenous philosophies and practices that were founded upon a spiritual connection of people with the whenua/land (Durie, 2004a, 2004b). This
affected the social and spiritual organization of Māori life, and the literature makes
evident that other indigenous peoples share similar spiritual perspectives regarding land
and people (Kirmayer, Macdonald, & Brass, 2001; Royal, 2003). Tuhoe Tohunga Papa Joe
maintains that “if a body is buried somewhere, you can’t grow kai/food there, you can’t
build a house there” (as cited in Moon, 2003, p. 123) because things will not grow where
tupuna/ancestors are buried. This belief informs an appreciation of the possible spiritual
and environmental effects of historical trauma upon Māori ancestors who experienced
displacement, oppression, war and sickness that led to mass deaths occurring upon the
whenua/land in New Zealand (Moon, 2003; Waitangi Tribunal, 2002, 2014a; Walters et
al., 2011). Durie (2004), quoting Vine Deloria (1994), maintains that “most tribes were
reluctant to surrender their homelands to the whites because they knew that their
ancestors were still spiritually alive on the land” (p. 1139). This highlights the indigenous
perspective that land, people and ancestors are spiritually indivisible. Walters et al.
(2011) provide an indigenous perspective of how colonization impacted upon
generations of American Indian Alaskan Native people (p. 183):

The seizing of the land has extracted a spiritual, physical, and mental toll on
indigenous people [and] assaults on the land are akin to assaults on the body and
the people [and] displacement from the land is akin to being stripped from one's
family of origin.

Indigenous perspectives contextualize the ways in which indigenous peoples may
experience the effects of colonization trauma. It is proposed that soul pain and the
suffering associated with disconnection, displacement and dissociation from
whenua/land, ancestral heritage and identity has far-reaching and ongoing consequences
for the spiritual and physical health and wellbeing of Māori people. Colonization
disrupted Māori society and sought to dismantle spiritual practices over time and
therefore it is proposed that the initial effects of colonization upon Māori ancestors must
be considered within social and spiritual frameworks. There is little doubt that the
trauma of colonization had detrimental effects upon Māori people’s social, spiritual and
physical health, collective identity and sense of wellbeing, and while research suggests
that the ongoing effects of colonization continue to span generations (Kruger, 2004), such
effects remain largely obscured or hidden from view (Royal, 2003).
Māori identity and spirituality

Māori identity is embedded in whakapapa/genealogy – a spiritual construct that is grounded within a Māori worldview of time – in which the past, present and future are seen to co-exist (Durie, 2004a). The whakatauki or proverb “kia whakatomuri te haere whakamua” meaning “walking backwards into the future with eyes facing the past” (Rameka, 2017) is well known and informs understanding of how Māori may view time and history. The whakatauki/proverb teaches that the answers lie in front of us, in our histories or ‘whakapapa’ as we see them gone before us. Whakapapa is discussed in more detail throughout the current research as it informs understanding of the intergenerational effects of colonization upon the social, spiritual, psychological and physical health of Māori people. Lawson Te Aho (2013) proposes that disparities in Māori mental health and more specifically Māori suicide rates may be viewed as afflictions of the spirit that in many cases may be traced back to the traumatic events of colonization.

Marks (2012) discusses Māori spiritual healing philosophy in which communication with a spiritual realm and ancestors is possible because Māori view humanity as spiritual beings having human experiences (Royal, 2003; Marks, 2012). The literature reveals that particular Māori spiritual healing practices addresses embodiment of mamāe/pain related to raruraru/problems thought to be associated with a person’s whakapapa or history (Moon, 2003; O’Conor, 2007). It is proposed that the disruption of colonization upon Māori spiritual ways of knowing and being impacts upon Māori health and wellbeing in ways that are hidden from view and spans generations (Royal, 2003). Prior to colonization, knowledge of Māori healing and other kinds of knowledge was held by tohunga sometimes referred to as medicine men or women who were revered for their expertise in many things. Following colonization, many tohunga refused to impart their knowledge to subsequent generations - as was traditionally practiced - for fear it would fall into the wrong hands (Royal, 2003; King, 1992). Such beliefs and the Tohunga Suppression Act 1907 meant that much ancient Māori knowledge was lost. The 1907 Act was repealed in 1962 and today surviving Māori healing knowledge has been made accessible within and outside of whānau/Māori families so that some Māori healing practices have been restored (G. T. Mark, 2012; O’Conor, 2007). It seems imperative that Māori healing systems are nurtured so that the social and spiritual ill health of Māori people may be improved. The literature suggests that in some cases, what might be
considered a spiritual problem in Māori terms may often be labeled a ‘mental’ health problem when viewed from Western clinical biological or psychological perspectives (G. T. Mark, 2012; Moon, 2003; NiaNia, Bush, & Epston, 2017; Royal, 2003). This indicates that Māori spiritual constructs are important to consider when dealing with Māori who are labeled as being ‘mentally’ unwell. Research makes evident that mental health disorders such as anxiety and depression are commonly comorbid with long-term musculoskeletal pain and other health conditions (Goldenberg, 2010), which is addressed further in Chapter 2.

While a positivist scientific perspective may hold the view that the intergenerational impact of historical trauma is difficult to prove, from the Māori spiritual perspective scientific proof is not needed because an intergenerational effect is evident in the high rates of mental distress evident within Māori communities today. While many studies suggest that the intergenerational impact of colonization upon Māori health today is related to economic deprivation and marginalization (Gracey & King, 2009; J. Reid et al., 2013; P. Reid & Robson, 2006), other research indicates that indigenous responses to historical trauma may be socially, culturally and spiritually bound (Cooper, 2012; Lawson-Te Aho 2013; Royal, 2003; E. Duran, 2006; Braveheart, 2000). For example E. Duran (2006) imparts the spiritual understanding of his American Indian Alaskan Native shamanic teacher who taught him that the soul wound of American Indian Alaskan Native peoples would take six generations to heal if traditional spiritual healing methods were observed. Some Māori people continue to have a belief in the spiritual construct of ‘matakite’ meaning ‘seer’ (Royal, 2003; G. T. Mark), which when viewed in the context of whakapapa suggests that some human beings have the ability to visualize or sense the future or past in visions, dreams, images, hearing voices or in the experience of unusual bodily sensations and deep intuition (Mark, 2012). It is argued that if historical trauma impacts upon psychic structures, then it seems likely that indigenous peoples who are spiritually inclined may suffer psychic or spiritual trauma. Recent epigenetic research shows that exposure to extreme trauma may lead to changes in gene expression that may affect a person’s ability to respond to stress and disease burden (Kellerman, 2013). Changes in gene expression may be passed on to future generations and may increase the risk for a sequelae of disorders later in life that may include long-term musculoskeletal pain (Kellerman, 2013; McEwen, 2007). In order to contextualize how historical trauma
theory informs the subject of long-term musculoskeletal pain in the Māori population, the following paragraphs briefly discuss the New Zealand literature regarding the intergenerational effects of historical trauma upon the social, spiritual and physical health of Māori people.

**The New Zealand literature and historical trauma**

The effects of historical trauma related to loss of land upon Māori health have been reviewed by J. Reid et al. (2013) who concluded that “Māori occupy a vulnerable position in New Zealand society where comparatively poor health and complex spiritual, social and economic problems reflect a fundamental insecurity” (p. 522). Rightful belonging to whenua/land was central to the mechanics of Māori tribal society, wherein an intricate system of proprietary rights “informed part of a stable and well established social and political system” (p. 522). Armitage (1995) suggests that “the importance of assault on Māori land cannot be underestimated, as their relation to land was central to their respective tribal identities” (as cited in J. Reid et al., p. 156). Loss of land took away autonomy and freedom to self-govern and “undermined the mana of Māori people” (p. 523). Mana is “a state of being characterized by a community’s experience of its own independent authority, control, influence, status, charisma and spiritual power” (p. 523). Reid (2011) explains that the process of undermining mana involved deep humiliation and personal, psychological and spiritual denigration (as cited in J. Reid et al., 2013, p. 523). As well as a deep sense of loss on a social and spiritual level, Māori endured the loss of their means of production, which also meant losing their social and economic base (J. Reid et al., 2013; Cram, 2011). Although the land itself was not owned, different resource areas were the property of whānau and hapū based on whakapapa that was well established and clearly defined over centuries (J.Reid et al., 2013). A modern form of the Māori political system still exists today where Māori identity and rightful belonging to whenua/land continues to inform the social and political organization of Māori people, albeit at a very fragmented and reduced level (Belgrave, Kawharu, & Williams, 2005; Waitangi Tribunal, 2002, 2014a, 2014b). Linda-Tuhiiwai Smith discusses colonization in relation to principles of disordering that are encoded in colonialism and imperialism wherein “fragmentation culminates in processes of re-presentation, disordering, disruption, renaming and reclassification of indigenous systems of knowledge and practices” (as cited in Te Puni Kokiri, 2010, p. 15). Fragmentation occurred on multiple
levels, disrupting Māori ways of being and knowing. For example, cultural practices pertaining to the care of children and the maintenance of good health as well as the use of te reo/Māori language, became disordered through enforced legislation and the adoption of colonial ideologies related to gender, relationships, education and child-rearing practices, which altered the Māori way of life (Te Puni Kokiri, 2009, 2010). While an effort to restore tribal affiliations and tikanga is evident at the hapū level (Cooper, 2012a; Lawson-Te Aho, 2013, 2014), many Māori remain disconnected from whakapapa, whānau, hapū and remaining tribal land, which may be considered central to the high rates of psychological distress that Māori people experience today (Durie, 1998; Lawson-Te Aho, 2013; Cooper, 2012a; Kruger, 2004).

Prior to 1970, Māori mental health problems were considered uncommon (Durie, 1998) and although statistics were not recorded at the time, the collective cohesion of Māori people prior to 1970 ensured that strong connections to whānau and hapū were maintained, which is believed to have had protective benefits for Māori mental health (Durie, 1998). The idea that strong connections to whānau and hapū have protective benefits for Māori mental health is corroborated in current research investigating Māori identity, cultural efficacy and mental health (Sibley & Hokamau, 2014). During the 1970s, Māori mental health declined to the point where 50% of those institutionalized in New Zealand with mental health problems were Māori. Urbanization and the pressure to assimilate, socioeconomic marginalization and the use of drugs and alcohol, all impacted heavily upon the collective physical and psychological health and wellbeing of Māori people (Durie, 1998; Royal, 2003; King, 2007).

**Whānau violence as an effect of historical trauma**

Research makes evident that the extent to which Māori feature in statistics as either perpetrators or victims of family violence is epidemic (Kruger, 2004). While Māori make up approximately 15% of the population, in 2006 police records showed that 43% of all apprehensions for family violence were Māori. In the same year, Māori made up 43% of all women and 52% of all children seeking refuge. Māori were more likely to be hospitalized as a result of assault, abuse or neglect at the hands of their spouse or partner. Of particular concern is the representation of Māori children in family violence statistics. In 2006, 50% of all children experiencing abuse, neglect or multiple forms of abuse were Māori (New Zealand Family Violence Clearinghouse, 2009). Hospitalization records
showed that seven Māori women for every one Pākehā woman and four Māori children for every one Pākehā child were hospitalized for assault. Cooper (2012a) conducted research with the Ngatihine iwi/tribe, which aimed to describe practices that assist whānau in the prevention of whānau violence. Fifty participants were represented in three groups: whānau, Ngātihine hapū representatives and health practitioners. Findings suggest that a complex interaction of historical and contemporary factors contribute to the disproportionate level of violence among Māori whānau. Cooper (2012a) notes there is a lack of historical analysis of the experience Māori whānau have of violence and “a failure of much of the literature to acknowledge the impact of colonization and persistent structural racism as having a role in the current experience of violence many Māori have today” (p. 9). Emerging research suggests that experiencing trauma as a result of domestic or sexual violence may heighten the risk of developing long-term musculoskeletal pain conditions (C. Green, R., Flowe-Valencia, Rosenblum, & Tait, 1999) and it is argued that exposure to the trauma of whānau violence has far-reaching implications for the incidence of long-term musculoskeletal pain within the Māori population.

Kruger et al. (2004) contend that “colonisation is an extreme form of violence” (p. 11) and direct links between the processes of colonization and current levels of whānau violence exist but remain hidden from view. For example, psychological processes exist in which identification with the oppressor causes the oppressed to become like the oppressor and oppress their own, resulting in intergenerational violence (Friere, 1970-2000; Lawson-Te Aho, 2013, 2014). Also, responses to historically embedded racism and State assimilationist strategies may become internalized and externalized in the colonized person. Internalized racism or ‘self-hatred’ may manifest as depression leading to violence toward the self, the adoption of risky behaviours including drug and alcohol abuse and suicide, while externalized racism and self-hatred may lead to violence towards others (Awatere, 1984; Kruger et al., 2004; Lawson-Te Aho, 2013).

Research suggests that current definitions in the extant literature pertaining to family violence in New Zealand are not broad enough to encompass fully the realities of whānau from the cultural perspective of Māori people. The cultural perspective may be defined as encompassing relationships beyond three generations or more and may include hapū and iwi (Cooper, 2012a; Kruger et al., 2004; Te Puni Kokiri, 2010). The continued use of
the term ‘family violence’ in literature and legislation as opposed to ‘whānau violence’ is contentious because it defines Māori whānau within the English construct of the nuclear family (Cooper, 2012). This may be considered as an ongoing form of structural racism and a continuation of colonization processes (Kruger, 2004). The lack of distinction reflects a disregard for fundamental aspects of the Māori worldview pertaining to whānau (Te Puni Kokiri, 2010). According to Cooper (2012a), the current definitions of Māori whānau and violence also do not take into account the impact of colonization, marginalization and continued racism that whānau may experience an impact that which remains highly significant (Bargh, 2007; Came, 2014; R. B Harris, Cormack, & Stanley, 2007; R. B. Harris, Cormack, & Stanley, 2013; R. Harris et al., 2011; Human Rights Commission, 2012; Jackson, 1988; P. Reid & Robson, 2006; P. Reid, Robson, & Phyllis-Jones, 2000).

Little has been written on the topic of whānau violence within Te Puni Kokiri, reflecting that much literature in the field has been authored by non-Māori (Cooper, 2012a). Kruger (2004) maintains that failing to understand the broad nature of whānau dynamics from the perspective of Māori people will lead to the failure of future programs in violence prevention involving Māori whānau. The development of a Māori definition of what ‘whānau violence is’ has its origins in “Conceptual Framework for Transforming Whānau Violence” (Kruger, 2004, p. 10) in which the Taskforce suggest that whānau violence is:

The compromise of te ao Māori values [where] whānau violence can be understood as an absence [of] or disturbance in tikanga. Tikanga is defined [...] as a process of practicing Māori values. The Taskforce believes that transgressing whakapapa [genealogy, descent] is a violation and that Māori have the right to protect their whakapapa from violence and abuse.

Kruger (2004) maintains that a Kaupapa Māori approach to addressing whānau violence is necessary within which transformation is a key concept. Such understanding stems from the belief that interpersonal violence damages wairua/spirit, hinengaro/mind, tinana/body and ngākau/heart (Kruger, 2004). Te Puni Kokiri (2009) also highlight the lack of research in the area of whānau violence and recommend that further research adopting a Kaupapa Māori research approach will provide pathways to whānau ora/family wellbeing. Te Puni Kokiri (2010) review Māori programs that are currently
working well to reduce whānau violence. For example, Te Whakaruruhau Women's Refuge set up in 1986 operates within a Kaupapa Māori framework based on manaakitanga, wairuatanga and kotahitanga (see glossary for definition of terms) and other foundational Māori principles for protection, care and support. Recent evaluation of the program found that it strongly contributes to positive outcomes relative to the strategies employed (Te Puni Kokiri, 2010). Te Tama Wahine O Taranaki implemented under Whānau Ora has provided services to Māori men for 20 years based on tikanga Māori principles to facilitate learning and self-examination with a focus on Taranakitanga in which the historical significance of passive resistance strategies employed by Taranaki ancestors Tohu Kakahi and Te Whiti Rongomai are explored (Te Puni Kokiri, 2010). Finally, the Wananga Whakamua promotes the restoration of cultural identity and balance to relationships within whānau and in society (Te Puni Kokiri, 2010). The success of these programs confirms that having tikanga values at the core works for Māori people. Culturally distinct programs that promote the reclamation of Māori values, practices and approaches may be considered as transformational levers that support Māori in achieving whānau ora/healthy families (Te Puni Kokiri, 2009).

**Historical sexual abuse and the importance of whakapapa**

Lawson-Te Aho (2014) undertook qualitative research with five women from a single hapū, three of whom were victims of intergenerational sexual abuse. Employing historical trauma theory allowed for the reframing of sexual abuse within the context of New Zealand’s colonial history (Lawson-Te Aho, 2014). Interestingly, through sharing whakapapa and historical hapū knowledge with the researcher and kaumātua who were present, together the participant women were able to uncover core truths surrounding the context in which the sexual abuse first started in the hapū and why it continued through five generations. The narrative that emerges makes visible how the introduction of muskets into inter-tribal warfare impacted upon hapū lineage where decimation of the women’s hapū led to an act of incest being sanctioned by a rangatira/chief so that certain tohunga blood lines would be maintained. Decimation of the hapū and the breakdown of Māori social, cultural and tribal structures meant that processes which would normally limit the practice of sanctioned incest were not upheld, leading to intergenerational incest and sexual abuse becoming embedded in whakapapa. Acknowledging historical trauma at the collective level of the hapū transformed the participant women’s
understanding of intergenerational sexual abuse in their lives and while this did not necessarily ease their pain and suffering, it is possible that opening up about sexual abuse at the collective level of the hapū might lead to safeguards being put in place to end intergenerational abuse.

It is likely that rapid changes in Māori society contributed to the rise in both physical and sexual abuse of Māori women and children. The influence of Western cultural norms that sanctioned the subjugation of women had the effect of disrupting the gender balance that was inherent in Māori society (Mikaere, 2005). Māori historical practices of utu/revenge and muru/plunder ensured that whānau violence against women and children was rare because whānau and hapū wished to avoid retribution that would result in a loss of mana for the perpetrator and their whānau (Te Puni Kokiri, 2009, 2010). Victorian notions of married women and children as the property of husbands may also have rendered Māori women and children more vulnerable to all forms of abuse, particularly when Māori men became urbanized into towns and cities and adopted Western values that prioritized the individual (Mikaere, 2005). English laws that permitted physical punishment of women and children at the hands of men also need to be taken into account. Mikaere (2005) reveals how cultural narratives upholding the mana and status of women in Māori society were modified by early Western male ethnographers such as Elsdon Best to suit the Eurocentric view of women as inferior.

**Suicide and Māori youth**

Beautrais and Fergusson (2006) undertook a study that examined explanations for higher suicide rates amongst Māori youth compared with non-Māori youth. One explanation given by the authors is that compared with non-Māori, Māori experience disadvantage within the context of New Zealand society in a wide range of areas including health, education, welfare, justice and employment, which contributes to high Māori suicide rates. Beautrais and Fergusson posited that if factors contributing to Māori disadvantage were accounted for in their research analysis, Māori suicide rates should fall into line with non-Māori suicide rates however, their findings showed the opposite, wherein Māori youth suicide rates remained higher than those of non-Māori despite factors related to disadvantage being taken into account. Another commentator has explored factors stemming from the experience Māori have of colonization (Lawson-Te Aho, 1998, p. 5) concluding that,
There are additional risk factors, which apply only to Māori and other indigenous youth. These are risk factors relevant to cultural alienation, the impact of history through intergenerational modeling and behavioural transfer and confusion over identity.

While the problem of youth suicide is framed largely within the parameters of psychological distress, Beautrais and Fergusson (2006, p. 165) quote Durie (2001), who maintains that,

Suicide cannot be understood only in terms of personal history or individual psychology. The individual is part of an ethnic history and where colonisation has occurred, the scars of oppression and humiliation may become intolerable. In so far as it ends the pain of emptiness and the futility of trying, suicide becomes the solution.

Beautrais and Fergusson (2006) also discuss the effects of neoliberal reforms upon Māori suicide. According to the authors, in the past two decades there has been an increasing tendency in a number of countries for societies to become more individualistic, thereby reducing opportunities for social identity and attachment (Beautrais & Fergusson, 2006). Māori individuals may see themselves as being a member of a collective first and as an individual second, and as such Māori may have difficulty in societies that value individualism (Beautrais & Fergusson, 2006). In response to the high New Zealand suicide rates in the early 1990s, a National Youth Suicide Prevention Strategy was devised in 1998, which includes two arms, one for Māori youth and one for mainstream youth. The Māori strategy is strengths based and focuses on building resilience (Beautrais & Fergusson, 2006) and empowering Māori individuals, whānau and communities through strengthening cultural identity. It also seeks to increase responsiveness to Māori suicide from the mainstream population. There is very little research examining risk and protection factors for suicidal behaviour among Māori (Beautrais & Fergusson, 2006; Lawson-Te Aho, 2013) and further Kaupapa Māori research is needed to understand the pain and suffering within Māori communities that leads to youth suicide in particular. While Māori may share risk factors with the mainstream population, it is evident that unique cultural and historical factors may generate different kinds of risk for Māori youth. In her doctoral thesis, Keri Lawson-Te Aho (2013) theorized Māori suicide as an
outcome of the wounding of the indigenous Māori spirit as a result of complex trauma birthed during colonization. In her study, Lawson-Te Aho (2013) examined 182 years of history in one discrete tribal group with a focus on whānau narratives. Analysis identified that historical trauma acts influenced contemporary outcomes and affected whakapapa/kinship relationships. In analysing history and associated trauma, revelatory knowledge and explanations for intergenerational suffering were identified, which empowered participants in her study. Lawson-Te Aho (2013) maintains that “the explanatory power of historical trauma and spiritual or soul wounding made sense to whānau experientially, intuitively and intellectually” (p. 8). Lawson-Te Aho (2013) recommends five healing pathways that indigenous professionals working with extensive trauma in their communities may utilize. The approach reframes trauma narratives as imperatives for identifying opportunities for healing the psychic or spiritual soul wound (p. 9). The pathways are summarized as follows (p. 9):

1. Making clear the relationship between history, spiritual wounds and healing;
2. Developing consciousness of the divine/spiritual nature of whakapapa [...] and authentic whakapapa practices that guide ‘duties of care’;
3. Developing healing practices that work on whakapapa as a spiritual barometer of Māori whānau, hapū and iwi wellbeing (achieving full consciousness of whakapapa identities);
4. Preserving Māori language and culture;
5. Developing exemplary tribal leaders who challenge those who oppress their own (includes restoring authentic leadership practices and female rangātira status as is traditional in some hapū).

Lawson-Te Aho (2013) frames the restoration of whakapapa as being fundamental to the prevention of suicide wherein the spiritual soul wound associated with historical trauma needs to be healed at the level of whānau, hapū and iwi. Other Kaupapa Māori research suggests that healing whakapapa is a central construct of Māori healing practices (G. T. Mark, 2012; O’Connor, 2007). In the current study, it is proposed that historical trauma may manifest as a psychic pain or a spiritual soul wound, which may affect the experiences participants’ have of long-term musculoskeletal pain.
B) Māori Health Inequity and the Impact of Racism on Health and Chronic Pain

Introduction

The following section addresses Māori health inequity. Firstly, the New Zealand Deprivation Index is critically examined, revealing that Māori health statistics are easily misconstrued or obscured by the way in which statistics are presented. Then, the World Health Organization’s definition of equity is addressed with consideration given to ethnic differences in health outcomes. Historical and contemporary factors impacting upon Māori health are then explored from the perspective of how they may affect the Māori experience of long-term musculoskeletal pain. This is followed by a discussion of racism and white privilege, which focuses on the ongoing impact of structural or systematic racism upon Māori health. The international literature assessing the impact of racism upon health and upon the experience of long-term musculoskeletal pain is highlighted.

Māori health inequity

Māori health inequity is well documented, widespread and longstanding (Cram, 2011; Dew & Matheson, 2008; Durie, 1998; Kunitz, 1994; Ministry of Health, 2013a; Ministry of Social Development, 2016a). Recent statistics show that Māori continue to have significantly higher age-standardized rates of mortality compared with non-Māori for all five leading causes of death: cancer, ischaemic heart disease lower respiratory disease, cerebrovascular disease and other heart disease (Ministry of Health, 2013a). In 2010, the all cause age-standardized rate of mortality for Māori was 1.8 times that of non-Māori; however, Māori age-standardized rates of mortality for lung cancer, stomach cancer, cervical cancer, chronic lower respiratory diseases including COPD, other forms of heart disease, diabetes, motor vehicle accidents, hypertensive disorders and assault, were at least twice that of non-Māori (Ministry of Health, 2013a). From the start of records in 1950, Māori males have sustained the highest mortality rate of all groups (Ministry of Health, 2013a). Disparity in Māori mental health is also of major concern as Māori have significantly higher rates of anxiety, depression and suicide compared with non-Māori (Browne, Wells, & Scott 2006; Ministry of Health, 2016). The age-standardized rate of Māori suicide in 2012 was 17.6 per 100 000 population compared with a non-Māori rate of 10.6. The age-specific suicide mortality rate for youth age 15 to 24 was 48 per 100 000
compared with a non-Māori rate of 16.9. New Zealand has the highest youth suicide rate of 34 countries belonging to the OECD due to Māori youth being over represented. Since 1996, suicide rates have declined for non-Māori but the trend is not evident for Māori. Māori youth suicide rates may be reflective of the social spiritual problems Māori people endure as a result of increasing inequity in New Zealand society evidenced in the widening gap between rich and poor (Ministry of Social Development, 2016).

In 2010, the largest differences between Māori and non-Māori mortality were seen in diabetes and rheumatic heart disease, where Māori mortality rates were 4.5 and 4.0 times higher than non-Māori rates, respectively (Ministry of Health, 2013a). Māori male mortality rates due to diabetes is increasing (Ministry of Health, 2015b). Complications from diabetes such as renal failure and lower limb amputation are 8 and 4 times more likely for Māori, respectively, compared with non-Māori (Human Rights Commission, 2012). The Human Rights Commission (2012) also reported that Māori babies are 5 times more likely to die of sudden infant death syndrome compared with non-Māori babies. It is plausible to presume that many Māori experience high levels of trauma (Koea, 2008) and trauma-related stress, which has implications for the experience Māori have of long-term musculoskeletal pain. Research shows that Māori also have higher rates of long-term musculoskeletal pain compared with non-Māori (Ministry of Health, 2008), which is addressed more fully in section C of this literature review.

Until recently, Māori health inequity has mostly been discussed in terms of socioeconomic position (Robson, 2007) however, it is evident that Māori health inequity is influenced by ethnicity independently of socioeconomic status (Durie, 2011; Ministry of Health, 2002; P. Reid & Robson, 2006) and so other factors also need to be considered. Māori, like many other indigenous groups, endure a marginalized status in New Zealand society that has its roots in colonization, Eurocentrism and the notion of a racial hierarchy (Blaut, 1993). Historically, government policies were strategically implemented with the dual purpose of alienating Māori from their arable land and assimilating the Māori population into the dominant British culture. Such policies aimed to erode the Māori economic base and dissolve the fabric of traditional Māori society (Cram, 2011; Durie, 1998, 2011). Further to this, Māori urbanization resulted in an increased sedentary lifestyle and a change in the Māori diet from traditional foods to foods of convenience, which has had a lasting and ongoing impact upon the health of Māori people. When
considered from an eco-social perspective, such an impact may be seen as being driven by the global neo-liberal forces of capitalism (Bargh, 2007).

Racism is an important determinant of Māori health inequity that affects Māori health and socioeconomic status in ways that remain obscured or hidden from view (Cram, 2011; McCreanor, 2008). New Zealand research regarding racism and Māori health is emerging (R. B Harris et al., 2007; R. B. Harris et al., 2013; R. Harris et al., 2011; Human Rights Commission, 2012) and increasing international research suggests that perceived racism has direct effects upon cardiovascular health (Krieger & Sidney, 1996) and may affect long-term musculoskeletal pain (C. R. Green et al., 2003; C. R. Green & Hart-Johnson, 2010). The effects of racism on health and long-term pain are addressed further throughout this chapter.

The New Zealand Deprivation Index and Māori health inequity

The New Zealand Deprivation Index is widely used in research to ascertain the impacts of socioeconomic deprivation upon population health (P. White, Gunston, Salmond, Atkinson, & Crampton, 2008). The Gap Model (Ministry of Health, 2002) demonstrates ethnic differences in economic and health status according to area location using the New Zealand Deprivation Index. Three gaps are identified as follows: the distribution gap; the outcome gap and the gradient gap. The distribution gap shows that in 1996, 56% of the Māori population compared with 20% of the non-Māori population mainly lived in deciles 8 to 10, which are areas with the highest New Zealand Deprivation Index deprivation scores. The graph below shows non-Māori as being distributed more evenly across all deciles and represented mainly in the areas with the least deprivation scores. If socioeconomic deprivation were independent of ethnicity, Māori would also be distributed more evenly across all deciles as are non-Māori (Ministry of Health, 2002).
The outcome gap demonstrates that socioeconomic status and ethnicity impacts upon life expectancy (Ministry of Health, 2002). Māori life expectancy at birth is significantly lower than that of non-Māori, across deprivation deciles. While Māori life expectancy at birth has improved steadily since the year 2000, a gap of around 7 years remains, when compared with non-Māori life expectancy (Ministry of Social Development, 2016b). Based on mortality rates for 2012-2014, Māori males can expect to live to age 73.0 and Māori females to age 77.1, compared with non-Māori males and non-Māori females who can expect to live to age 80.3 years and 83.9, respectively (Ministry of Social Development, 2016b).

The ‘gap model’, however, shows that level of area deprivation affects life expectancy at birth wherein a greater gap in life expectancy between Māori and non-Māori is evident when both ethnicity and socioeconomic status are taken into account. For example, the gap between Māori males living in the most deprived areas compared with non-Māori males living in the least deprived areas, increases the gap in life expectancy between Māori and non-Māori males to approximately 15 years (Ministry of Health, 2002). Research utilizing the gap model demonstrates that Māori have worse health outcomes.
even after controlling for area deprivation because those Māori living in the least deprived areas appear only to achieve a similar life expectancy to non-Māori who live in the most deprived areas (Durie, 2011).

The gradient gap demonstrates a widening relative difference in health outcomes between Māori and non-Māori as area deprivation increases (Ministry of Health, 2002). Reid (2002) gives an example of hospital admissions, which on the surface may seem to reflect equity where Māori hospital admission rates are similar to non-Māori rates (Reid, 2002), however, when considered alongside higher rates of Māori mortality, which increase as area deprivation increases, a more accurate picture is portrayed. According to Reid and Robson (2006), Māori hospital admission rates would be much higher if hospital care was proportional to need in accordance with higher Māori mortality rates, which highlights that Māori are not receiving adequate levels of hospital care (Ministry of Health, 2002). According to Durie (2011), the gradient gap suggests that socioeconomic hardship impacts more heavily upon Māori because Māori living in the least deprived areas also only achieve health outcomes similar to those of non-Māori living in the most deprived areas. The gap model indicates that ethnicity as a determinant of health may be unrelated to social class or socioeconomic status (Durie, 2011) and it also demonstrates that socioeconomic factors, ethnic identity, gender and to some degree place of residence interact in complex ways to affect Māori health (Ministry of Health, 2002). Statistics show that Māori experience disadvantage as a result of exposure to systemic and structural inequity over their life course and disadvantage in early life may influence health throughout their life course from birth through childhood and adolescence, and into adulthood (Ministry of Health, 2002). Disadvantage may also be accompanied by high levels of stress and an increased exposure to trauma that may have a cumulative effect on the health of future generations (Koea, 2008; Ministry of Health, 2002).

**The World Health Organization on health inequity**

The World Health Organization Constitution (WHO, 1946) asserted 70 years ago that “the highest standards of health should be within reach of all, without distinction of race, religion, political belief, economic or social condition” (as cited in Whitehead & Dahlgren, 2006/2007, p. 5). Health equity is achieved when the resources needed for health are distributed fairly, and when the opportunities that are available in society are made
accessible to the wealthy and the poor alike. Whitehead and Dahlgren (2006/2007) maintain that achieving health equity is always about leveling up so that the most disadvantaged groups in society may enjoy the same level of health as advantaged groups. In this way, systemic differences in health may be reduced and health inequity between different socioeconomic groups eliminated. The term ‘systemic’ refers to the systems, structures and processes designed to manage and maintain power and control over a country’s resources and its people, for example, the political, legal and economic systems and institutions which impact upon health, education, justice and employment (Human Rights Commission, 2012; D. R. Williams, 1997). In their book *The State of Māori Health*, P. Reid and Robson (2006) maintain that equity like fairness does not always mean that resources are shared equally; rather, it is an ethical concept acknowledging that sometimes differing levels of resources are needed to achieve equal health outcomes.

Research demonstrates that in societies with low levels of social inequality, not only do people feel more socially connected, the incidence of violence, crime and other undesirable social ills decreases, which benefits society as a whole (Ministry of Social Development, 2016a; Wilkinson & Pickett, 2009). This has implications for the pain, suffering and trauma that people may experience in societies. The WHO recommends that where possible, ethnicity correlated with socioeconomic background is reported in research, so that differences within and between ethnic and socioeconomic groups are ascertained (Whitehead & Dahlgren, 2006:2007). In New Zealand, the exclusion of ethnicity data may obscure the true picture of Māori health inequity. P. Reid and Robson (2006) are critical of literature that ignores ethnic inequity, where data sets may not be analyzed by ethnicity and where brief descriptions fail to explain fully why inequity exists. While measures of inequity using ‘non-Māori’ or ‘European’ as a benchmark for inter-ethnic comparisons may have universal application, such clinical indicators also do not reflect health perspectives arising from specific ethnic worldviews (Durie, 2011). For example, epidemiological research tells us what the situation ‘is’, however it does not answer the questions ‘why’ it ‘is’ or ‘how’ it came to be.
Historical and contemporary factors and inequity

Williams’ (1997) model underpins the need to address how historical factors such as the nature of racism and mass migration has impacted upon the health of minority ethnic groups. While racism is controversial, Krieger (2003) argues that the political, legal and economic consequences of racism as a health determinant are as relevant as they are for any other social health determinant, whether it be child abuse, tobacco policy or air pollution. The argument that race is a political and not a scientific issue (Satel, 2000) is countered by (Krieger, 2003) who asserts that it is a political act to exclude the topic from the domain of legitimate scientific inquiry and discourse. Avoiding the study of racism and its impact upon health may result in incomplete and misleading explanations that may be harmful to interventions that seek to alter the distribution of resources for health, disease and wellbeing (Krieger, 2003). The effect of racism upon health has historical origins whereby meaning was constructed around observable biological features such as skin colour. Central to upholding this view was the notion of Western ideals and knowledge constructs as being superior and hegemonic (D. R. Williams, 1997). The racial hierarchy determined power and access to resources and shaped societies institutions, which when established continued to shape other social structures (D. R. Williams, 1997). Williams’ model explicitly includes racism as an important part of the structure of society that shapes the definition of race. Racism has individual and institutional dimensions and it is the institutional kind that is deemed a basic cause of differences in health status (D. R. Williams, 1997).

It has already been shown that historically many Māori were forced into the demeaning position of having to struggle for mere survival, whereas they had previously thrived. Durie (2011) maintains that race-based policies implemented after 1854, when the colonial government was established, failed to take into account a Māori worldview in terms of land tenure, fishing protocols and social controls (Durie, 2011). This laid the foundation for ongoing intergenerational struggle against racial oppression, land alienation and cultural denigration, which permeated the Māori life-world (Lawson-Te Aho, 2013; L. T. Smith, 1999). It is argued that biological racism lies at the core of historical trauma and health inequities because it justified aggressive and continued micro-aggressive tactics used to dominate and control the Māori life-world (Lawson-Te Aho, 2013). Research regarding race and health has until recently focused upon biological
or genetic markers and cultural explanations for health differences between ethnic groups (P. Reid & Robson, 2006). According to Nazroo (1999, p. 219), health disadvantage defined by ethnicity is indicative of the ways in which ethnicity is understood by others (as cited in Robson, 2008, p. 25). Nazroo states that,

The view of ethnicity as a natural division between social groups allows the description of ethnic variations in health to become their explanation. So, explanations are based on cultural stereotypes or suppositions about genetic differences rather than attempting to assess directly the nature and importance of such factors.

Research that seeks to define health disadvantage as inherent to a person’s ethnicity is framed by Krieger (2003, p. 195) as “the racialized expression of biology” however a second theoretical perspective suggests that the “biological expression of racism” (p. 195) results from processes related to how our bodies are shaped by our position in the social hierarchy and our social environment (Krieger, 2003). The study of the role of race in health is complex and Williams (1997) highlights essential pathways that aid understanding of the subject. While biological and cultural considerations are important, it is the basic underlying political, legal and economic causes that have by far the largest impact upon ethnic health inequities (Williams, 1997) and if left unaddressed, they will subvert any gains made in targeting what Williams describes ‘surface causes’. Surface causes include health practices, medical care, psychosocial resources and stress (Williams, 1997).

**Three levels of racism**

C. P. Jones (2001) describes three levels of racism. Institutionalized racism is where differential access to society’s goods, services and opportunities are determined by race/ethnicity. This form of racism is codified into the structures of public institutions and by its very nature it defies pinpointing a perpetrator as it often manifests as State “inaction in the face of need” (C.P. Jones, 2001, p. 300). The unequal access to material conditions and to power is indicative of institutionalized racism. Education, housing and employment are examples of material conditions, while access to knowledge and having a voice are examples of power (C. P. Jones, 2001). Jones (2001) notes that while socioeconomic status and race have their origins in historical events, contemporary
structures continue to perpetuate historical injustices. Institutionalized racism impacts upon health through the pathways of socioeconomic status and access to health-care. Robson (2008) asserts that the difference in distribution between Māori and non-Māori across deprived areas, income brackets and occupational class illustrates that these two groups have different limitations regarding access, participation, choice and being heard (Robson, 2008). The Human Rights Commission of New Zealand has recently called for an end to structural discrimination in the institutions of health, justice, education and society (Human Rights Commission, 2012).

Personally mediated racism is defined as prejudice and discrimination. Prejudice denotes differential assumptions about others’ abilities, intentions and motives based on race/ethnicity, while discrimination denotes differential actions towards others based on race/ethnicity (C. P. Jones, 2001). The definition represents what most people regard as racism; however, personally mediated racism may be intentional or unintentional and may include acts of commission or acts of omission (C. P. Jones, 2001). It is signified by a lack of respect, suspicion, devaluing, scapegoating and dehumanizing and it impacts health directly through the stress response (Krieger, Waterman, Kosheleva, Chen, & Smith, 2013). It may permeate institutions resulting in differential treatment; for example, research demonstrates that Māori are treated differently when seeking health-care (Crengle, Lay-Yee, Davis, & Pearson, 2001) housing (Houkamau & Sibley, 2015) and employment (Robson, 2008).

Internalized racism is where members of the stigmatized ethnic group accept or believe negative messages about themselves and their group’s abilities and intrinsic worth. The stigmatized person may accept that their self-determination, self-expression and dreams for the future are limited. Jones (2003) asserts that it also manifests as embracing “whiteness” alongside self-devaluation, helplessness, hopelessness and resignation (p. 300). Internalized racism impacts upon health wherein self-hatred may lead to the adoption of risky behaviours and is also associated with acts of fratricide (Jones, 2003). Robson (2008) maintains that internalized racism is evidenced in Māori society when Māori are anti-Māori (p. 26). Internalized racism may lead to problems with identity and where the cultural norms of others are adopted, it may have adverse effects upon mental health.
**White privilege**

White privilege is an institutional set of benefits proffered to those of the same race/ethnicity as those who dominate positions of power that is, ‘whites’ (Kendall, 2002). White privilege has its origins in colonialism, Darwinism and the racial hierarchy and is interlinked with institutionalized racism. Despite the guarantee of tino rangatiratanga or unqualified exercise of chiefly authority given to Māori in Article 2 of the Treaty of Waitangi, the colonial settler government acted as though the “white way” was the only way to make decisions and to deliver justice, health and education (Consedine & Consedine, 2005). New Zealand institutions were built upon the idea that being European/Pākehā/white was normal and that being ‘other’ or Māori was abnormal (Simon & Smith, 2001). According to (McIntosh, 1999), whites are taught to think of their lives as “morally neutral, normative and ideal” (p. 1) and work done for the benefit of others enables others “them” to become more like “us” or like whites (p. 1). The normative ideal is built around the notion of the middle-class, white male. For example, it was an English, male, landowning Parliament that constructed New Zealand’s justice, education and health systems while Māori and women were systematically excluded from any influence or decision-making (Consedine & Consedine, 2005). Those who are born into privilege, whether white or male, may not see themselves as having privileged access to resources and power (Kendall, 2002).

Peggy McIntosh (1999) sheds further light on the concept of white privilege upholding the notion that while many Pākehā may acknowledge that Māori are disadvantaged, they are not willing to accept that the nation State built by their predecessors upon an ethnocentric and therefore racist ideology (Cram, 2011) is in any way responsible. Since the arrival of Europeans, Māori have struggled and fought to maintain autonomy, rejecting assimilation policy and organizing towards self-development and the acknowledgement of their rights under the Treaty of Waitangi. In the past two decades, while settlement of Treaty breaches has improved the economic status of some Māori, the dominant Pākehā majority are still not yet ready to accept that as tangatawhenua/people of the land, Māori have a special status in New Zealand as was agreed to in the Treaty of Waitangi (Belgrave et al., 2005; United Nations, 2008). McIntosh’s (1999) view further upholds that white privilege in New Zealand includes denial that that Pākehā may gain from Māori disadvantage. The problem with white
privilege is the invisibility it provides to those who benefit from it the most as a direct result of the disadvantages of others (Consedine & Consedine, 2005). Controversy surrounds the subject of white privilege, including a certain sense of ‘taboo’, which has the effect of silencing the disadvantaged, protecting the privileged and preventing the issue from being acknowledged or ended (McIntosh, 1999). Robson and P. Reid (2006) suggest that if being disadvantaged means Māori are getting less, then it also means non-Māori are getting more. Māori inequity is often framed within the context of Māori having a greater health need; however, greater health need may be viewed as a consequence of a breach of indigenous rights. The United Nations Declaration on the Rights of Indigenous Peoples contains 45 articles, many of which are directly relevant to indigenous people’s health such as article 24, which affirms the rights of indigenous people to access health services free from discrimination and article 7e, which upholds the right of indigenous peoples to protection from propaganda (United Nations, 2008).

**Historical trauma and Māori women**

While it may appear that circumstances are improving for Māori, access to resources and being heard remains elusive to many, especially to Māori women. Māori women continue to have the highest smoking rates, which have their origins in early colonization (Robson, 2008) when Māori began growing tobacco to trade (Cook, 2013). Early 19th-century postcards, paintings and other media featured Māori women smoking pipes, which normalized smoking for Māori women (Barnett, Moon, & Kearns, 2004). During the 19th century, Victorian values that prevented non-Māori women from smoking did not apply to Māori women, whose social status was different (Barnett et al., 2004). A 1962 study of rural Māori smokers found that 70% of Māori women smoked (Cook, 2013). In 1999, a pilot program called Akutai Kai Paipa was funded to specifically target Māori women who smoke because they are not accessing mainstream smoking cessation support. The association of smoking with sudden infant death syndrome is an important driver of the need to support pregnant Māori women and young Māori mothers in particular with smoking cessation (Ministry of Health, 2003). The service, run by Māori women for Māori women, offers extended one-on-one support for quitting smoking within a Māori cultural framework (Ministry of Health, 2003). Smoking is associated with lower socioeconomic status, stress, adverse mental health, long-term musculoskeletal pain and many diseases
such as cancer and chronic obstructive pulmonary disease (Barnett et al., 2004; C. R. Green & Hart-Johnson, 2010).

Māori women also have the highest rates of hospitalization for attempted self-harm (Ministry of Health and Accident Compensation Corporation, 2013) and disproportionately high rates of anxiety and depression (Browne et al., 2006). They make up a greater percentage of females in prison (Human Rights Commission, 2012) and as previously discussed, they experience a disproportionate level of physical and sexual abuse compared with non-Māori. For example, in 2009, 30% of women who experienced domestic abuse were Māori while they make up just 16% of the population (New Zealand Family Violence Clearinghouse, 2009). Māori and Pacific women also have the lowest socioeconomic status, which also impacts upon Māori and Pacific children of solo female parent families (Ministry for Women, 2012). Cram (2011) quotes the Department of Statistics and Ministry of Women’s Affairs (1990:13) who maintain that “patriarchal institutions superimposed with a Christian morality and Victorian values” underpinned colonization (p. 135). Orbell (1978) also asserts that such values had a negative impact upon the status of Māori women because they undermined traditional rank and birthrights (as cited in Cram, 2011, p. 155).

*Māori and lifestyle risk factors*

Lifestyle risks such as smoking, drinking alcohol, poor diet and a low level of exercise have implications for the entire population; however, a lower socioeconomic position and Māori ethnicity are associated with increased risk for adverse lifestyle factors. Robson (2008) maintains that universal health promotional messages for reducing lifestyle risk aimed at the whole population do not work well for people with lower socioeconomic circumstances because educational, financial and social constraints may limit access to the resources, services and supports needed to facilitate change. While society promotes systems that supposedly provide equal opportunity for all, systemic bias is not examined. Where Māori people are concerned, rather than considering historical systemic inequity, Robson (2008, p. 28) maintains “the problem is said to lie with Māori through any mix of inferior genes, intellect, education, aptitude, ability, effort or luck”. This type of colonial thinking, where the “problem” or “deficit” lies with Māori, is called “deficit theory” or “victim blaming”. Believing the problem lies with the Māori group or individual ignores systemic and structural bias that privileges non-Māori outcomes (Robson, 2008). It also
neglects to account for historical influences that may have contributed to the Māori experience of trauma, loss and consequent unhealthy lifestyles, which may be transferred across generations (Duran, 2006). The introduction of tobacco and the intergenerational impact of the smoking epidemic, exemplifies how history has affected the present-day health status of Māori women in particular.

**Historical systemic racism**

History makes evident that Māori were denied ordinary citizenship rights that Pākehā took for granted, which affected Māori development. Power sharing and equal rights for Māori as promised in the Treaty of Waitangi was a myth to most settlers. Māori land, the historical foundation of settler wealth, was systematically transferred to settlers through the mechanisms of the Native Land Courts, despite Treaty promises (Consedine & Consedine, 2005; Ward, 2011) and Māori attempts at self-governance. Unrelenting protest went unheeded, while tino rangāti ratanga/absolute sovereignty – the unqualified exercise of Māori authority – was denied time and again. It was expected that Māori would give up their traditional culture and language and the new government enacted hundreds of policies ensuring British rule (Consedine & Consedine, 2005). Policies marginalized Māori in many spheres. The Old Age Pension introduced in 1898 was available to Māori only if they applied for it through the Land Courts and if it was ever approved, it was paid at a reduced rate of two thirds that paid to Pākehā (Consedine & Consedine, 2005). In 1927, the rate paid to Māori was reduced to half that paid to Pākehā, which meant Māori pensioners were left starving. The Social Security Act of 1938 promised Māori a fresh start and new rights; however, a loophole in the Act meant Māori benefits paid at a lesser rate, continued. Reduced pensions paid to Māori remained in place until 1945. While Māori efforts during World War II had a positive impact upon some attitudes toward Māori, Pākehā returned soldiers were given government grants of land and entitlement to housing while Māori were not (Consedine & Consedine, 2005). It was not until the late 1940s that equal levels of age, widows and invalid benefits were accorded to Māori. Consedine and Consedine (2005) quote McLure (1998) who maintains that “extreme poverty of Māori communities became the rationale for differential treatment” where in critical Pākehā eyes, “Māori poverty was a sign of lower expectations rather than greater need” (p. 207). This is indicative of deficit thinking in
action (Human Rights Commission, 2012) and demonstrates how colonial structures excluded Māori and guaranteed white privilege.

**Racism, Māori access to health-care and embedded racist attitudes**

Racism is important to this thesis as it may be linked to the onset and exacerbation of long-term musculoskeletal pain and a host of other health conditions. For some Māori people, perceived racism, bias or social exclusion may be a chronic stressor that can eventually affect a person’s ability to positively respond and adapt to stress. Experimental and survey studies show that exposure to, and memory of, racist events can trigger physiological arousal, that is, the stress response, which over a long-term period may lead to the development of negative health sequelae (J. P. Harrell, Hall, & Taliaferro, 2003; McEwen, 2000, 2007) that include long-term musculoskeletal pain (McEwen, 2007). Repeated exposure to racism may also have a negative impact upon psychological wellbeing and self-esteem, which may also contribute to the development of long-term musculoskeletal pain (Sarno, 2011; D. R. Williams, Neighbors, & Jackson, 2003). Collectively, Māori have been exposed to multiple forms of racism over a prolonged period of time. A recent study by Harris (2006) found that Māori reported the highest incidence (34%) of multiple kinds of racism followed by Asians (28%), Pacifica (25%) and European/Others (4.5% and 0.5%). They also found that racism was significantly associated with poor or fair self-rated health, lower physical functioning, poorer mental health, smoking and cardiovascular disease. These findings are in accordance with an increasing body of international research linking racial discrimination with adverse health (C. R. Green et al., 2003; Krieger & Sidney, 1996; Krieger et al., 2013; D. R. Williams et al., 2003).

In 2005, the Ministry of Health released data from the 2001 National Primary Medical Care Survey, which was the first survey to collect information about Māori patients’ experiences of general practice. The research compared Māori and non-Māori visits to the doctor and over 50,000 general practitioners consultation records were examined (Crengle et al., 2001). Results showed that Māori patients were seen for a lesser amount of time than non-Māori patients and referral rates for Māori adults between the ages of 24 to 65 for diagnostic tests and secondary care were also low compared with non-Māori referral rates. Considering that Māori have a greater need for cardiovascular and diabetes interventions, the findings indicate that health-care delivered to Māori patients
compared with non-Māori patients is inconsistent with the Māori burden of disease (Crengle et al., 2001). Māori made up just 12% of the sample in the study despite making up 16% of the population, suggesting an under-utilization of GP services by Māori (Crengle et al., 2001). European doctors in the study also rated their rapport with Māori patients as lower than with their European patients, suggesting that less attention was paid to Māori patients. This has implications for Māori mortality rates, for example in relation to the preventative management of cardiovascular disease (Crengle et al., 2001).

New Zealand’s Māori health strategy ‘He Korowai Oranga’ recognizes four main pathways, one of which is to deliver effective health and disability services (Ministry of Health, 2014). Four strands recognized under this pathway aim to address Māori health inequalities, improve access to and the effectiveness of mainstream services for Māori, provide services of the highest quality and improve health information for Māori. It is well documented that where social environments are supportive and positive, they are health promoting for the individual; however, for colonized indigenous minorities in particular, the social environment may be health demoting (King et al., 2009; Wilkinson & Pickett, 2009). McCreanor (2008) examined stereotypical societal beliefs about Maori that may be held by others belonging to the dominant majority and which perpetuate negative perceptions of Māori identity. Phrases such as “good Māori bad Māori” and “Māori privilege" are 2 of 13 examples given by McCreanor (p. 90), which reflect how Māori are often perceived by some belonging to the dominant majority. Such thinking reflects a general lack of respect for and understanding of Māori people, New Zealand's history, Māori culture and the current status of Māori people in relation to the State in today’s political climate (Belgrave et al., 2005; Consedine & Consedine, 2005; McCleanor, 2008). This lack of understanding is referred to as cultural blindness or historical amnesia where the majority of New Zealanders are blind to the Māori world, except in the case of the haka and sport, and where remembering the impact of colonial history upon Māori people is limited to taking the day off on Waitangi day (Belgrave et al., 2005; Consedine & Consedine, 2005; Walker, 1990:2004).

Racism, health and chronic pain research

The most straightforward consideration of the impact of racism on health is that it makes the lives of those who are disadvantaged more stressful, which when prolonged may negatively affect both mental and physical health (J. P. Harrell et al, 2003; D. R. Williams
& Mohammed, 2010). Harrell et al. (2003) outline the psychophysiological pathways that link racism and racist environments to biological reactions that may lead to disease. Prenatal experiences, subcortical emotional neural circuits, emotion regulation both conscious and preconscious, cognitive pathways and negative affective states are addressed. Harrell et al. (2013) recommend that engaging in techniques that reduce physiological arousal, such as mindfulness meditation, may be essential for dealing with the effects of racism. American studies show racism is associated with raised blood pressure in blacks in interpersonal settings and in the workplace (Krieger & Sidney, 1996; D. R. Williams et al., 2003). In a study comparing individuals who challenge racism and those who respond passively to it, Krieger and Sidney (1996) found that passive responders had higher elevations of blood pressure than those who challenged unfair treatment, which suggests that internalized or suppressed responses to racism are harmful to cardiovascular health. Other studies also suggest that racism may affect cardiovascular health (D. R. Williams & Mohammed, 2010). Very recent research confirms a causal link between chronic stress and cardiovascular disease (Tawakol et al., 2017), which further informs how stress triggered by perceived racism may indeed be linked with negative health sequelae.

In an extensive literature review, D. R. Williams et al. (2003) found that the impact of racism upon psychological health was significant. Of 25 studies examining the association between discrimination and psychological distress, 20 reported a positive association. Other studies examined in the review measured psychological wellbeing such as happiness, life satisfaction, self-mastery and self-esteeem and all but one of 16 studies reported that discrimination impacted negatively upon the measured variable (D. R. Williams et al., 2003). Further to this, D. R. Williams et al. (2003) found that the effects of racism mediated through the stress response may influence physical illness primarily through negative emotional states, which can have direct effects on biological processes and patterns of behaviour that increase disease risk. D. R. Williams et al. (2003) maintain that chronic stressors that have an impact over time are a stronger predictor of the onset and course of illness then are acute events. This supports the assertion that historical and ongoing racism may be a significant determinant of health for Māori people that may influence the experience Māori have of long-term musculoskeletal pain.
Racism may be considered as a traumatic experience for indigenous people that has spanned many generations and is ongoing (E. Duran, 2006) however the psychobiological effects of racism remain hidden from view. D. R. Williams et al. (2003) suggest that racism may be viewed as both micro and macro environmental stressors. Micro-stressors may involve everyday encounters that trigger automatic feelings of perceived bias, for example being pulled over by the police (Lawson Te Aho, 2013), while macro-stressors that occur on a larger scale may involve systemic events such as an economic downturn or environmental disaster, which generally have a greater impact upon ethnic minorities who have lower socioeconomic status. The effects of macro-stressors upon Māori health are evident in New Zealand research, where following the 1987 economic downturn Māori leaders warned that economic reforms would make Māori the shock absorbers of the economy (Durie, 1998). The Māori unemployment rate rose from 10.7% in 1986 to 25.6% in 1992 and remained above 15% until 2003 when it fell to 10.2% (Blakely et al., 2005). Māori suicide rates increased exponentially as Māori unemployment rose. By contrast, European unemployment rose from 3.2% in 1986 to a peak of 7.9% in 1992 and fell to 3.5% by 2003. In 1991–92, 41% of Māori compared with 23.3% of European were living in relative income poverty (Blakely et al., 2005).

As a chronic micro-stressor, racism may contribute to the development of long-term pain from an acute injury (Chapman, Tuckett, & Woo Song, 2008) through neural pathways that mediate emotional responses and cognitive processes. In America, emerging research shows that the prevalence of pain in non-Hispanic blacks is greater when compared to whites and remains greater even after socioeconomic status is accounted for. This suggests that racism may play a part in the experience non-Hispanic blacks have of long-term pain. Non-Hispanic blacks also have a higher incidence of depression associated with pain compared with whites (C. R. Green & Hart-Johnson, 2010). Perceived racism may impact upon health-seeking and coping behaviours related to the experience of pain; for example, not seeking care or advice for acute pain may lead to pain becoming chronic or long term. J. P. Harrel et al. (2013) point to important issues for future research on racism such as understanding how multiple types of discrimination relate to each other and to other types of stressors where one may exacerbate the other and generate new stressors. The authors also discuss trauma and non-events as important areas to consider. An example of a non-event is where a person may fail to get a promotion at
work due to discrimination, while trauma may involve physical violence or displacement resulting from a natural disaster. Such events may be associated with discrimination; however, they may remain hidden from view, as they are not assessed in ways that contextualize discrimination.

Racism, stress and the brain

The stress-coping model details the cerebral cortex as the area of the brain where information is represented as conscious, emotional and cognitive responses that are activated when a human being is under threat (J. P. Harrell et al., 2013). Le Doux (1996) however showed that when the brain processes information in response to stress, another neural pathway is activated (as cited in J. P. Harrell et al., 2013). The thalamus receives and transmits sensory input to the cortex and also connects with a second set of neural circuits that reside within the amygdala. The amygdala initiates a cascade of neural events that are not associated with conscious awareness and instead are activated through instinctive awareness in which an event may be perceived unconsciously. Research in this area is emerging and is central to understanding the body’s response to discrete environmental stressors such as racism (J. P. Harrell et al., 2013). Emotion regulation is the ability to increase, maintain or inhibit an emotional reaction and can occur in milliseconds; however, if the emotion is denied – meaning ‘regulated’ or suppressed – conscious awareness of the subjective experience is prevented but physiological arousal persists (as cited in Harrell et al., 2013, p. 4). Studies referred to earlier that examined the effects of racism on blood pressure showed that those who coped passively had higher systolic BP than those who confronted racism (Krieger, 2003; Krieger & Sidney, 1996). This suggests that ‘active coping’ or ‘expressing’ rather than suppressing emotional responses to racism may help mediate the negative effects of the stress response.

Differences in prefrontal cortex activation may play a role in determining the effectiveness of emotion regulation; for example, people who report persistent negative affect and increased arousal to stressful events may face difficulty with regulating a negative emotion once activated (J. P. Harrell et al., 2013). Social rejection associated with racism may trigger intense emotional responses and research using fMRI technology shows that regions of the brain that are activated by social rejection are the same brain regions that are activated in response to physical pain (Eisenberger, Lieberman, &
Williams, 2003; J. P. Harrell et al., 2003). This and further brain imaging studies are examined in greater detail in Chapter 2. Racism may be represented in the mind as unpleasant memories and cognitive schemata that have been shaped by history in which being ‘other’, non-Western and indigenous becomes a threat to one’s psychological wellbeing where positive feelings about one’s culture and self are blocked. Emerging research suggests that interrupting processes responsible for generating positive emotions about the self are particularly threatening to the physiological regulation of stress (J. P. Harrell et al., 2013). Frederickson (2001) demonstrated that pleasant emotions reverse the cardiovascular activation associated with negative emotions.

A study using fMRI imaging techniques showed that in both black and white participants, perceiving black faces caused greater amygdala activation than perceiving white faces (Lieberman, Hariri, Jarcho, Eisenberger, & Bookheimer, 2005). The amygdala is sensitive to threat and the hyper-arousal seen in black participants in response to black faces, is considered a sign of learned self-deprecation or in other words, internalized racism resulting from exposure to conditioning influences of dominant Western cultural norms. It is possible that experiencing negative emotions associated with being seen as ‘other’ may increase susceptibility to developing long-term musculoskeletal pain (Eisenberger et al., 2003). Perceived racism may be viewed as a threat to identity that triggers sympathetic nervous system activation or hyper-arousal. Research suggests that the neural pathways triggered by mental schemata that are lodged in the memory and by suppression of emotions related to racism, are similar to those activated in people who experience chronic or long-term, widespread pain (Eisenberger, M., Lieberman, & Naliboff, 2006).

**Hegemony in health in New Zealand**

In a recent review, Came (2014) confirms that the biomedical construction of health within public policy remains dominant and the use of epidemiological research is the primary platform of health policy in New Zealand. Came points out that best practice approaches tend to be based on international evidence that seek the strongest health outcomes for the dominant majority populations. However, there is little research that assesses the effectiveness of these interventions for indigenous people, implying that policy is developed along the lines of universal measures. Came (2014) gives the example of how tobacco policy has played out in New Zealand. While the Māori smoking cessation
service ‘Akutai Kai Paipa’ has produced high Māori quit rates, indigenous evidence of successful outcomes from local programs does not appear to inform tobacco policy in New Zealand (Came, 2014). Policy makers tend to focus on global ideas such as securing quit attempts as opposed to trying to understand and respond to locally constructed meanings surrounding the act of smoking and the action of quitting. As yet, there is little evidence that a universal approach works for Māori. Came (2014) suggests that cultural and political specificity targeted at improving indigenous people's health is central to strengthening health policy. While epidemiological research is useful for defining relationships between race/ethnicity, socioeconomic status and other variables such as smoking or long-term pain, the tendency to separate, take apart and break down components of the whole, which is an essential feature of the biomedical model, is antithetical to a Māori worldview in which knowledge is sought through seeking inclusivity wherein each part is built upon to inform the whole, a bigger and more complete picture (Durie, 2004a; Royal, 2003). Māori people may consider the subjective experience of the commentator in an all-encompassing manner that attempts to understand “what is going on here?” rather than seeking empiricism in numerical form (Royal, 2003).

While prioritizing equity may be addressed at strategic planning levels, below this, efforts towards achieving equity appear to be driven by a few exceptional individuals throughout New Zealand (Sheridan et al., 2011). There is clearly a need for the development of services that respond to indigenous Māori perspectives of health. For example, a recent study by Levack et al. (2016) investigating the uptake of pulmonary services by Māori with chronic obstructive pulmonary disease found that Māori placed high value on ‘whakawhānaungatanga’ or the making of culturally meaningful connections with others and in particular, health professionals. Some participants felt so strongly about it that if a connection during a consultation was absent, they were greatly discouraged from continuing with treatment. Participants also commented that some of the more holistic clinics were able to offer a service where they felt culturally safe. Levack et al. (2016) concluded that an oversight of cultural factors may be a barrier to the uptake of pulmonary rehabilitation services by Māori and that indigenous-led or culturally responsive health-care interventions may remedy the situation. The finding of both Came (2014) and Levack et al. (2016) suggest that a Māori perspective of Māori health needs
may still go unnoticed by policy-makers, which may be reflective of the ongoing effects of colonization, marginalization and historical trauma. This has implications for how policy-makers may respond to the growing epidemic of long-term musculoskeletal pain. Almost one quarter of the Māori population experience long-term musculoskeletal pain, the subject of which is addressed in the following section.

C) Māori and Long-Term Pain

Although the term ‘chronic pain’ is often used in the literature, it is gradually being replaced by the term ‘long-term pain’. For the purpose of the current research, the term ‘long-term pain’ is used. In the review of the literature to follow, where an author uses the term ‘chronic pain’, the term is maintained in the review and has the same meaning as ‘long-term’ or ‘persistent’ pain. Also, where appropriate, more neutral terminology may replace terms that have potentially negative implications for health and wellbeing.

Introduction

This section critically examines the quantitative and qualitative New Zealand research on the subject of Māori and long-term pain. Little is known about long-term musculoskeletal pain in the indigenous Māori population of Aotearoa, New Zealand and a recent literature review identifies that research on the subject is mainly epidemiological (Mcgavock, Moewaka Barnes, & McCreanor, 2012). Mcgavock et al. (2012) maintain that the dearth of research concerning Māori and long-term pain necessitates the undertaking of further research using Kaupapa Māori research methodology. Kaupapa Māori research methodology is emancipatory in nature and more likely to lead to positive outcomes that respond specifically to the needs of Māori. Understanding Māori people's perspectives of long-term musculoskeletal pain is essential, as this may inform future planning for the provision of services to Māori and other populations in an area of health that is becoming of increasing concern as the population ages. Firstly, literature examining Māori and gout is briefly addressed and informs how research with Māori people may not necessarily result in positive outcomes for Māori. Notes on epidemiological research are then presented, which highlight the fact that there are different requirements in research with Māori and European/Pākehā populations. This is followed by a critical review of the research that investigates long-term musculoskeletal pain and associated conditions in the Māori population.
For the purpose of this thesis, the term ‘European’ may be used interchangeably with the terms ‘Pākehā’ and ‘English’, depending on the context. While the origin of the term Pākehā is under debate, it is not considered to have negative connotations and was most likely used by early Māori in reference to the fair skin of the European person. Where an author uses a specific term in the research, out of respect for them, their terminology will be employed when discussing their research. The term non-Māori may also be used; this may represent either the ‘European ethnic group’ or ‘all other ethnic groups combined’ and usually excludes the Pacific ethnic group whose socioeconomic status is comparable with Māori. In some studies Māori and Pacific research data are combined to improve the power of research.

Quantitative Research

A word on gout and Kaupapa Māori research

Gout is an extremely painful and debilitating chronic form of arthritis for which Māori are genetically predisposed. Māori men have the highest incidence of gout in the world and Māori women also have relatively high rates of gout, and as such it is the most researched painful chronic musculoskeletal condition involving Māori (Dalbeth et al., 2012; Horsburgh et al., 2013; Klemp, Stansfield, Castle, & Robertson, 1997; Lindsay, Gow, Vanderpyl, Logo, & Dalbeth, 2011; Murphy et al., 2015; Te Karu, Bryant, & Elley, 2013). Despite 50 years of research on the subject, however, Māori continue to experience disparities in pain management for gout (Te Karu et al., 2013), which raises the question, who is served by research investigating Māori and gout? Gout research highlights the need for Kaupapa Māori research methodologies to be adopted in health studies so that strategies for better management of specific health conditions may be developed within frameworks that respond to and identify culturally appropriate solutions for addressing Māori health needs (Te Karu et al., 2013).

Epidemiological research reflects difference in Māori demographics, access to care and socioeconomic status in Māori with long-term pain

Current epidemiological research provides an estimate of the prevalence of long-term musculoskeletal pain and its common etiologies in New Zealand’s ‘general’ population; however, determining a precise estimate of the prevalence and etiology of long-term pain
within the Māori population has its challenges in research (Klemp, Williams, & Stansfield, 2002; Taylor, 2005; Taylor, Smeets, Hall, & McPherson, 2004). New Zealand Māori and Europeans are two very distinct groups, socially, economically and demographically. For example, it is well documented that Māori are a much younger population compared to Europeans with the Māori median age in 2013 being 23 years compared with a European median age of 41 years. Māori also live in the most deprived areas, which may lead to discrepancies in research comparing Māori with European who are older and more wealthy (Ministry of Health, 2002, 2008; Ministry of Social Development, 2010, 2016a). Although many large population studies claim to represent a cross section of society and may account for socioeconomic and demographic differences between ethnic groups, adopting a cautionary approach in interpreting results for Māori in epidemiological research is recommended (Ministry of Health, 2008, 2013b; Salmond & Crampton, 2012). Research makes evident that younger Māori adults and Māori living in lower socioeconomic regions may be difficult to access (Taylor et al., 2004). For example, while those with low economic living standards often have a higher need for health-care, they are less likely to access health services when needed (Ministry of Health, 2008, 2013b). This has implications for the majority of Māori with low socioeconomic living standards who may not access health-care for the diagnosis or treatment of long-term musculoskeletal pain and other associated disorders. Financial difficulty, reduced access to transport, stoic attitude, perceived discrimination and a lack of knowledge about entitlement to services may all influence the health choices that Māori may make in regard to long-term musculoskeletal pain (Ellison-Loschmann & Pearce, 2006; Jansen, Bacal, & Crengle, 2008; Jatrana & Crampton, 2009; Ministry of Health, 2013b). If Māori who have low economic living standards are less likely to access health-care for long-term musculoskeletal pain, they may also be less likely to participate in research on the subject, suggesting that further qualitative and quantitative Kaupapa Māori research is needed to improve understanding of the Māori experience of long-term musculoskeletal pain.

**New Zealand Health Survey – population study of chronic pain**

Based on data from the 2006/2007 New Zealand Health Survey, Dominick, Blythe and Nicholas (2011) aimed to establish patterns of chronic pain within the New Zealand population. The New Zealand Health Survey was a nationally representative, cross-
sectional face-to-face survey of 12,488 New Zealanders including 3160 Māori, 1033 Pacific, 1513 Asian and 8593 European/Other. Prevalence of chronic pain, its impact on quality of life, trends in treatment use and association with socio-demographic factors were examined (Dominick, Blyth, & Nicholas, 2011). Ethnicity was established through self-identification. Overall results suggest that in 2006/2007, 16.9% of the New Zealand adult population had chronic pain. Prevalence of chronic pain increased with age to 28.1% for those over the age of 75. As living standards declined, the prevalence of chronic pain increased and those with the lowest economic living standards were found to be 3.5 times more likely to experience chronic pain than those with the highest economic living standards. While Māori were equally as likely to report chronic pain as other groups, when the total population was used as a comparator and age and gender controlled for, Māori had a higher prevalence of chronic pain (Dominick et al., 2012). Two thirds (67%) of those with chronic pain reported living with pain for more than five years while a quarter (27%) had lived with pain for more than 40% of their lives. The most frequently attributed cause for chronic pain was injury (42%) followed by a health condition (28%) then age (11%). Men were more likely to report chronic pain due to injury while women were more likely to report pain related to an existing health condition. While half of those reporting ‘moderate to severe pain’ (53%) were using some treatment, one quarter (24.7%) of those reporting ‘severe or very severe’ recent pain were not using any treatment. Demographic and ethnic differences in treatment use were not established.

Updates to the New Zealand Health Survey show chronic pain on the rise for Māori

Following the publication of research by Dominick et al. (2011), the Ministry of Health undertook to update the New Zealand Health Survey annually from 2012 (Ministry of Health, 2013b) so that health trends might be established. In 2013, the overall population prevalence of chronic pain rose to 18%, while for Māori the rate increased to 20%. By 2015, the overall population rate of chronic pain increased to 20%, while the Māori rate remained unchanged. Rates of diagnosed arthritis rose from 15% in 2007 to 17% or 620,000 adults in 2015 and although the estimated prevalence of arthritis for Māori in 2015 was found to be lower (13%) than the overall population prevalence, Māori were 1.2 times more likely to be diagnosed with arthritis compared with non-Māori after adjusting for age and gender. Arthritis for men increased from 13% in 2012 to 16% in 2015, which is closer to the overall rate for women of 18%. The most common form of
arthritis is osteoarthritis, which rose from 9% in 2007 to 11% in 2015. Gout is the second most common form of arthritis affecting 3% of adults overall in 2015 compared with Māori and Pacific male rates of gout which were 11% and 7% respectively (Ministry of Health, 2008, 2013b, 2015a). Research suggests that as the population ages the prevalence of long-term musculoskeletal pain will rise.

**Prevalence of rheumatic disorders**

In a study by (Taylor et al., 2004), the prevalence of rheumatic disorders in the New Zealand population was ascertained by calculating general-practice consultation rates. The influence of age, gender, ethnicity and small-area deprivation in consultation rates was examined. Of 29,152 cases, 5,900 or 20.4% overall consulted with a rheumatic disorder. Findings suggest that Europeans, older people, males and people living in deprived areas were more likely to consult with a rheumatic disorder, while Māori and women were less likely to consult overall. Those living in the most deprived areas were 1.4 times more likely to consult with a musculoskeletal disorder compared with those in the least deprived areas. Māori were 3.5 times more likely to consult with gout; however, they were less likely to consult with osteoporosis, back pain or regional pain disorders such as fibromyalgia, soft tissue disorders or minor musculoskeletal injury. While the authors concluded that osteoporosis, back pain and regional pain disorders may be less frequent in Māori, they advise that translating consultation rates into population prevalence is problematic because not all patients with rheumatic disease will consult. Interestingly, the study found that the recording of ethnicity by general practice overemphasized the ‘other’ category while Māori and Pacific identification of ethnicity was proportionally low – a discrepancy that has historical roots. Those living in the least deprived areas were over-represented in the study, suggesting that the general practice population studied may not be representative of the community.

**Ethnic differences in the prevalence of chronic pain – Māori not counted**

In a pilot study by (Taylor, 2005), the feasibility of determining ethnic differences in the prevalence of chronic pain in the New Zealand population using a mail-out survey was assessed. A total of 289 surveys were answered giving a 61% response rate overall. The response rate was much lower for Māori and for people under the age of 40. In those over the age of 45 the Māori response rate was 45% compared with a non-Māori response rate
of 75%, which posed a risk of non-response bias. While results showed that the prevalence of musculoskeletal pain was similar between Māori and non-Māori, the comparisons were drawn between Māori of ‘all ages’ and the ‘younger’ respondents in the non-Māori group below the age of 40 and the group of ‘older’ respondents in the non-
Māori group above the age of 40. The authors recognized that the electoral register may not be representative of the population targeted for this study because both younger people aged 18 to 24 and Māori are less likely to be on the electoral roll (Taylor, 2005).
The authors concluded that strategies are needed to engage younger Māori in future studies of this nature. Age difference is an important factor in ethnic differences in chronic musculoskeletal pain because older age is associated with both an increased burden of musculoskeletal disorders and chronic pain (Hoy, Geere, Davatchi, Meggitt, & Barrero, 2014; Taylor et al., 2004). In another survey study of chronic pain by (Swain & Johnson, 2014), online and paper questionnaires were placed with general practitioners, physiotherapists and in pain clinics. The initial question, “Do you suffer from chronic pain?” determined inclusion in the study and 142 surveys in total were answered. Questions regarding demographics, pain profiles, mental health, disability, acceptance and opinion regarding treatment were included. The cohort consisted of 16% men and 84% women, and while 8% of respondents were Māori, 88% of respondents were European. The study presented some interesting findings; for example, the most common cause for pain given by participants was ‘unknown’ (23%) followed by ‘injury’ (21%) and arthritis (20%). However, findings pertaining to Māori ethnicity were not provided. The authors offered no explanation for the discrepancy and it can only be assumed that the small number of Māori participants lacked sufficient power for any reliable conclusions to be drawn.

**Ethnic difference in mental-physical comorbidity**

Scott et al. (2008) investigated the possibility of ethnic differences in comorbidity. Chronic pain, cardiovascular disease, diabetes, respiratory disease and 12-month mood and anxiety disorders were measured. Participants were sourced from The New Zealand Mental Health Survey - Te Rau Hinengaro conducted in 2003/2004 in which a sub-sample of 7,435 participants over 16 years old were assessed for the presence of chronic physical conditions including pain. Significant differences were found in both physical and mental disorders between groups; for example, the prevalence of chronic pain was highest for
Māori at 42% and Māori also had the highest prevalence of mood disorders with and without chronic pain. This is significant because mood disorders are associated with chronic pain (Goldenberg, 2010). Prevalence of chronic pain was lowest among Pacific participants at 31% while the non-Māori non-Pacific prevalence was 38%. Comorbidity was only apparent for Pacific participants in which respiratory disorders were associated with mood and anxiety disorders.

**Māori and fibromyalgia**

Fibromyalgia is a condition characterized by widespread chronic pain and the presence of tender points throughout the body, and is more common in females. Klemp et al. (2002) aimed to determine differences in the prevalence of fibromyalgia between Māori and Europeans and also investigated whether an association between hypermobility and fibromyalgia exists. Participants were selected randomly through the Rotorua electoral roll, the Eastern Māori Habitation Index and local schools. Non-random selection was also used to access Māori participants from Tuhoe and Te Arawa tribes, because according to the authors “traditional beliefs favour participation by all” as opposed to random selection (p. 1). Two senior kaumātua/elders from each tribe were elected to recruit as many Māori as possible; however, Māori were only included in the study if they claimed 25% Māori ancestry or more. Of 689 participants recruited, 358 were Māori and 331 were European. A difference in mean age of approximately nine years between Māori and European participants across both sexes was evident. The outcome showed nine participants in total – four Māori and five Europeans – were diagnosed with fibromyalgia and no association with hypermobility was found. This amounted to a prevalence of 1.1% of fibromyalgia in Māori and 1.5% in Europeans and the authors concluded that the overall rate of fibromyalgia was similar for both Māori and European at 1.3%. The study again highlights the difficulty of comparing younger Māori with older non-Māori, where older age is associated with an increased incidence of long-term musculoskeletal pain. One Māori male participant was aged 59 years, while three Māori female participants had a mean age of 39 years. Of the five Europeans diagnosed with FM, all were female with a mean age of 66 years. In their discussion, the authors reported that the non-random selection of Māori from Tuhoe and Te Arawa iwi/tribes may have introduced bias into the study and also suggested that this may continue to be a problem in future studies involving Māori, unless a change in attitude by Māori to research methodology occurs.
The tone here appears to be critical of Māori beliefs regarding participation in research and is deserving of a response. Perhaps it is researchers who need to change their methodologies in future when including Māori in research. The criteria for inclusion of Māori participants with 25% or more Māori ancestry is seen by many as being culturally inappropriate and out of date. The method of self-identification is preferable and commonly used in the collection of census data and health research (Mcgavock et al., 2012; Ministry of Health, 2008; Ministry of Social Development, 2016a).

*An observational study of Māori with gout*

Gout is a painful, chronic inflammatory arthritis characterized by the deposition of urate crystals in the joints and tissues of the body, which mainly affects men over the age of 40. In a robust prospective observational study, (Dalbeth et al., 2012) examined the experience and impact of gout in Māori and Pacific people compared with European/Other. Participants (n=291) underwent comprehensive clinical assessment at baseline and at a one-year follow-up. Results for 63 Māori and Pacific were compared with 186 European/Other as data for Māori/Pacific patients were grouped together to improve the power of the study. Findings showed that Māori and Pacific patients had a higher body mass index compared with the European/Other group and were more likely to have diabetes. An earlier onset of gout compared with European/Other by nine years was found for both Māori and Pacific patients as well as higher flare-frequency, more swollen and tender joints and higher C-reactive protein concentrations. Māori and Pacific patients were more likely to be taking diuretics, colchicine and allopurinol and although allopurinol doses were similar between groups, Māori and Pacific patients had higher urate concentrations overall compared with European/Other patients. The authors concluded that being of Māori or Pacific descent should be recognized as a prognostic factor for more severe outcomes in gout disease, suggesting that more intensive efforts to control serum uric acid in these groups is necessary to prevent flares.

*Māori, Accident Compensation Corporation and injury related health loss*

In 2008, the Accident Compensation Corporation (ACC) released ethnicity data showing that although Māori made up 14.9% of the population, they accounted for less than 12% of ACC entitlement claims (Accident Compensation Corporation, 2008). Although Māori men were more likely to suffer injury due to higher numbers in manual labour, they had
a 25% lower claim rate overall than non-Māori/Other ethnic groups combined. Claim rates were low for both Māori income-earners and non-earners made up of those receiving a benefit or caring for others. However, the disparity was much greater for Māori non-earners whose claim rates were 60% lower than non-Māori claim rates. Māori continued to have the highest serious injury claim rate at 10% higher than non-Māori; however, they were 50% less likely than non-Māori to claim compensation following an injury. Medical fee only claims for Māori were also 15% lower than they were for non-Māori. The question has to be asked, what factors contribute to Māori not accessing the ACC services that they are entitled to? (Accident Compensation Corporation, 2008). Injury is the fifth leading cause of health loss in New Zealand and a further 2013 report by the ACC detailing injury related health loss by ethnicity showed that Māori had disproportionately high injury rates (Ministry of Health and Accident Compensation Corporation, 2013). Māori also experienced twice the rate of injury related health loss compared with non-Māori. Transport injury was the leading cause of injury related health loss in New Zealand overall and was also the leading contributor to observed inequality in injury related health loss for Māori. Approximately 40% of Māori injury related health loss was due to transport injuries, which was followed by self-inflicted injury (31.5% in Māori males and 28% in Māori females) and interpersonal violence (15%). Māori were twice as likely as non-Māori to have self-inflicted injury than non-Māori and were four times more likely than non-Māori to have injury related health loss due to interpersonal violence. By 2026 the Māori population is estimated to rise to 17% while the European population will drop from 77% to 69%, suggesting that unless health disparities in injury for Māori are addressed, the burden on society of Māori ill-health and disability related to injury will increase as the Māori population increases (Accident Compensation Corporation, 2008; Ministry of Health and Accident Compensation Corporation, 2013). Accident Compensation Corporation statistics make visible that Māori do not access services that they are entitled to, which may reflect that Māori are not comfortable with the services offered or may be indicative of systemic bias. Higher injury rates and exposure to trauma suggest that Māori may also have a much higher prevalence of poorly managed long-term musculoskeletal pain. Introduction of clause 11 to The New Zealand Disability Strategy (2001) was implemented to ensure that Māori have equal access to disability and rehabilitation services because many disabled Māori are not receiving adequate care (Wiley, 2009).
Qualitative Research

A Māori view of pain descriptors

To gain insight into how pain might be perceived and expressed within Māori culture, Magnusson and Fennel (2011) sought the views of three male kaumātua/Māori elders and 12 self-identified female Māori working in the health-care setting. In total, 10 participants spoke basic te reo/Māori language and five were conversational to fluent in te reo. Opinions were sought in regard to what culturally appropriate pain measures should be included for Māori patients, and participants were asked to determine the suitability of commonly used pain descriptors and also develop phrases for inclusion. Descriptors were taken from existing self-report pain measures, such as the McGill pain questionnaire and the Headache Disability Inventory. Of 61 phrases describing pain experience, 56 were endorsed by 65% of participants or more and alternatives for other descriptors were given. The authors concluded that Māori perceive pain as a multidimensional experience similar to other cultures: physiologically, psychologically and socially (Magnusson & Fennell, 2011). However, the study has limited validity because participants were not representative of Māori who experience pain. Further studies are needed to explore Māori perceptions of pain descriptors as although the authors briefly mentioned the Te Whare Tapa Whā model of Māori health, its dimensions were not considered for inclusion in the development of a pain questionnaire that may have better represented a Māori perspective. It is evident that research conducted within a biomedical framework exploring aspects of Māori culture may neglect to include the spiritual dimension, which may be important for Māori with long-term musculoskeletal pain (Cram, Smith, & Johnstone, 2003; O’Conor, 2007; Te Karu et al., 2013).

Two studies investigate Māori experience of physiotherapy

A phenomenological study by Basset and Tango (2002) sought the views of six Māori adults about their experiences of physiotherapy treatment. Participants had either completed or were still undergoing a course of physiotherapy and semi-structured, face-to-face in-depth ‘conversations’ were conducted with them. Findings revealed that overall, participants viewed the experience of pain during treatment as a normal and necessary part of the healing process (Basset & Tango, 2002). Participants in the study
did not think it important to tell their physiotherapist if treatment was painful and instead endured the pain of treatment. The authors concluded that physiotherapists needed to be vigilant regarding the false belief of “no pain no gain” so that patients did not suffer unnecessarily. Basset and Tango’s conclusion suggests that pain during treatment may be an unpleasant experience that should be avoided; however, it is also possible that Māori may perceive the experience of pain in ways that are culturally defined (O’Connor, 2007). Traditional Māori healing techniques such as romiromi and mirimiri may involve deep pressure being applied to specific areas of the body and while this is sometimes painful, it may also facilitate a positive feeling of relief from pain held in the body as an after effect (O’Connor, 2007). Māori cultural constructs such as whakama/shyness and upholding mana/personal power or status (Sachdev, 1990) may influence how Māori respond to pain and may determine whether they keep the experience of pain private rather than complain about it to others. Other studies suggest that Māori may be more inclined to display stoicism in that they are prepared to endure pain rather than seek help (Mcgavock, 2011; Te Karu et al., 2013). Further research is needed to understand if such attitudes are socially or culturally defined. Bassett and Tango (2002) also found that Māori participants felt it unnecessary for their culture to be overtly acknowledged by physiotherapists and instead thought it more important to be respected as people. The finding was different to that of a separate qualitative study by N. White, Mavoa and Bassett (1999) in which Māori perceptions of health, illness and physiotherapy in a group of 19 Māori belonging to Ngāti Tama Iwi were assessed. N. White et al. (1999) found that respondents in their study thought that physiotherapists should be culturally sensitive to Māori patients. The difference in findings may be reflective of cultural diversity among Māori who reside in urban and rural settings. The use of different recruitment methods may also be significant as Basset and Tango (2002) purposefully selected urban Māori who had used or were still using a physiotherapy service, while White et al. (1999) selected participants through snowballing techniques within a single iwi in a regional location and prior use of physiotherapy was not necessary for inclusion in the study.

Māori views of gout

Te Karu et al. (2013) recruited 12 Māori participants between the ages of 48 and 72 from both urban and rural areas. Participants were interviewed about their experiences of
gout and a Kaupapa Māori research approach was undertaken to ensure that mātauranga-Māori/Māori knowledge and tikanga/Māori customs were respected throughout the research process (Te Karu et al., 2013). Participants described experiencing overwhelming pain, suffering and disability leading to job loss during acute flare-ups. Participants blamed themselves for their condition and also experienced blame from partners and employers. Most participants reported being aware that certain foods contributed to gout and rural participants reported using rongoā/Māori herbal medicine to treat their gout as opposed to urban participants who did not use rongoā. Whānau were the main source of information and support when participants’ independence was limited, and the concept of wairua/spirituality was considered important for coping. Stoicism was a common theme among participants as many just “put up with” the pain of gout rather than seeking help straight away. Cultural, financial and time barriers to accessing care were identified in the study, and while participants expressed that relationships with health professionals were important, they seemed ill-informed about the condition and about the use of gout medication. For example, participants thought that allopurinol was only useful late in the disease. The study identified that Māori are not accessing early preventative treatment for gout, which needs to be addressed within the health-care system. Educational campaigns for health professionals and the community, promoting better understanding of the condition, cultural sensitivity and a paradigm shift in gout management were seen as needed to greatly improve the quality of life for Māori and Pacific people with gout. Te Karu et al. (2013) adopted a thorough Kaupapa Māori research approach that prioritizes Māori beliefs and values so that the unique voice of Māori who are suffering is heard. Findings make clear that the development of culturally appropriate strategies for managing gout in the Māori and Pacific population are needed.

**How Māori talk about chronic pain**

Another qualitative study by McGavock (2011) investigated how “Māori talk about their lived experiences of chronic pain” (p. 1). Kaupapa Māori research and interpretive phenomenology were the chosen methodologies. Seven Māori adults with chronic pain were interviewed and four superordinate themes were identified: a life transformed by the experience of chronic pain, experience of chronic pain as Māori, evaluating treatment experiences and negative perceptions and experiences (McGavock, 2011). The researcher
expressed difficulty finding seven Māori participants, who were finally sourced by the snowballing method throughout the greater urban Auckland region. Participants expressed that their experiences with health professionals often left them feeling that doctors suspected their pain was all “in the head” and Mcgavock suggests the need for greater compassion from doctors for Māori who have chronic pain. While some participants reported experiencing perceptions of racism in health encounters, this related to feeling they had restricted access to the medical system and services. Participants in general felt they were not getting the information or support they needed from the medical system; however, some reported that general practitioners who had a holistic view, who were not patronizing, who listened and helped them access services and information, had a more positive impact on their lives. The findings suggest that Māori who have chronic pain may be particularly sensitive to discriminatory attitudes in the health setting, which may make their pain worse. While most participants described having a holistic view of health and were drawn to trying complementary-alternative medicine such as acupuncture, homeopathy, naturopathy and other healing methods, reliance on painkillers was a problem for several participants in the study. Stoicism was found to be a common theme and two participants expressed being influenced by their parents or kuia and kaumātua/female and male elders who they witnessed putting up with a great deal of pain without complaint, and who just carried on with what they had to do regardless of their pain. The finding indicates that for Māori, stoicism may to some degree be culturally defined. One participant expressed the attitude that she had to be tough about her pain so she could get work and another said that she had to pretend that everything was fine even though she was suffering. A male participant conveyed trying to hide his pain, which did not work and eventually he had to seek help.

While Mcgavock's (2011) study is the first qualitative Kaupapa Māori research to examine chronic or long-term pain from the point of view of Māori, common themes arise from the small amount of qualitative research examined in this review that inform a Māori understanding of long-term pain. For example, further research is needed to increase understanding of why Māori may put up with pain rather than seek care. Identifying barriers that prevent Māori from accessing health-care for pain management is another common theme that warrants further research. The use of alternative treatments informs how Māori may deal with pain outside of mainstream care, which
suggests that long-term pain from the perspective of Māori people may not be adequately addressed within the mainstream primary care setting. A lack of Māori understanding about the purpose and use of medication and its side effects also appears to be an important area of consideration for Māori who have long-term pain and is also an area that needs further investigation. Findings in this review suggest that further quantitative and qualitative research using a Kaupapa Māori research approach are necessary to increase understanding of how Māori perceive and respond to their experiences of long-term pain. Such understanding may inform the development of treatment strategies for Māori people and other marginalized groups who have long-term pain.
Chapter 2 – Literature Review Investigating Research, Theories and Models of Chronic Pain and Trauma

Introduction ‘Nau te rourou, naku te rourou, ka ora ai te iwi’

It is important to this field of enquiry to understand the scientific and biomedical advances made in the fields of long-term pain and trauma as these may inform perspectives on the social, psychological and spiritual effects of embodied historical trauma upon colonized, marginalized populations. Research clearly indicates the need for a paradigm shift that places people’s identities and their dignity at the centre of future developments in the treatment of long-term pain, especially long-term pain that may stem from historical trauma. While the following section presents an overview of research that informs these ideas, the subject of long-term pain is complex and research in the field is vast. Out of necessity, this review narrows the focus to research that informs understanding of the complex topic of long-term pain and its possible relationship with embodied historical trauma. The literature review is presented in three sections. The first examines ‘what pain is’ and then discusses various pain models that inform recent developments in the understanding of what causes long-term pain. Recent theories and models are discussed, which highlight that long-term pain may be mediated by central processes and a limited understanding of how plasticity in the brain and central nervous system may affect long-term pain is presented. The second section discusses the relationship between stress and long-term pain, which is a complex multi-layered subject that is not completely understood in scientific terms. Research examining the effects of cortisol on the brain and the body is addressed and dysregulation of the autonomic nervous system is discussed in relation to how this may affect cardiovascular function, breathing patterns and long-term pain. This is followed by an examination of research that considers the trans-generational effects of stress and trauma in relation to long-term pain. Post-traumatic stress disorder is also addressed and informs understanding of both the harmful effects of exposure to a single traumatic event and to prolonged and repeated exposure to stress. The third section addresses ‘emotion’ and a psychogenic theory of pain, which considers how difficult emotions may impact upon homeostatic mechanisms at the level of the brain to affect long-term pain. Recent advances in brain imaging research suggest that social and emotional stress may affect long-term pain and
experimental studies investigating anger suppression are reviewed. How identity construction may affect long-term pain and how long-term pain may impact upon identity construction, are considered. Spiritual, historical and cultural considerations are briefly addressed in relation to how religion and science impact upon indigenous Māori approaches to understanding health, illness and long-term pain. Finally, findings from research combining psychological, emotional and physical therapeutic approaches to managing and treating long-term pain are reviewed.

A) About Long-term Pain, Models and Theories

What pain is

In considering ethical perspectives on pain, Ferrell (2005) quotes pain theorist Margo McCaffery (1968) who maintains that: “pain is whatever the experiencing person says it is, existing whenever he/she says it does” (p. 88). Further, it is well documented that a client self-report is the most reliable indicator of pain intensity (Wells, Pasero, & McCaffery, 2008), suggesting that the human experience of pain is subjective. Cassel (1982) describes suffering as “a state of severe distress that threatens the intactness of the person” (p. 640) that “may occur in relationship to any aspect of the person” (p. 641). Cassel (1982) situates suffering and pain in the realm of social and cultural aspects of the person, where relationship to self, body, family, society or other sources of abstract meaning may influence pain and suffering. Cassel maintains that understanding the place of the person in pain requires a rejection of historical dualism that seeks to separate the mind and the body (Cassel, 1988). Wells et al. (2008) suggest that many definitions of pain provide for a physiologic perspective that defines pain at the tissue and not the human level, suggesting that much biomedical literature regarding long-term pain may neglect to truly account for the fact that pain is subjective and may have specific meaning for the person who experiences it.

It is estimated that between 10% and 30% of the adult population across countries suffer with long-term pain (Dominick et al., 2011; Gatchel, Peng, Peters, Fuchs, & Turk, 2007) and due to a rapidly aging population both globally and locally, these figures are set to rise (Hoy et al., 2014; Statistics New Zealand, 2014a). In the case of chronic lower back pain, lifetime prevalence is thought to be as high as 84%, with 12% of the population being disabled by lower back pain. The cost of pain is substantial and reduced
effectiveness at work as a result of pain – known as ‘presenteeism’ – is thought to result in 36.5 million lost workdays annually in Australia (International Association for the Study of Pain, 2004; Phillips, 2009). A study sponsored by Pfizer NZ Ltd (2012) revealed that the annual total cost of long-term pain for Australia in 2007 was estimated at $33.4 billion, while in 2010, the total annual cost of arthritis alone in New Zealand was estimated at $3.2 billion (Pfizer New Zealand Ltd, 2012).

**Acute and chronic/persistent/long-term pain**

Pain is a sensation of importance for self-preservation (Melzack, 2001; Zborowski, 1952) and in biomedical terms, it is considered as either acute or chronic. Acute pain may signal potential or actual tissue damage from injury or disease and motivates a person to act to prevent and treat its cause. Memory encodes the experience so that future encounters with the noxious stimuli are avoided. Acute pain is understood as being an adaptive process where damaged body tissues heal within a set time frame and pain subsides. Acute pain is mostly resolved successfully within a biomedical framework (Lumley et al., 2011).

Chronic or long-term pain is defined as pain that persists for 12 weeks or more or that lasts beyond the time expected for damaged tissue to heal (Treede et al., 2015). Recurring long-term pain may be experienced over many months or years with interspersed pain free periods occurring in between bouts of persistent pain (Gatchel et al., 2007). While much research in the last two decades on the subject of long-term pain has improved understanding, theories regarding its etiology and identification of the exact biophysiological mechanisms involved in much long-term pain are still developing (Asmundson, Coons, Taylor, & Katz, 2002; Gatchel et al., 2007; Melzack, 2001).

**The International Association for the Study of Pain and reclassification of chronic idiopathic pain**

Thieme and Gracely (2012) suggest that in society, long-term musculoskeletal pain may by definition be considered a problem that is characterized by unsuccessful treatment outcomes. Many types of chronic pain defy explanation and do not respond to traditional biomedical methods (Thieme & Gracely, 2012). For example, in the case of idiopathic lower back pain, while there appears to be a correlation between lower back pain and the
degeneration of lumbar discs seen in clinical imaging, systematic reviews with meta-analysis conclude that at the individual level, none of the lesions identified by MRI may be established as a cause of lower back pain because similar MRI abnormalities are very common in people who are asymptomatic, they do not coincide with lower back pain, and they do not predict the response to evidence-based therapy for non-specific lower back pain (Balagué, Mannion, Pellisé, & Cedraschi, 2012). In response to emerging research findings, in 2015 the International Association for the Study of Pain together with the World Health Organization redefined classification categories for chronic pain conditions (Treede et al., 2015). A new category – chronic primary pain – is described as follows (p. 1004):

primary pain is pain in one or more anatomic region/s that persists or recurs for longer than three months and is associated with significant emotional distress or functional disability in that it interferes with daily living and participation in social roles and cannot be explained by another chronic pain condition.

The new category includes chronic widespread pain, back pain that is not musculoskeletal or neuropathic, fibromyalgia and irritable bowel syndrome (Treede et al., 2015). While contemporary models recognize that pain is a complex, subjective and perceptual experience involving psychological, social, cultural and biological factors (Gatchel et al., 2007; Melzack, 2001; Penney, 2010), the mainstream biomedical approach continues to promote the concept of pain as being a purely sensory experience involving noxious stimuli related to an injury, inflammation or organic pathology. Not wishing to be seen as incompetent, doctors may be compelled to try and identify a structural cause for persistent pain (Asmundson et al., 2002) and in doing so, they may ignore emotional difficulties or stressful life circumstances that may contribute to pain. This may be problematic for people who have recalcitrant persistent pain that fails to resolve or respond to pain medication (Casey, 2014). Many people with long-term pain may end up thinking that their doctor believes their pain is imaginary (Casey, 2014) and may fear labels such as ‘hypochondriac’ or ‘psychosomatic’ that imply they may have a psychological disorder. Such encounters may leave the patient feeling resentful, helpless and disillusioned with their doctor and the health-care system (Okifuji, Turk, & Curran, 1999). Asmundson et al. (2002) maintain that many people who have long-term pain may in the end turn to a psychologist or pain specialist for help (Asmundson et al., 2002).
The biopsychosocial model

Engel's (1977) biopsychosocial model is widely accepted as being a necessary alternative to the reductionist biomedical approach to health-care and is particularly salient in the treatment of idiopathic long-term pain. The model recognizes that psychological factors may influence the experience of long-term pain, which confounds the biomedical view that pain is merely a physical sensation (Penney, 2010). While in theory the model is more holistic in that it encourages consideration of the biological, psychological, social, cultural and historical factors that may contribute to long-term pain, the literature suggests that historical and cultural factors receive little to no attention in pain research (Chapman et al., 2008). If a model that is designed to respond to a person in their world ignores historical and cultural perspectives, complex variables that may influence collective and individual wellbeing, disease and pain may be overlooked (Chapman & Nakamura, 1999; Chapman et al., 2008).

In practice, the biopsychosocial model holds that the onset of chronic or long-term pain following acute pain involves patterns of conditioned learning in which the adaptive alarm of acute pain fails to resolve and is no longer a reliable indicator of tissue damage. The model suggests that long-term pain develops as a result of maladaptive social, behavioural, neurological and biological responses to pain that may maintain the acute pain state (Hannibal & Bishop, 2014). Avoiding activity, resting and negative emotional responses such as fear, worry and rumination may contribute to what is termed the vicious cycle of pain (Gatchel et al., 2007; Lumley et al., 2011). The biopsychosocial approach is mainly used in the physical therapy setting and is directed at getting patients to modify their dysfunctional pain behaviours and negative emotional reactions to pain (Hannibal & Bishop, 2014). For example, responses to pain that cause the person to avoid activities they think will make pain worse, such as exercise, become the target of strategies that aim to reduce ‘fear avoidance’ behaviour (Norton, 2003). Exercise has been shown in many studies to reduce bouts of long-term pain and graded exposure methods encourage a gradual return to activity and exercise as a means of managing long-term pain (Hannibal & Bishop, 2014). The fear avoidance model suggests that confronting pain may break the vicious cycle and promote recovery (Norton, 2003). While evidence suggests that confronting pain is useful for alleviating pain-related fear behaviour, pain may persist because other fears or stressors that may exacerbate pain remain
unaddressed (Gatchel et al., 2007). A recent amendment to the ‘fear avoidance’ strategy for addressing pain advises that clinicians need to be mindful of patients fear and anxiety in general as the presence of these may indicate a state of physiological arousal or in other words, ‘stress’, that may exacerbate long-term pain (Norton, 2003). The association between long-term pain, depression and anxiety is discussed further on in this chapter.

**The neuromatrix model**

Melzack (2001) proposed the ‘neuromatrix model’ in which pain is defined as a multidimensional experience produced by a characteristic ‘neuro-signature’ or nervous system response pattern generated by a widely distributed neural network – ‘the body-self neuromatrix’ – in the brain. The theory asserts that the output patterns of the body-self neuromatrix activate perceptual, homeostatic and behavioural programs after injury, pathology or chronic stress that may contribute to the experience of long-term pain. Melzack (2001) states “we are so accustomed to considering pain as a purely sensory phenomenon that we have ignored the obvious fact that injury does not merely produce pain, it also disrupts the brains homeostasis regulation system” (p. 3). Hans Seyle, who advanced understanding of stress in the biological sense of tissue injury, infection and pathology, also highlighted the importance of psychological stress and his theory that chronic stress causes much illness is now widely accepted (Chrousos & Gold, 1992; Goldstein, 2010). Melzack’s (2001) neuromatrix model of pain is informed by advancing research in the field of neuroscience and by research documenting the damaging biological effects of chronic stress (Chrousos & Gold, 1992). Both subjects are addressed further in this chapter.

Experimental research conducted by Ramachandran in the 1990s, in which a mirror box was used to successfully treat phantom limb pain, completely changed scientific understanding of long-term pain (Ramachandran & Rogers-Ramachandran, 1996) and informs the perspective that pain is in fact a perceptual experience produced by an extensive neural network in the brain, rather than by direct sensory input evoked by tissue damage, inflammation, or other pathology alone (Melzack, 2001). Recent advances in brain imaging technology have led to a surge in research investigating the interconnected constructs of long-term pain, the brain, psychological and emotional stress and related biochemical interactions. The remainder of this chapter addresses the literature that focuses on the brain and neuroendocrine function in relation to biological,
psychological and emotional effects of stress and trauma on long-term musculoskeletal pain.

**Central sensitization, plasticity and related pain research**

Before reviewing a range of current research, the concept of central sensitization is discussed. This is an extremely complex process involving hyper-arousal of the central nervous system neurons that triggers neurochemical and neurotransmitter activity in the brain and spinal cord. Experimental research has increased understanding of ‘chronic primary idiopathic pain’, making clear that the brain’s response to both physical assault or injury and psychological stress or trauma share overlapping neurological mechanisms that are not completely understood (Lumley et al., 2011). Central sensitization may generate pain in the body in the absence of peripheral tissue damage (Lumley, Sklar, & Carty, 2012); however, peripheral tissue damage may also generate central sensitization and as such the two mechanisms are interconnected.

Three perceptual dimensions have been identified in the pain experience (Lumley et al., 2011). The *sensory-discriminative dimension* senses location, timing and the physical properties of noxious stimuli (heat, pressure or noxious chemical), which when perceived, prompt withdrawal reflexes in order to limit tissue damage. The *affective-motivational dimension* is associated with emotion in which the perceived unpleasantness of noxious stimuli motivates escape, defensive behaviour and recuperation. Finally, the *cognitive-evaluative dimension* appraises the meaning and consequences that pain has for the individual (Lumley et al., 2011). The first two perceptual pain dimensions are mediated by two separate but parallel neural systems arising from within the dorsal horn of the spinal cord. The lateral pain system is responsible for assessing the sensory-discriminative aspects of pain and has axons ascending laterally within the spinothalamic tract of the spinal cord that synapse with lateral nuclei in the thalamus. From there, neurons project to the somatosensory cerebral cortex. The medial pain system (lying adjacent to the lateral) is responsible for the affective-motivational aspects of pain, consisting of medial axons of the cord and brain stem that synapse with medial thalamic nuclei that send further projections to a number of regions in the brain including the limbic system and the cingulate cortex. Experimental and clinical studies support the distinction between the two systems, where damage to the lateral system has been shown to make it difficult to localize or describe the physical
properties of pain while the unpleasantness of the experience remains (Ploner, Freund, & A., 1999). An imaging study directing people to think about the location of a noxious stimuli showed activation of the primary somatosensory cortex when they did so, while directing them to think about how unpleasant the stimulus was, showed activation of the medial pain system (Kulkarni et al., 2005).

Recent research suggests that long-term pain may involve neural plasticity and sensitization of the medial pain system in which the medial thalamus is the primary relay of nociceptive input to the anterior cingulate cortex (Lumley et al., 2011). In experimental research, repeated stimulation of this pathway via pain applied to peripheral tissues caused changes in neurons in the cingulate cortex and the modification of cingulate synapses appeared to regulate afferent signals that are considered important to the process in which the perception of acute pain becomes long-term pain (Shyu & Vogt, 2009). When pain is triggered by peripheral injury or a repetitive pain stimulus to the tissues, it may lead to long-term changes in the morphology, neurochemistry and gene expression in the anterior cingulate cortex, which may contribute to the maintenance and exacerbation of long-term pain (Cao et al., 2009). Three characteristics of central sensitization are known to occur: an enhanced pain response to normally painful stimuli or hyperalgesia, a decrease in the pain threshold to normally painful stimuli or allodynia, and an increase in spontaneous activity or spontaneous pain (Lumley et al., 2011). The medial pain system has projections to other subcortical regions that are considered key to emotional expression such as the amygdala, the hypothalamus and the periaqueductal gray. Lumley et al. (2011) report on studies demonstrating that peripheral pain may induce changes in neurons projecting from the basolateral amygdala to the medial prefrontal cortex, whose neurons are associated with cognitive and emotional processing. For example, partial kindling (repeated stimulation) of the basolateral amygdala in rats generated prolonged sensitization of neurons, which correlated with increased affective responses to painful shocks. This kind of sensitization is thought to be a factor in the persistent pain of fibromyalgia because people with the condition have enhanced defensive brain activations to non-painful, threat-related stimuli (Lumley et al., 2011). The hypothalamus amongst other things organizes innate defensive behaviours to threat, including anticipation of and ‘actual’ pain. Lumley (2011) reports that in murine
In a novel brain-imaging study, Rainville, Duncan, Price and Carrier (1997) used positron emission tomography (PET) and hypnosis to ascertain the cortical areas involved in the pain affect in normal human volunteers. Hypnotic suggestion both increased and decreased pain unpleasantness without changing the perceived intensity of pain sensations (Rainville, Duncan, Price, & Carrier, 1997). Changes in pain-evoked activation in the anterior cingulate cortex were consistent with the encoded suggestion of perceived unpleasantness; however, primary somatosensory cortex pain-evoked activation was unaltered. The experimental study links frontal lobe limbic activity with pain affect or emotional awareness of pain (Rainville et al., 1997), which is in line with clinical lesion studies in which unpleasantness of pain was absent with frontal lobotomy (Foltz & White, 1962). The findings suggest that affective states may alter perception of pain independently of pain intensity and Rainville et al. (1997) propose that pain-related activation in the anterior cingulate cortex reflects nociceptive input from a pain pathway that is highly modifiable and that emotional and behavioural reactions to pain largely determine the level of anterior cingulate cortex activation. Further, the close proximity of nociceptive, motor and attentional regions of the anterior cingulate cortex might allow for local interconnections where its output is able to command immediate behavioural reactions. Rainville et al. (1997) maintain that there is at least a partial segregation of function between pain affect and sensation, where the anterior cingulate cortex possibly reflects the emotional experience that provokes behavioural reactions to pain. The close proximity of the lateral and medial pain systems, however, suggests their functions are inextricably interconnected and plastic changes that may occur between the two may affect long-term pain.

While studies suggest that central sensitization and brain plasticity are important, Chapman and Nakamura (1999) assert that many pain models are not equipped to incorporate new understandings of the multiple biological, psychological, social, cultural and historical factors that may affect the pain experience. Recent advances in brain imaging studies highlight marked explanatory gaps in the understanding of pain resulting from the separation of research in the fields of classical neurophysiology and perceptual psychology (Chapman & Nakamura, 1999; Chapman et al., 2008). It is evident that long-
term pain and trauma, both physical and psychological, may alter the brain’s architecture and biochemical processes, and unless new models and methods of treatment are developed and applied that reflect new understanding, then much long-term pain may remain unresolved. The psychological, social and emotional effects of trauma and prolonged stress upon long-term pain have until recently been given little attention in research; however, these effects are highly salient for understanding the multiple pathways that may contribute to the development and maintenance of pain.

B) Understanding Stress, Trauma and Long-Term Pain and Related Research

**Complexity of understanding stress, pain and the brain**

Chapman and Nakamura (1999) propose a constructivist systems approach, in which the knowledge of pain on multiple levels can be integrated into a coherent multidisciplinary account of pain. The model construes pain not as the passive registration of sensory information as is espoused in traditional research, but rather an active process in which a brain with consciousness is capable of generating and shaping awareness. The theoretical framework responds to observations made in imaging studies that indicate that pain is a dynamic product of a self-organizing conscious brain. Penney (2010) maintains, “it is impossible to understand such a complex system that is capable of self-organisation using a linear reductionist approach” (p. 43). Brain imaging studies make evident that a massive surge of activity occurs in multiple regions of the brain during the pain experience, which calls into question long-held assumptions regarding its cause (Chapman & Nakamura, 1999).

**A systems approach to stress and pain**

Chapman and Nakamura (2008) propose, “a human being is an open living adaptive system that pursues the dual objectives of adaption to the environment and survival” (p. 123). Adaptive systems have three important features: irritability, connectivity and plasticity. Irritability reflects that the system is dynamic and responds to perturbations such as tissue injury by moving away from equilibrium to meet the challenge and then returning back to equilibrium (Chapman et al., 2008). Connectivity is where connections and interactions that exist among the components of a system allow for the formation of patterns and a process of self-regulating feedback. In the systems approach, the
connections made between systems are more important than the components themselves. Plasticity is where change occurs selectively in response to alterations in the environment and change is considered non-linear or bidirectional. Systems theorists describe non-linear transitions as either ‘state’ or ‘phase’ shifts and a key aspect is that small perturbations can result in large systems changes while large perturbations often do not. Emergence, self-regulation and self-organization are key features of the systems approach that contextualize complex processes that link physical and emotional stress and trauma with long-term pain.

**Stress, defensive arousal, recovery and long-term pain**

According to Chapman et al. (2008), the stress literature tends to group all reactions of the stress response into one event; however, two phases are activated simultaneously. An initial fast phase involves defensive arousal and a slower phase moderates the defensive response and the recovery process (Chapman, 2008). The two phases, respectively, also align with pro-inflammatory and anti-inflammatory processes. The major mechanisms involved in the stress response at the central level of the brain are the locus coeruleus noradrenergic system, the hypothalamic pituitary adrenal axis and the sympathetic adrenal medullary axis which includes the peripheral nerves of the autonomic nervous system (Chapman et al., 2008). A stressor is any event that elicits a stress response and may be physical, social, an invading pathogen, a signal of trauma, or actual trauma (Chapman, 2008). While normal responses to everyday life may involve phases of the stress response, intensity, duration and frequency all impact upon the magnitude of the response. Cognitive processes affect the magnitude of the stress response because a person responding to the world around them perceives and determines how predictable and controllable a stressor is (Chapman et al., 2008). It is evident, however, that adaptive responses to stress involve considerable autonomic nervous system activity and connectivity of humoral messenger substances such as cortisol, epinephrine and noepinephrine, opioids and endocannabinoids and inflammatory cytokines that may influence long-term musculoskeletal pain in a number of ways. Understanding the relationship of stress to pain or pain to stress is complicated by the fact that pain itself is a stressor in its own right and also triggers the same physiological and psychological responses that other threats to homeostasis or equilibrium initiate (Penney, 2010). In discussing pain and the stress response, Chapman
et al. (2008) maintain that when psychosocial stressors are present, the acute wound-induced stress response may fail to resolve properly leading to long-term pain (Chapman et al., 2008). This may happen in several ways, for example, when a single stressor or trauma of significant magnitude that overwhelms the system occurs, or when a stress is repetitive and/or prolonged, and/or when the system fails to recognize that a stressor has ended, leading to a failure of the transition from arousal to recovery phase (Chapman et al., 2008). Tissue trauma or injury is a stressor that initiates multiple processes involving the nervous, endocrine and immune systems; however, external cognitive stimuli generated during anticipation and memory reconstruction can also activate complex neural circuits that are able to mobilize the stress response in the absence of tissue trauma (Chapman et al., 2008), which may affect long-term musculoskeletal pain. How memory shapes expectation or anticipation is not well understood but is thought to involve the frontal-amygdala networks in the brain. How these processes in turn influence physiological functioning through the autonomic nervous system network and how other sensory modalities integrate with noxious neural signalling, also remains unknown (Chapman et al., 2008). The central nucleus of the amygdala has projections to the peri-aqueductal gray, which co-ordinates defensive behaviours and conditioned fear. For example, the amygdala recognizes angry faces and in response may communicate with the hypothalamus via neural connections so that adrenocorticotropic hormone is released, which stimulates the release of cortisol from the adrenal cortex.

**Stress, cortisol and long-term musculoskeletal pain disorders**

Failure to recover from a stressor is reflected in the hypothalamic pituitary adrenal axis function in which both free cortisol (in the blood) insufficiency, or cortisol excess, may be damaging. Too little cortisol leads to prolonged anabolic processes and Cushing’s disease, and excessive cortisol has catabolic consequences that may result in the breakdown of body tissues such as muscle and bone if unregulated. Free cortisol has a diurnal rhythm and is high in the morning when energy is required for the day and decreases throughout the day when energy requirements are less. Cortisol is an essential hormone for mobilizing energy stores needed for action and its production may increase or decrease in response stress loading. Any alteration to the normal diurnal variation in cortisol release, however, is considered ‘dysregulation’ of the endocrine system. Hypercortisolism is known to be immunosuppressive and dysregulated cortisol is believed to
be involved in chronic disorders of the immune system such as rheumatoid arthritis and scleroderma. Irritable bowel syndrome, fibromyalgia, other musculoskeletal disorders and depression are commonly concurrent with long-term pain and also are thought to be related to cortisol dysregulation (Chrousos & Gold, 1992; Jarcho, Slavich, Tylova-Stein, Wolkowitz, & Burkeb, 2013).

**Cortisol’s effect on the brain, long-term pain and related research**

The brain is the key organ involved in the stress response because it is responsible for determining what is threatening and therefore what is potentially stressful. The brain also determines behavioural responses, which may be adaptive or harmful (McEwen, 2007). The brain mechanisms are complex and McEwen (2000) points out that stress hormones such as cortisol protect the body in the short term and promote adaption to stress; however, evidence is clear that with prolonged elevation, the brain is a central target of the damaging effects of cortisol. McEwen (2007) maintains that the stress hormones may result in both adaptive and maladaptive effects on the brains hippocampus over the life course. To test the theory that chronic pain may be maintained by a dysregulated physiological response to recurrent stress, Vachon-Pressau et al. (2013) assessed associations between basal levels of cortisol collected over seven consecutive days in 16 participants with chronic back pain and 18 healthy volunteers (Vachon-Presseau et al., 2013). Hippocampal volumes and brain activation to thermal stimulations were also measured. Results showed that those with chronic back pain had higher levels of cortisol than healthy participants and that higher cortisol was associated with smaller hippocampal volume and stronger pain-induced activity in the anterior para-hippocampal gyrus, which is a region involved in anticipatory anxiety and associative learning (Vachon-Presseau et al., 2013). The findings support a stress model of long-term pain as they indicate that the observed sustained endocrine response to stress found in individuals with smaller hippocampi leads to changes in the function of the hippocampal complex that may contribute to maintaining persistent pain states. Other studies show that emotional distress may lead to alterations in brain architecture and function in people who have long-term pain (Wand et al., 2011). In a systematic review, Wand et al. (2011) highlight numerous brain imaging studies showing that expanded activation or plastic changes in the primary somatosensory cortex (S1) lower back region may occur in people with chronic lower back pain. For example, in one case,
representation of the (S1) region had shifted medially into the leg region. A separate study showed similar expansion in people with chronic lower back pain who displayed high emotional distress, but the same expansion was not seen in people with lower back pain who were not distressed (Wand et al., 2011). In another study, A. J. Harris (1999) showed that cortical changes may also occur in repetitive strain injury. Experimental stress has been shown to have analgesic and allodynic effects in animals (Butler & Finn, 2009; Jørum, 1988) and this effect also occurs in humans in response to experimental stress (Crettaz et al., 2013). Crettaz et al. (2013) assessed the effect of stress – delivery of a five-minute speech to an audience, and completion of a mathematical equation – on allodynia (central sensitization of pain) in 10 pain-free participants and 13 participants with fibromyalgia. Psychometrics in the fibromyalgia group revealed higher depression and anxiety scores, more reports of childhood trauma and a tendency to experience chronic stress compared with the pain-free group. Following the stress tests, both groups displayed allodynia in response to thermal stimuli where the pain-free group responded to hot stimuli and the fibromyalgia group to cold.

**Chronic stress, cardiovascular disease and suboptimal breathing**

Tawakol et al. (2017) proposed that the brain’s salience network involving complex functions such as cognition and emotion may have an important role in cardiovascular disease because activation of the amygdala as a key component leads to hormonal, autonomic and behavioural changes that are typically associated with fear and stress (Tawakol et al., 2017). In their groundbreaking longitudinal study, the brains of (n=293) patients who experienced a cardiovascular event during median follow-up of 3.7 years were assessed. Results demonstrated that resting metabolic activity within the amygdala is significantly associated with risk of developing cardiovascular disease, independently of other risk factors such as smoking and sedentary lifestyle. The authors concluded that the amygdala has a key role in linking stress to cardiovascular events as it may influence arterial inflammation through the up-regulation of bone marrow activity, which may increase production of hematopoietic tissue. It is possible that alterations in cardiovascular function resulting from stress may have detrimental effects on cardiac variability and breathing function, which may in turn affect long-term musculoskeletal pain (Chaitow, 2004).
Cardiac variability or vagal tone reflects changes in heart rate during the respiratory cycle; for example, during exhalation vagal efferent activity modulates this rate causing deceleration of the heart, and inhalation increases heart rate. Vagal tone provides a ‘trait measure’ for autonomic nervous system function (Chapman et al., 2008) as it indexes behavioural, cognitive and emotional functioning, which is reflected in the balance between sympathetic and parasympathetic nervous system influences. Sympathetic activation accelerates heart rate and parasympathetic activation slows it down. Respiratory rhythm is closely associated with emotions and the piriform-amygdala cortex may alter respiratory rhythm in response to qualitative changes in the emotions. Increased respiratory drive prepares the body for sympathetic activation or ‘fight or flight’; however, homeostasis or equilibrium is best served by parasympathetic drive and a relaxed and shallow breathing pattern.

The autonomic nervous system serves allostatic or adaption to stress loading by balancing the respiratory, endocrine, circulatory, nervous, lymphatic and muscular systems (Chapman et al., 2008). One of the ways it does so is by up-regulation, that is, by increasing the set point around which breathing rate, heart rate, tone of the muscles and hormone levels occurs, in preparation for launching an effective response to a stressor. When mental and emotional factors such as anticipation, fear, grief, anxiety or depression drive breathing regulation, homeostatic and biochemical functions of breathing may be disturbed (Boiten, 1998; Chaitow, 2004; Courtney, 2009). When up-regulation of the sympathetic nervous system is prolonged, the breathing pattern may be altered and allostatic – which regulates homeostasis – maintained around an altered breathing set-point (Courtney, 2009). Courtney (2009) notes that prolonged up-regulation may lead to plastic changes in the brain that maintains the suboptimal breathing state; however, Courtney suggests this may be reversed if a person becomes aware of and consciously changes their breathing pattern over time. Courtney reports on fluoroscopic studies demonstrating that in situations of emotional stress, the diaphragm shows signs of hypertonicity and may become flattened and less mobile (Courtney, 2009). Change in function of the respiratory muscles such as the diaphragm may impact upon the function of other muscles in a flow-on effect that is thought to affect long-term musculoskeletal pain (Chaitow, 2004). Long-term pain associated with sub-optimal breathing may resolve with treatment targeted at the autonomic nervous system (Hallman & Lyskov, 2012;
Hansen-Honeycutt, Chapman, Naspany, Baker, & May, 2016). For example, mind body therapies such as yoga that increase awareness of breathing and stress may help restore an optimal breathing pattern and improve autonomic nervous system function leading to reduction in long-term pain. Reduction in lower back pain in particular has been demonstrated in studies using methods that both increase mind-body awareness and improve breathing function (Ma et al., 2017; Mehling et al., 2005).

Suboptimal breathing in the otherwise normally healthy population may be quite common, affecting approximately 1 in 10 people; however, the true figure is unknown and may be much higher than this depending on the measures used (Barker & Everard, 2015; Thomas, McKinley, Freeman, Foy, & Price, 2005). High vagal tone or cardiac variability is indicative of a person’s ability to respond to and effectively recover from a stressor (Chapman et al., 2008) and research suggests that exposure to trauma early in life may permanently diminish cardiac variability, reducing the individual’s resilience against future stressors (Liddell et al., 2016).

**Trans-generational effects of stress**

The trans-generational effects of stress and trauma on the brain and body are addressed in epigenetic research documenting how environmental factors may alter the way genes are expressed (Fish et al., 2004; Palma-Gudiel, Córdova-Palomera, Eixarch, Deuschle, & Fañanás, 2015; Yehuda, Schmeidler, Wainberg, Binder-Brynes, & Duvdevani, 1998), which also has relevance for long-term musculoskeletal pain. Evidence that early life stress modulates the hypothalamic pituitary adrenal axis and in particular cortisol regulation, is unequivocal (McEwen, 2000, 2007). Cortisol plays an important role in gene regulation or switching genes on or off and gene regulation determines behavioural responses to stress as well as metabolic function (Davidson & McEwen, 2012). In a meta-analysis, Palma-Gudiel et al. (2015) assert that maternal experiences of stress prior to and during pregnancy may alter physiological function of the hypothalamic pituitary adrenal axis in offspring, predisposing them to metabolic, cardiovascular and mental disorders in adulthood. Further to this, overactivation of the hypothalamic pituitary adrenal (HPA) axis early in life may lead to the onset of depressive symptoms, and while the HPA axis is developed by week 22 of pregnancy, its plasticity is maintained during the first 2 years of life (Palma-Gudiel et al., 2015). The meta-analysis suggests that early life experiences affect health and wellbeing over the life course.
Yehuda et al. (1998) demonstrated that the offspring of World-War II holocaust survivors have greater vulnerability to post-traumatic stress and psychiatric disorders. Yehuda (2000) found that parental post-traumatic stress disorder was associated with low cortisol in offspring, even when lifetime post-traumatic stress was absent in the offspring. Yehuda (2000) concluded that low cortisol levels in post-traumatic stress disorder may be a marker of vulnerability that is related to parental post-traumatic stress disorder. The research supports the notion that the effects of extreme trauma may have negative transgenerational effects; however, Yehuda (2000) is careful to point out that not all people exposed to extreme trauma go on to develop post-traumatic stress disorder or other psychiatric disorders, suggesting that adversity in childhood may also lead to adaptive responses. Meaney et al. (2001) show that while early life stress increases stress reactivity, this may confer advantage in early life. For example, the children of highly anxious mothers may be more timid or shy and from an epigenetic viewpoint shy behavior may cause the child to avoid risk. Meaney et al. (2001) argue, however, that the cost of adaption to a high level of environmental stress early in life such as low socioeconomic status and related adversity in parental care, may come at a cost of increased risk of developing stress-induced illnesses in later life (Meaney, 2001), which may include risk of developing long-term musculoskeletal pain.

In a murine study examining the intergenerational effects of maternal separation Franklin et al. (2010) showed that separating mice pups from their mothers from day 1 to 14 induced depressive-like behaviours in infant mice and behavioural changes in adult life in response to aversive environments. The offspring of separated males expressed similar behavioural alterations despite being reared normally. Alteration in the profile of DNA methylation in the promoter of candidate genes in the germ-line of separated mice was also evident in offspring mice and associated with altered gene expression. The research highlights that the effects of early stress on behavioural responses and on the regulation of DNA methylation in the germ-line may be transferred across generations. Meaney et al. (2001) assert that environmental adversity alters the wellbeing of the mother such that stress induced anxiety and fearfulness may decrease maternal responsiveness. Early life experiences related to maternal care shapes gene expression wherein the underlying neural mechanisms of the hypothalamic pituitary adrenal axis affects cognitive and emotional development (Meaney et al., 2001). Fish et al. (2004)
suggest that given the importance of early life parent-child interactions to behaviour later in life, this phase of development should be targeted for intervention programs. Early life events may influence life-long patterns of emotionality and stress responsiveness and may alter the rate of brain and body aging. In particular, the hippocampus, the amygdala and the prefrontal cortex may undergo stress-induced remodeling that in turn influences a person's behavioural and physiological responses to subsequent stressors (Davidson & McEwen, 2012). Child abuse is associated with changes in the epigenetic regulation of the glucocorticoid (cortisol) receptor, which is evidenced in a recent postmortem study where tissue extracted from the hippocampus of suicide victims with a history of child abuse and those without, showed decreased levels of glucocorticoid receptor mRNA in abuse victims (McGowan et al., 2009). Reductions in hippocampal volume found in stressed primate mothers as well as their infants indicate that reduced hippocampal volume resulting from stress is heritable (McEwen, 2007). Davidson and McEwen (2012) report findings from other studies in which reduced volume in the orbito-frontal cortex in children who were abused compared with non-abused children was evident. More severe abuse was associated with smaller orbito-frontal volume. Murine studies also show that when a mother rat abuses its young, the young cling to the mother, which is thought to be associated with immature development of the amygdala (McEwen, 2007).

McEwen (2000) highlights that lower socioeconomic status is associated with stress and that social, behavioural and psychological therapeutic interventions are needed that may counteract the effects of early life adversity. For example, incorporation of emotion-regulation education in schools may support development of more positive social outcomes by increasing resilience in children who are at risk (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). In a recent meta-analysis, Durlak et al. (2011) examined results of 213 programs involving over 270,000 school children that showed that participating in social/emotional learning programs lead to significant gains in social skills and an 11% better academic achievement. Such programs may lead to better coping and adaptive responses throughout the life course and may help mitigate the risk of developing stress-induced illnesses in later life, which may include risk for developing long-term musculoskeletal pain.

*Post-traumatic stress and long-term pain*
According to van der Kolk and Saporta (1991), the experience of extreme physical or psychological trauma is qualitatively different from generalized stress in that it is an overwhelming experience that may result in lasting changes to the body’s regulatory system. Pierre Janet (1889) taught that traumatic experiences are accompanied by vehement emotions that may interfere with information processing and appropriate action. Janet considered this to be “hyper-arousal induced memory disturbances”, that are a common response to trauma in which disturbed processing on a verbal and symbolic level occurs (as cited in van der Kolk & Saporta, 1991). In such cases, hyperarousal causes memory of trauma to be split off from consciousness to be stored in the unconscious or ‘procedural’ memory and Janet asserted that such visceral memories may return as physiological reactions, nightmares, visual images, emotional disturbances, flashbacks or behavioural re-enactments (van der Kolk & Fisler, 1995). Cortisol is also thought to play a role in storing traumatic memory (van der Kolk, 1994). In commentary, van der Kolk and Saporta (1991) maintain that experiences that overwhelm coping or regulatory mechanisms set the stage for conditioning of automatic excessive emotional reactions to subsequent stressors; however, the conditioned response remains rooted in memory of the past trauma (van der Kolk & Saporta, 1991). According to van der Kolk and Saporta (1991), Freud (1919) adopted these views from Janet and theorized that the fixation on trauma becomes biologically mediated where “after severe shock [...] the dream life takes the person back to the situation of his disaster from which he awakens with renewed terror [...] the patient has undergone a physical fixation to the trauma” (p. 199). Traumatization may result in a ‘hyperactive’ response to subsequent external stimuli, which was described by Freud in neuropsychiatric terms wherein “[...] the traumatic neurosis is the result of the extensive rupture in the barrier against stimuli” (as cited in van der Kolk & Saporta, 1991, p. 199).

The study of stress hormones in people diagnosed with post-traumatic stress disorder reveals that dysregulation of the hypothalamic pituitary adrenal axis is a common finding (van der Kolk & Fisler, 1995). Increased 24-hour norepinephrine and epinephrine secretions have been found in veterans with post-traumatic stress disorder, compared to those with other psychiatric diagnoses (Kosten, Mason, Giller, Ostroff, & Harkness, 1987) and both abnormally low and high levels of cortisol have been reported in veterans with post-traumatic stress disorder compared with other psychiatric disorders (Kosten,
Wahby, Giller Jr., & Mason, 1990; Maryrose Gerardi, 2010). While high cortisol levels might be expected in people with post-traumatic stress disorder, differences in findings of cortisol levels reflect its paradoxical effects and the complex interactions involved in dysregulation of the hypothalamic pituitary adrenal axis. For example, studies report that changes in glucocorticoid receptor activity that reflect a blunted adrenocorticotropin response to corticotrophin releasing hormone stimulation, may be secondary to elevated levels of circulating catecholamines. Paradoxical findings may reflect changes in pituitary function in response to increases and decreases in anxiety or stress (Smith et al., 1989). Down-regulation of the glucocorticoid receptor may affect low cortisol levels (Perry, Giller, & Southwick, 1987). Research suggests that traumatic events may have profound and lasting effects on the emotional, cognitive, behavioural and bio-physiological functioning of the person and such effects may be passed on to future generations (Kellerman, 2013). While originally described in war veterans, post-traumatic stress disorder is commonly experienced by victims of rape and interpersonal violence, witnesses of violence and natural disaster and many other types of trauma, and it is evident that the largest group of such victims are children (Perry, 1994). Prominent symptoms of post-traumatic stress disorder include increased arousal characterized by hyper vigilance and physiological hyperactivity, increased startle response, sleep difficulties, irritability and anxiety, dissociation, memory loss and somatic symptoms such as metabolic disorder and long-term pain (McFarlane, 2010; van der Kolk & Saporta, 1991).

C) Emotional Stress, Psychogenic Pain Theory and Other Considerations

*Long-term pain, trauma and emotional distress*

Understanding the relationship between long-term pain, stress and post-traumatic stress is essential, as many studies demonstrate an association between long-term
musculoskeletal pain and psychopathology that may be indicative of dysregulation of the autonomic nervous and endocrine systems (Goldenberg, 2010; Kirmayer, 1996; McFarlane, 2010; Penney, 2010). A model of diathesis is often used to explain such associations, where an underlying predisposition or semi-dormant trait of a person present at the time physical pain is activated leads to the identification of a diagnosable psychopathology as well as long-term pain (Penney, 2010; Turk, 2002). Neuroticism or an inability to cope that may, however, cause some individuals to react with hyper-arousal to stress, anxiety or stray emotions, may also reflect a phenomenological reality in which somatic symptoms may be understood as protests of the powerless against the intolerable personal social circumstances, status and/or political and economic forces that shape lives (Kirmayer, 1996). Kirmayer (1996) maintains that empowerment may decrease the prevalence of distress, which, it is proposed, may also decrease the prevalence of long-term pain.

Population studies indicate that many long-term pain conditions are co-morbidly associated with poor mental health (Gatchel et al., 2007; Goldenberg, 2010; McWilliams, Goodwin, & Cox, 2004), especially post-traumatic stress disorder (Andreski, Chilcoat, & Breslau, 1998; McFarlane, 2010). An American population study (n=3032) by McWilliams et al. (2004) found a strong association of depression and anxiety with arthritis, back pain and migraines with an odds ratio of 1.5 to 3.9. The authors also reported that having more than one pain complaint greatly increased the prevalence of depression; for example, having two or more complaints increased the probability of depression six-fold, and having three or more complaints, eight-fold (McWilliams et al., 2004). In a separate study depression was present in 40% to 60% of patients throughout various pain clinics, and was also associated with greater levels of physical impairment (Bair, Robinson, Katon, & Kroenke, 2003). Another study showed that patients who had irritable bowel syndrome, chronic lower back pain or chronic headaches had a much greater rate of depression in specialty clinics than in primary care (Goldenberg, 2010). Andereski et al. (1998) report that of all psychiatric disorders, post-traumatic stress is most likely to be associated with somatization disorders and in particular, unexplained long-term musculoskeletal pain. McFarlane (2010) maintains that while there is substantial research on post-traumatic stress and somatization, their connection is seldom referred to in the literature, which tends to focus on psychological aspects of post-
traumatic stress such as anxiety and depression (McFarlane, 2010). Experimental and brain imaging research makes clear that depression and pain share common pathways and neurotransmitters, which has implications for the treatment of both concurrently (Bair et al., 2003). Goldenberg (2010) maintains that some long-term pain conditions respond better to antidepressants than they do to pain medication and research suggests that treatment focused on improving mental health may help reduce the prevalence of long-term musculoskeletal pain (Goldenberg, 2010).

**Emotions and pain**

Emotion, according to (Penney, 2010), may be considered “the most complex expression of homeostatic regulation” (p. 44) where motivation and sensation activated by the anterior cingulate cortices involves emotional responses that also constitute the need for survival. Further, Penney (2010) suggests that, “In this sense, pain may be considered a homeostatic emotion that drives behavior.” Emotional responses related to survival needs may operate at unconscious instinctive levels and the system is also capable of dysregulation (Chapman et al., 2008; Penney, 2010). Recent advances in neuroscience suggest that a direct connection between long-term pain and negative affect exists (Lumley et al., 2011). In their review of pain and emotion, Lumley et al. (2011, p. 1) conclude: “emotions are integral to the conceptualisation, assessment, and treatment of persistent pain” and should be integrated into cognitive-behavioural models of pain. Kirmayer (1996), however, proposes that the emphasis on the cognitive aspects of emotion, which involve the language of emotions, while easier to study, may lead to neglecting the importance of emotions as they may be directly related to bodily experiences like persistent pain. Kirmayer (1996) suggests that while emotion may be “a bridge between the body and the cognized social self” (p. 6) non-cognitive aspects of bodily function remain, wherein the symbolic reality of the body goes beyond semantic networks and involves processes that link perception directly to the realm of bodily experience. Kirmayer contrasts non-Western systems of health and wellbeing that are often holistic and have long recognized that links between emotions, physiology and the cosmos exist in which disorders that may be deemed social in origin continue to be treated on the physical level (Kirmayer, 1996). The somatization of social emotional difficulty is apparent across cultures, often involves persistent pain and may generally be labeled as psychosomatic, which implies the disorder originates in the mind (Kirmayer,
Kirmayer proposes that too great a focus on the psychological aspects of the labeled psychosomatic disorders ignores the body itself as a potential idiom of distress. Understanding the body in long-term pain necessitates understanding of ‘the person in pain’ and the personal meaning a person makes of bodily symptoms, which may inform recovery from long-term pain.

**Chronic psychogenic pain theory, traumatic memory and the survival response**

In attempting to understand unusual symptoms such as memory loss and somatic symptoms evident in people who had experienced extreme physical or psychological trauma, early psychologists Charcot, Janet and Freud considered that psychological trauma could manifest as long-term pain (Ruden, 2008; van der Kolk & Fisler, 1995; van der Kolk & Saporta, 1991) and their work informs a psychogenic model of pain (Ruden, 2008; Sarno, 2011). The psychogenic model explains that traumatic memory becomes dissociated from consciousness during the trauma experience and may be lodged in the unconscious or ‘procedural’ memory as discussed earlier (Atarodi & Hosier, 2011; Ruden, 2008; Sarno, 2011). Somatic bodily pain may occur when subsequent reminders of the original trauma triggers unconscious traumatic memory. When this occurs, there is also a disturbance to the autonomic nervous system (Atarodi & Hosier, 2011; Ruden, 2008; Sarno, 2011). Walters (1961) reported on pain that is ‘un-anatomical’ in that it does not correspond to known neurological schema and is associated with other somatic abnormalities such as motor deficits, tenderness throughout the body, sensory deficits and skin temperature changes, which suggested to Walters that the autonomic nervous system is involved (as cited in Ruden, 2008). Treatment of chronic psychogenic pain involves bringing unconscious memory into consciousness (Ruden, 2008), which informs understanding of the complex cognitive and emotional processes involved in its development. Psychogenic theory considers that dysregulation of the body’s response to threat, that is, extreme stress, explains the kind of widespread long-term musculoskeletal pain that is commonly seen in people who have been diagnosed with post-traumatic stress disorder (McFarlane, 2010; Sarno, 2011; van der Kolk & Fisler, 1995). Kirmayer (1996) maintains that while post-traumatic stress disorder is categorized in the DSM IV as an ‘anxiety disorder’, many dispute the classification because exposure to extreme trauma is most frequently associated with disturbances in memory, for example, ‘dissociation’ of the traumatic event from conscious memory (van der Kolk & Fisler,
Since the 1970s, John Sarno – MD of New York University’s Rusk Institute – has successfully treated thousands of people with long-term musculoskeletal pain and other somatic disorders, utilizing methods that he and colleagues have developed that respond to a psychogenic theory of chronic pain (Ruden, 2008; Sarno, 2011; Schecter & Smith, 2005). Sarno (2011) refers to ‘tension myositis syndrome’, or in simple terms, ‘muscle tension’ that is central to psychogenic pain and occurs as a result of reduced circulation to the painful region, which is also referred to as ischemic muscle pain. Sarno makes evident that old injuries are a target for psychogenic pain because injury involves traumatic memory. When unconscious memory related to trauma is triggered, physical pain may be recreated at the old site of injury long after tissue healing has occurred (Sarno, 2011).

The psychogenic theory of chronic pain has its basis in how an animal responds to threat or challenge, that is, stress (Ruden, 2008). This is also termed the ‘fear survival response’ and begins with freezing (Bracha, Ralston, Matsukawa, Williams, & Bracha, 2004). Animals in the wild may instinctively freeze in response to ‘sensed’ danger, or may consciously freeze in response to ‘perceived’ danger, which from an evolutionary point of view is advantageous as a predator scans for moving prey (Ruden, 2008). In the freezing stage, high levels of dopamine released in the prefrontal cortex focuses attention and increases sensory perception, producing a state of arousal. If the stimulus is highly threatening, further chemical reactions occur that prepares the animal for mounting either defensive rage as in ‘fight’ or escape as in ‘flight’ (Ruden, 2008). Cahill (2003) maintains that at the point the animal knows it has to fight or escape, serotonin is released, which diminishes the effects of dopamine and triggers a cascade of chemical reactions involving epinephrine, norepinephrine, adrenocorticotropic hormone and other endorphins (as cited in Ruden, 2008). Ruden (2008) maintains that these neurochemical processes are also needed for encoding the event into memory and in particular, epinephrine and norepinephrine are critical. As fear turns to defensive rage, the same neurobiological response recruits muscle activity to achieve escape or to overcome the predator. When safety is achieved through escaping or overcoming the challenge, the animal may ‘find safety’, which leads to recovery and further serotonin being released. Finding safety allows for avoidance of traumatization because it leads to a full recovery from the survival response, that is, a complete return to homeostasis.
Ruden postulates that rising serotonin in the recovery phase activates amino-butyric acid or GABA, which is believed to inhibit reconnection of the link between memory of the traumatic experience and amygdala outflow. In simple terms, if full recovery from the experience is achieved, then memory of the event is not encoded as traumatic because chemical inhibition occurs and prevents the memory from being lodged in the unconscious or procedural memory. Traumatic memory stored in the unconscious may act as an instinctive warning system that causes the animal or person to avoid similar danger in future; however, research suggests that in the human being, when unconscious memories of trauma are triggered in the present, the mind is able to produce somatic pain (Sarno, 2011) and may also render the person vulnerable to future stress.

Repetition compulsion seen in trauma victims is thought to be driven by a desire to ‘find safety’ related to the ‘inability to escape’ from the traumatizing experience (van der Kolk, 1989). Ruden (2008) makes evident that the different stages involved in the survival or stress response have unique neurobiological and emotional consequences and in the initial stages, where the emotional response is heightened, defensive rage and fear create a precise neurobiological moment in which encoding the experience in memory may occur. This occurs when ‘finding safety’ is not achieved and the brain and body may fail to complete the recovery phase (Ruden, 2008). Sarno (2011) maintains that the storage of traumatic memory in procedural memory may also involve suppression of key emotions such as anger or ‘defensive rage’ and fear that are considered too dangerous to the person to be expressed in consciousness. Sarno (2011) also maintains that the DSM IV definitions of post-traumatic stress disorder and other anxiety disorders exclude many people who may have subclinical symptoms of autonomic nervous and endocrine system dysregulation that may be related to a failure of the arousal-to-recovery phase (Chapman & Nakamura, 2008) following traumatic experiences.

Subclinical states of hyper-arousal and emotional distress may be overlooked in the person who has long-term pain (Kirmayer, 1996; Sarno, 2011). Somatic symptoms associated with hyper-arousal of the hypothalamic pituitary adrenal axis include, pilorection, increased heart rate, clenched jaw, back muscle tension, especially of the neck and shoulders, increased blood flow to some muscles and vasoconstriction elsewhere, for example to the digestive system, which is thought to be a cause of irritable
bowel syndrome (Sarno, 2011). Ruden (2008) explains that treatment of chronic psychogenic pain involves a process of delinking traumatic memory from amygdala processes, which requires a psychophysiological approach in which the person’s life circumstances and related difficult emotions are addressed. Sarno (2011) advocates encouraging the person to first accept that their pain symptoms may come from encoded traumatic memories that reside in the unconscious. Sarno (2011) reports that acceptance often relieves symptoms immediately as its breaks the cycle of unconscious suppression of anger and fear that lie at the core of traumatic memory; however, more intensive psychological interventions may be needed to uncover and promote delinking because secondary surface emotions such as grief, shame or guilt may be used by the person to rationalize traumatic experiences in the conscious mind and may mask anger and fear, which are considered a central cause of chronic psychogenic pain (Sarno, 2011).

The failure of biomedicine to effectively treat idiopathic long-term musculoskeletal pain has led to a surge in research investigating emotional and social factors that may inform understanding of long-term pain. Emerging research exploring the role of emotions such as anger and fear in the experience of long-term pain appear to support a psychogenic model of long-term pain. The role of identity construction and sociocultural factors may also be important in the experience of long-term pain because threat to identity may elicit unconscious responses involving strong emotions that may not be adequately expressed.

The remainder of this review addresses research that responds to the understanding that pain is as much a psychological emotional experience as it is a physical one. The role of emotional disclosure in the treatment of chronic psychogenic pain is addressed. The research highlights that the experience of long-term pain may be related to social, cultural and historical factors that may often be overlooked by health practitioners.

**Brain imaging, social exclusion and pain expectation**

A neuroimaging study by (Eisenberger et al., 2003) examined the neurological correlates of social exclusion, testing the theory that brain activity involved in feeling ‘social pain’ – for example having ‘hurt feelings’ – is similar to brain activity involving physical pain (Eisenberger et al., 2003). In a virtual ball tossing game, participants’ brain fMRI imaging results revealed increased activity in the anterior cingulate cortex during exclusion from the game compared with inclusion, which was positively correlated with self-reported distress. During exclusion from the game, a pattern of brain activation in the dorsal
anterior cingulate cortex, very similar to that found in physical pain studies, confirmed that the experience and regulation of social and physical pain share a common neuroanatomical basis. This novel research is interesting as it provides a new level of understanding to the expressions ‘hurt feelings’ or ‘broken heart’. In separate research involving the same study, participants were subjected to three different pain stimuli following the ball tossing game and asked to rate unpleasantness. Two hypotheses were tested: 1) that baseline sensitivity to pain will predict sensitivity to social exclusion and 2) that experiences that heighten social distress will heighten sensitivity to physical pain (Eisenberger et al., 2006). Both hypotheses were confirmed wherein greater baseline sensitivity to pain was associated with distress in response to social exclusion, and in the social exclusion group, higher reported distress correlated with greater pain sensitivity. The research has implications for marginalized groups or individuals who may feel socially excluded and as a result may be more susceptible to developing long-term musculoskeletal pain.

In another brain imaging study the hypothesis that expectation of pain might amplify brain responses to somatosensory stimulation in the anterior cingulate cortex and other regions that regulate pain-dependent behavior, was tested (Sawamoto et al., 2000). Results showed that expectation of a painful stimulus amplified the perceived unpleasantness of an innocuous stimulus and imaging showed the anterior cingulate, the posterior insula and the parietal operculum were involved in modulation of the affective aspect of sensory perception, by the ‘uncertain’ expectation of painful stimulus. The authors concluded that modulation might be considered an adaptive response to pain as a warning signal; however, where pain is excessive or prolonged, it might be detrimental. Understanding control of the complex nature of pain experiences in relation to expectation, may inform development of treatment strategies.

*Experimental studies on anger suppression and pain, and task performance*

Burns et al. (2008) maintain that evidence linking anger suppression or inhibition to long-term pain severity is mostly based on correlational study designs. Ironic process theory proposes that attempts to suppress angry thoughts during provocation can increase pain intensity in people with long-term lower back pain through the paradoxical enhanced accessibility of anger (Burns et al., 2008). Burns et al. (2008) tested 58 patients with chronic lower back pain who were assigned to suppression and non-suppression
conditions with a harassing confederate. Results showed that patients who were told to suppress anger during pain provocation a) reported greater anger following the maze task and greater pain intensity during the structured pain behaviour task. They also exhibited more pain behaviours than patients in the non-suppression group and b) post-maze anger levels significantly mediated group differences on pain behaviours. The authors concluded that attempts by participants with chronic lower back pain to suppress anger could have aggravated pain through an ironic or paradoxical increase in the feeling of anger. In a separate study, (n=53) healthy individuals were assessed in regard to anger management style, blood pressure reactivity and acute pain sensitivity in order to identify ‘trait x situation’ models (Burns, Bruehl, & Caceres, 2004). The study shows that anger style affects pain and is consistent with evidence suggesting that deficient endogenous opioid functioning may be one mechanism through which ‘anger out’ is linked to both pain sensitivity and cardiovascular stress reactivity (Bruehl et al., 1996), a connection that appears more reliably when anger is provoked.

In another anger study by Okifuji et al. (1999), the frequency and intensity of patients’ anger toward a range of targets and how intensity of anger toward differing targets related to the long-term pain experience were examined. Participants with long-term pain were assessed for level of anger, pain, distress and disability. In total, 70% of patients reported feeling angry and were mostly angry with themselves (74%) and health-care professionals (64%). Anger toward self was significantly associated with pain and depression whereas only overall anger was significantly associated with perceived disability. Further research found that people who had long-term back pain were impaired on a task designed to assess emotional decision making (Apkarian, Bushnell, Treede, & Zubieta, 2005).

**Emotions, pain and identity**

Other research suggests that fear is a central object of long-term pain because the experience of pain may be a threat to identity (Eccleston, C de C Williams, & Stainton-Rogers, 1997). This has implications for the place of the ‘self’ at the centre of the experience of pain, where physical and psychological aspects of pain have been demonstrated as being interconnected in the perception of threat. Many studies suggest that the meaning people make of pain may be culturally bound (C de C Williams, 2007; Kirmayer, 1984; Napier et al., 2010) and while culture and pain have been studied
extensively elsewhere, limited space in this review means the subject is only briefly addressed. C de C Williams (2007) is critical of current measures used to qualify and quantify long-term pain and makes evident that the framing of pain may influence treatment outcomes because the way in which illness, suffering, pain or indeed adverse mental health states are contextualized, informs the construct within which they are defined, pathologized and treated. C de C Williams (2007) maintains that pain is best understood when the individual is recognized as a social being and where a more integrated approach could provide a firmer foundation for addressing personal, cultural, historical and social differences in the pain experience. A focus on the individual may be central to the tendency of clinicians to neglect measures of personal, social and socioeconomic factors, as well as age, gender, cultural and other differences such as psychological variance, that may be important to understanding a person’s pain experience. C de C William’s critique informs understanding of how the dominant biomedical approach may neglect to give attention to the much broader influences that impact upon indigenous and traumatized populations’ experiences of pain and suffering in which historical and contemporary sociocultural factors may play a part (Kirmayer, 1984; Krieger, 2005; Krieger & Smith, 2004; Napier et al., 2010).

The construction of identity may also be important for understanding long-term pain trajectories (Eccleston et al., 1997). For example, Meichenbaum (1993) maintains that practitioners and researchers need to pay greater attention to the chronic pain sufferer’s construction of identity, which involves having an appreciation of the narrative structure of their lived experience (as cited in Eccleston et al., 1997). Where narrative accounts of chronic pain have been reported, the meaning of chronic pain in the construction of identity has been overwhelmingly portrayed. Eccleston et al. (1997) maintain that when pain as a symptom cannot be attributed to a specific cause defined by the biomedical model, identity may be under threat and the patient may become the victim of blame. For example, pain may be dismissed or labeled as psychosomatic, which implies the patient is exaggerating or making up pain. Such notions may be recognized as a play of power (Foucault, 1963) within which the medicalization of health, illness and pain may impact upon the construction of identity. Singer (2004) points out that doctors practice medicine and not social change and “therefore they are not neutral”, nor do they effectively address “what is really bothering the patient” (p. 14). Other commentators suggest that
medicalization contributes to increasing social control on the part of doctors and health institutions that mystifies and depoliticizes the social origins of personal distress (Kirmayer, 1996; Kirmayer, Young, & Hayton, 1995; Napier et al., 2010; Singer, 2004).

In a qualitative study, J. A. Smith and Osbourne (2005) conducted semi-structured interviews with six participants who had lower back pain. Results revealed that pain became ‘an assault’ on the self. A central theme revealed that the experience of long-term pain lower back pain may lead to a rejection of the self and self-denigration, which may also lead to rejecting others. Participants described that ‘a self with pain’ was unwelcome and incompatible with their ‘preferred self’ and many experienced difficulty related to loss of a positive social identity over time. Experience of the self was at its most conscious and disabling in the social domain that involved the perceived judgment of others. Shame and anxiety were related to socially undesirable and destructive behaviour and social withdrawal (J. A. Smith & Osbourne, 2005).

**Religiosity and the consequences of separation of the spiritual from the secular upon indigenous people**

Religiosity has been criticized for having a negative effect on health (Miller & Thoresen, 2003) and little effect on long-term pain (Ashby & Lenhart, 1994); however, in a literature review, Aukst-Margeti and Margeti (2005) reported finding several studies showing ‘no effect’ but none showing ‘negative effects’ of religious or spiritual practices upon health. It is possible that historical and political factors surrounding religion, culture and science may influence literary attitudes toward religiosity or spiritual practices (Aukst-Margeti & Margeti, 2005; Miller & Thoresen, 2003; Royal, 2003), which may impact on peoples understanding of their experience of pain. In earlier times medical and spiritual care were often delivered by the same person; however, as medicine shifted to becoming grounded in Cartesian dualism the body became the ground of science while the mind and soul remained with the church. Further developments in psychology led to further separation of the mind from the soul, and psychology and religion to this day remain divorced entities (Aukst-Margeti & Margeti, 2005). From an indigenous perspective, separation of the mind, body and spirit, or the spiritual from the secular, misrepresents the human condition (B. Duran et al, 1998; E. Duran, 2006; Royal, 2003) and is considered a central cause of the social, psychological and physiological
dysfunction evident among indigenous colonized populations today (E. Duran, 2006; Royal, 2003). Research suggests that indigenous colonized people may experience acculturative stress, which is associated with high levels of anxiety and depressive symptoms (Crockett et al., 2007; E. Duran, 2006; Hovey & King, 1996) that may be the result of separation of the spiritual from the secular (Royal, 2003). In a study examining the relationship between acculturative stress and psychological functioning, Crockett et al. (2007) enrolled 148 Mexican American college students. Results showed that active coping was associated with better adjustment and a lower level of depression, and avoidant coping predicted poorer adjustment and higher anxiety and depression levels. Good social support networks buffered the effects of acculturative stress. The research suggests that acculturative stress may affect long-term pain through the stress response related to perceived threat to identity.

**Treatment paradigms using emotional and psychological approaches to long-term pain**

Many commentators agree that a greater appreciation of how social and psychological interventions may help people understand and manage long-term pain is needed (Gatchel et al., 2007; Goldenberg, 2010; Hauglia, Steena, Lñruma, Nygardb, & Finsetc, 2001; Roditi & Robinson, 2011). In a randomized controlled trial of people (n=121) with long-term musculoskeletal pain and high absenteeism from work, Hauglia et al (2001) assessed the effects of a group-learning program based on phenomenological epistemology and personal construct theory. A group of 77 received the intervention and a group of 44 controls did not. The program emphasized awareness, possible relations between bodily symptoms, emotions, mind and life-situation, and a change of focus from pain and disability to resources and potential. Follow-up after the 12-session intervention showed significant improvements in the intervention group in pain reduction, increased coping abilities and a higher reduction of health-care consumption compared with the control group (Hauglia et al., 2001). A qualitative follow-up study and self-reports with the intervention group at one year demonstrated that participants had reconstructed life-patterns in relation to self and others. Increased self-awareness, less pain and more constructive ways of handling pain and life circumstances were reported (Steena & Haugli, 2001). Steena and Haugli (2001) emphasize the need to understand the body as a ‘talking subject’ as opposed to viewing pain as either psychological or
structural. Promoting participation, everyday language, respecting, seeing, listening and trusting in each other in a group as well as identifying resources of the group, challenged participants to accept their inner authority and internal validation instead of surrendering authority over their pain to health experts. The research suggests that people with long-term pain may benefit from a process and experience-oriented therapeutic program that promotes the reframing of pain over time.

Other research suggests that people who have experienced trauma may benefit from disclosing emotions (Pennebaker & Susman, 1988) and emotional disclosure is also used in the treatment of chronic psychogenic pain (Sarno, 2011; Schechter et al., 2007). In a review of the literature, Pennebaker and Susman (1988) found that childhood experiences of trauma that are never talked about are correlated with health problems and recent trauma that is not discussed is correlated with health problems and rumination. Encouraging people to confront earlier traumas in writing improves health and immune function and actively talking about upsetting experiences is associated with immediate reductions in autonomic nervous system activity (Pennebaker & Susman, 1988), which may also contribute to the reduction of long-term pain. In a recent case series study by Schechter et al. (2007), 51 participants with long-term pain who participated in a treatment program based on a mixed psychological intervention involving emotional disclosure were followed up at 3, 6 and 12 months after treatment. Results showed significant decreases in visual analogue scale scores, decreases in the use of medication, increased reported physical health and increased level of activity. In another study, Ventegodt et al. (2006) enrolled 31 participants with long-term medically unexplained illness characterized largely by chronic pain. Participants undertook treatment over 14 months using a holistic integrated approach of short-term psychodynamic psychotherapy and bodywork based on the Rosen method. Central to short-term psychodynamic psychotherapy is verbalizing feelings and associated body sensations. One third of participants in the study reported a change from feeling ‘physically unwell’ before treatment to feeling ‘physically well’ following treatment where ‘physically well’ represented ‘complete cure’ (Ventegodt et al., 2006). A recent systematic review of studies that measured the effects of emotional disclosure upon psychological, physiological and biological bodily responses found inconclusive results and the authors recommended that further research is needed to understand the role of
emotional disclosure upon bodily processes (Meads, Lyons, & Carroll, 2003). A meta-analysis by Gatchel and Rollings (2008) suggests that behavioural therapy in conjunction with physical therapy for the treatment of long-term pain may interrupt the vicious cycle of worry and fear avoidance behaviours that may exacerbate long-term pain.
Chapter 3 – Methodology and Methods

Introduction to methodology and methods

The following section has two parts. The first examines research methodologies while the second focuses on the methods that were used in undertaking the research. Kaupapa Māori research methodology situates the research within a framework of Māori cultural knowledge and understanding in which political consciousness is maintained, highlighting the importance of Māori autonomy, representation and participation. Exploration of the participatory approach acknowledges that the research is conducted for the benefit of the people and not for individual or institutional gain. The critical nature of Kaupapa Māori research is explored, making evident that the power-imbalances that exist in the world should be challenged. While a Kaupapa Māori approach is prioritized, additional methodologies that lend support to the Māori ethos are also acknowledged. Hermeneutic phenomenology is a qualitative research methodology that aims to understand the lived-experiences of human beings in the world and is suitable to use alongside a Kaupapa Māori research. Embodiment and cultural phenomenology are briefly addressed as these concepts inform understanding of the body in pain and in healing from a cultural perspective. Eco-social theory is also considered as this situates the Māori human being within wider social and historical contexts. Phenomenology informs the interview process as well as thematic analysis of the data, and related concepts pertaining to both are discussed. The problem of interpreting, understanding and translating Māori language and metaphor is considered. In the methods section, a breakdown of how the research was conducted is presented in detail. The methods section discusses the processes that were involved in getting the research underway and completed. How the final thesis for the study was arrived at is addressed, followed by a discussion on the sourcing of participants and the challenges and learning encountered along the way. Inclusion and exclusion criteria for enrolling participants onto the study are presented and consent processes are outlined. Māori ethics such as giving a koha to participants are discussed and ethical considerations related to the interview process that emerged out of conducting a practice interview are also addressed. The processes and methods involved in gathering data for the study are also considered and the late adoption of a Kaupapa Māori research approach to data analysis is outlined.
A) Methodology

Kaupapa Māori research

In the 1980s, increasing political consciousness among Māori communities emerged resulting in a resurgence and revitalization of Māori language through the establishment of Kohanga Reo/early childhood language nests and later Kura Kaupapa/Māori total immersion primary schools, Whare Kura/Māori language secondary schools and a Whare Wananga/Māori tertiary education institute (Mahuika, 2008). The establishment of Māori education learning centres ‘for Māori by Māori’ represented resistance initiatives, which signalled a shift in Māori thinking. Mahuika (2008, p. 4) quotes Graham Hingangaroa Smith (2003, p. 2) to describe this shift:

A shift away from waiting for things to be done to them, to doing things for themselves; a shift from an emphasis on reactive politics to an emphasis on being more proactive; a shift from negative motivation to positive motivation.

Kaupapa Māori research theory developed out of these resistance initiatives as “a new theory of change” (as cited in Mahuika, 2008, p. 4), which underpins both the success and the emancipatory potential of these initiatives. Kaupapa Māori research emphasizes empowerment, where Māori control over Māori lives, culture and related research is realized (Mahuika, 2008). Mahuika (2008) maintains that,"Kaupapa Māori is an assertion of our cultural beliefs and practices, our ways of knowing and being and [the] right to live and maintain them." This is not to be viewed as a rejection of Pākehā knowledge and culture, but rather gives recognition to the critical factor of how knowledge can be controlled for the benefit of particular interest groups. G. H. Smith (1993) maintains that “Kaupapa Māori research advocates excellence within Māori and Pakehā culture [and] that this is not an either or choice – Māori parents want full access to both cultural frameworks for their children” (as cited in Mahuika, 2008, p. 4).

Kaupapa Māori research principles promote research by, for and with Māori so that positive benefits for Māori people and especially Māori research participants are achieved as an outcome (Smith, 2012). While the pronouncement appears straightforward, a caveat remains regarding ‘who’ as Māori are qualified to undertake Kaupapa Māori research. For example, just being Māori does not necessarily mean a
person is qualified to undertake Kaupapa Māori research (L. T. Smith, 1999). Henry and Pene (2001, p. 236) refer to Kathy Irwin’s interpretation of Kaupapa Māori research as being “research which is culturally safe [...] involves culturally relevant and appropriate mentorship of kaumātua/elders while satisfying the rigour of research, and which is undertaken by a Māori researcher and not just a researcher who happens to be Māori”. This has implications for Māori researchers regarding strategic positioning within the Kaupapa Māori research framework. Māori researchers are faced with accepting the mantle of ‘speaking back’ to the dominant voice that is Western knowledge and theory, a discourse that has frequently attempted to silence indigenous voices (Mahuika, 2008; L. T. Smith, 1999). Adopting Kaupapa Māori research takes a certain willingness, courage and commitment to truth telling from a Māori perspective, which stems from a Māori worldview (Henry & Pene, 2001; Mahuika, 2008; L. T. Smith, 1999).

Tinorangatiratanga - autonomy, representation and validation of te ao Māori

The Māori researcher who accepts fully the responsibility that comes with doing Kaupapa Māori research needs to understand that they will be assessed according to a differing set of assumptions, values, concepts, orientations and priorities to those that govern Western modes of research (L. T. Smith, 1999). Bishop (1999) maintains that the importance of Kaupapa Māori research is emancipatory in nature and related to the tinorangatiratanga/self-determination/autonomy principle in that the cultural aspirations, understandings and practices of Māori people implement and organize the research process (Bishop, 1999; L. T. Smith, 1999). The Māori researcher understands that the process of initiating and conducting Kaupapa Māori research must be considerate of Māori representation and legitimation within the cultural context of the research participants. This establishes ground for maintaining rigour and accountability. According to Bishop (1999), Lincoln and Denzin’s (1994, p. 578) version of epistemological validity is where the authority of the text is “established through recourse to a set of rules concerning knowledge, its production and representation”. What is acceptable or not in research, text and/or processes is “determined by the research community itself in reference to the cultural context within which the research operates” (Bishop, 1999, p. 4). This research stance “rejects outside control over what constitutes the text’s call for authority and truth” (Bishop, 1999, p. 4). Validity in Kaupapa Māori research is therefore established within the context of Māori culture
where verification and authority of a text and how well it represents the experiences and perspectives of participants, are assessed by criteria constructed within the Kaupapa Māori research framework.

Graham Hingangaroa Smith has written extensively about Kaupapa Māori initiatives and agrees with Bishop (1999) where in summary he defines Kaupapa Māori research as related to being Māori, being connected to Māori philosophy and principles, being an approach which privileges Māori cultural knowledge, language and belief systems, and being concerned with the struggle for autonomy over Māori cultural wellbeing (L. T. Smith, 1999). These basic principles have a clear and coherent rationale evolved out of well-tested and long-established practices of Māori people. Bishop (1999, p. 4) refers to ‘taonga tuku iho’ meaning ‘treasures from the ancestors’, where ‘treasures’ represent “the distillation of wisdom through the ages that continue to guide and provide a system for monitoring Māori lives”. Embedded within Māori wisdom, messages pertaining to ‘kawa’ (marae protocol) are the principles that guide the process of establishing relationships. Māori constructs such as whānau/family and whakawhānaungatanga/establishing relationships are employed as metaphors for the research process. Whānau, for example, can be defined literally as ‘a family’ or may refer to a ‘research whānau’ who are encouraged to behave as though they were a whānau. Bishop (1999) asserts that whānau have means of addressing contentious issues, resolving conflict, constructing narratives, telling stories, raising children and addressing political issues. Contrary to popular belief, Māori cultural whānau practices may change over time to reflect changes occurring in the wider world.

According to (Henry & Pene, 2001), Kaupapa Māori is not just a set of philosophical beliefs, it is also a set of customary social practices or ‘tikanga’ that are based upon a collective consciousness or ‘kotahitanga’. Kotahitanga encourages interdependence and unity among all human beings and acknowledges the sacred relationship Māori have with the cosmos and its many deities/gods. The relationship with the cosmos is a spiritual concept termed ‘wairuatanga’. Responsibility for ‘caring for’ or ‘being guardians of’ the natural environment is termed ‘kaitiakitanga’ and is also central to tikanga practices. The interconnection between mind, body, spirit, environment, world and cosmos, informs Māori ontology and epistemology and as such also informs the assumptions Māori may have regarding the reality of human nature (Durie, 1998; Henry & Pene, 2001; Royal,
To live according to ‘tikanga Māori’ is to live by principles, which are ‘tika’ meaning ‘right’ or ‘true’. Henry and Pene (2001) refer to Māori elder Mira Szazy who once called upon young Māori to “build a vision for the future” founded upon “a humanism based on ancient values but versed in contemporary idioms” (p. 238). Further aspects of the Māori worldview or ‘te ao Māori’/the Māori world, are addressed in the methods section and elsewhere.

**Kaupapa Māori research is participatory in nature**

Bishop (1999) advocates a participatory mode of consciousness in Kaupapa Māori research, which situates the researcher within a metaphorical whānau context “where the ’I’ of the researcher is released in order to enter a consciousness larger than the self” (p. 4). While there is personal investment in research by the researcher, Bishop argues that investment is not determined by the ‘investor’ but is arrived at through mutual understanding by all parties involved. Therefore ‘personal investment’ by the researcher is not considered the pursuit of an individual agent and instead emerges out of the research context in which it is formulated. According to Heshusius (1994, p. 15), there is a need for a shift from an alienated mode of consciousness in which the “knower is separated from the known”, to a participatory mode of consciousness which reorders our understanding of relationship between ‘self and other’ and between ‘self and the world’. Such a reordering includes connectedness and conscious letting go of the focus on self (Heshusius, 1994). Bishop (1999) quotes Heshusius (1995, p. 14), who states,

> In a participatory mode of consciousness the quality of attentiveness is characterized by an absence of the need to separate, distance and insert predetermined thought patterns, methods and formulas between the self and other [and] it is characterized by an absence of the need to be in charge.

The basis for a participatory mode of knowing emerges as “the recognition of a deeper kinship between ourselves and others” (as cited in Bishop, 1999, p. 3). This mode of ‘knowing and being’ resonates with collective Māori cultural ways of knowing and being and is reflected in the term ‘whānaungatanga’. Whakawhānaungatanga is a fundamental construct within Māori culture that is both a value and a social process that prioritizes the importance of relationships.
**Kaupapa Māori research is critical**

According to Mahuika (2008, p. 4), Kaupapa Māori differs from the dominant Western paradigm in that it does not make claims to universal truths or to superiority over other existing paradigms. It does, however, like much indigenous scholarship, aim to challenge and disrupt the commonly accepted forms of research in order to privilege unique Māori approaches, perspectives and ways of knowing and being. While Kaupapa Māori research is based on a different worldview from that informed by the dominant Western paradigm, adopting a Kaupapa Māori research position that is critical is validated because “the world is defined by power differentials and by different cultural systems in which different groups of people interact meaningfully with the world” (Bishop, 1999). Bishop also asserts that the Kaupapa Māori research position is political because it addresses the ongoing effects of racism and colonialism in wider society.

For example, Linda Tuhiwai Smith’s (1999) book *Decolonizing Methodologies* addresses the history of colonialism, its racist underpinnings and the impact of both upon Māori as ‘researched’ and ‘researcher’. Smith (1999) suggests that Māori researchers wishing to embark upon Kaupapa Māori research undergo a process of decolonizing the mind in order to reclaim authentic Māori identity, voice and heritage. She challenges the notion of post-colonialism because the term implies that colonization is over as though the colonizers have left. Smith maintains that Kaupapa Māori represents a minority voice that exists on the margins. For example, Brendan Hokowhitu (2010) explores the Western colonial construct of Māori as, ‘noble savage’ and the implications this has for Māori males today, so that a Kaupapa Māori framework for physical education may be developed. Keri Lawson-Te Aho (2013) explores New Zealand’s colonial history in relation to its association with current high rates of Māori suicide, a theme that is echoed among colonized indigenous populations worldwide. Lawson-Te Aho draws upon historical trauma theory (Duran, 2006), which associates cataclysmic events related to colonization such as genocide, ethnocide, war, land loss, discrimination and economic deprivation with current levels of social disadvantage and poor health outcomes – of which high suicide rates is perhaps the most compelling.

While Kaupapa Māori research lays bare the Māori past that is often fraught with struggle, the objective is not to dwell there but rather to learn from mistakes of the past so that unique solutions for healing grounded in Māori value systems may be developed.
Critical theory is commonly employed alongside a Kaupapa Māori research methodology (Mahuika, 2008), because it promotes critical consciousness and “embraces the struggle to break down institutional structures and situations that reinforce oppressive ideologies” (Van Manen p. 176). Social inequalities and the powerful modern structures that maintain them are critiqued in pursuit of inspiring change and liberation.

**Phenomenology – Husserl and van Manen**

Phenomenology developed at the end of the 19th century in response to a philosophical crisis in which questions asked in human sciences were not adequately being answered by methods borrowed from the natural sciences. German philosopher Edmund Husserl was critical of positivist methods used in psychology because their objectives were different to those of natural science. Husserl’s ‘life-world’ concept was conceived as an alternative to positivism (Sadala & Adorno, 2002). The differences between natural science and human science resides in what is studied; for example, natural science studies ‘objects of nature’, things, natural events and the ways that objects behave, while in contrast, human science studies ‘persons’ or beings that have ‘consciousness’ and “act purposefully in and on the world by creating objects of meaning”, which are expressions of how human beings exist in the world (van Manen, 1998, p. 4). The preferred method for natural science is detached observation, controlled experiments and mathematical or quantitative measurement and when applied to behaviour, methods involving ‘experimentation’ and ‘quantification’ are retained. Human science, on the other hand, is qualitative and involves description, interpretation and self-reflective or critical analysis.

According to Dilthey (1976), “we explain nature, but human life we must understand” (as cited in van Manen, p. 4). Van Manen (1998, p. 5) quotes Diogenes who said: “phenomenology is practical reflection in the concreteness and fullness of lived life and not fancy abstract philosophical discourse”.

Phenomenological research questions the way we experience the world because we want to know the world in which we live. Since to know the world is profoundly to ‘be’ in the world in a particular way, researching, questioning and theorizing is the act of ‘intentionally’ attaching ourselves to the world, to become more fully part of it, or in other words, “to become the world” (van Manen, 1998, p. 5). This inseparability between being human and the world is known as the principle of ‘intentionality’ where “we bring the
world into being” ‘for us’ and ‘in us’ (p. 5). Research, then, is an act of caring, because we wish to know that which is most essential to being. Van Manen (1998) suggests that to care is to ‘serve’ and to ‘share with’ the one we love, so that we may truly come to know our loved one’s very nature. If our love is strong enough we will not only learn much about life, we will also come face to face with its mystery. Ludwig Binswanger said the same in reverse, that: “we can only understand something or someone for whom we care” (as cited in van Manen, 1998, p. 6). This understanding acknowledges that “knowing is not a purely cognitive act”, especially where a person may be encountered in all their weakness, vulnerability and/or innocence (van Manen, 1998, p. 6). Phenomenology works well alongside Kaupapa Māori research as the methodology shares common ground with Māori cultural values such as aroha/love and manaakitanga/sharing, where love, sharing and respect are expressed in order that the receiver is uplifted so that they may feel comfortable in ‘expressing’ themselves. In this way, we may discover something unique and wonderful about the person and their life-world.

Husserl's phenomenology is the study of lived experience or the life-world as we immediately experience it “pre-reflectively rather than as we conceptualize, categorize or reflect on it” (van Manen, p. 9). Its purpose is to gain a deeper understanding of the nature of ‘meaning’ of our everyday experiences (van Manen, 1998). While phenomenology asks, ‘what is this or that experience like?’, it differs from other research methodologies, as “it does not seek to taxonomize, classify or make abstract 'being' in the world” (van Manen, 1998, p. 9). While there has been much debate about phenomenology as a methodology, it has long been considered valid and necessary because through insightful descriptions and interpretations of that which is plausible, it is able to bring us more directly into contact with the world as it is. Phenomenology is both old and new: old in that throughout history human beings have invented artistic, philosophical, communal, mimetic and poetic languages, in order to reunite with the ground of lived experience, and new in the sense that phenomenology may be considered by some to be a breakthrough because of “its ability to liberate” (van Manen, 1998, p. 9), which fits well with the emancipatory aims of Kaupapa Māori research.
**Cultural phenomenology, embodiment and ecosocial theory**

According to van Manen (1998), there are four fundamental life-world themes that are essential for guiding reflection in phenomenology as follows: lived time, lived space, lived body and lived relations. All themes intertwined are important to the current thesis; however, the notion of the 'lived-body' or 'embodiment' is of particular relevance for understanding 'meaning-making' of the body in pain, within the context of Māori culture and history. If embodiment is an existential condition in which the body is the subjective source or inter-subjective (shared by more than one conscious mind) ground of experience, then studies concerning embodiment are not about the body as such (Csordas, 1999). Instead, they are about culture and experience insofar as these can be understood from the standpoint of bodily being-in-the-world. Coehlo (1991) clarifies Merleau Ponty's idea of a dialectic inter relationship between 'being' as a 'lived-body' and the world, where the body is simultaneously perceiving and being perceived (as cited in Sadala & Adorno, 2002). The body throws itself into the world through an ambiguous movement between the universal and the personal. Ambiguity, therefore, defies absolute truth. There are no certainties and the question being asked therefore remains open and always in transformation. As the horizon draws near, a new horizon is ahead, suggesting that as answers emerge, new questions may form. From this viewpoint, bodies and culture are dynamic or eternally 'coming-into-being' and moving forward. This is what Merleau Ponty refers to as 'dialectic without synthesis' (Sadala & Adorno, 2002). Synthesizing the immediacy of embodied experience with the diversity of cultural meaning in which we are always and inevitably immersed is a central requirement of what Csordas terms 'cultural phenomenology' (Csordas, 1999).

Csordas's analogy affirms that embodiment as a methodology considers that different cultural constructs exist and that such differences are premised upon how the world is perceived in totality by all of the body's senses and ways of making meaning. Perceptual reality may influence modes of presence and engagement in the life-world of urban Māori whose embodied histories may reveal hidden truths. This has implications for the 'urban Māori life-world' where traditional or pre-European Māori cultural concepts may be blended with modern Western modes of 'being in' and 'engaging with' the world. While acknowledging that for Māori blending or hybridization through colonization and assimilation has occurred, attention is focused upon the use of Māori language and
contemporary cultural references within which embodied histories may be understood through Māori modes of ‘being’ with long-term musculoskeletal pain.

Csordas (1999) asserts that when studying embodiment, a special kind of data or method for eliciting such data does not exist; however, a methodological attitude that demands attention to ‘bodily-ness’ even in verbal data as in written text or the oral interview, is necessary. Csordas (1999) maintains, however, that cultural phenomenology may highlight the engagement of sensory modalities in phenomena as established in indigenous healing traditions, where the healer engages with the person being healed in a range of somatosensory modes. The healer may see, hear, smell or feel the afflicted organ or feel or sense pain in the same region as the person being healed (Csordas, 1999). With this in mind, it is plausible therefore that: the person being healed has modes of experience in which illness or pain makes sense in the healing session. Csordas (1999), however, also maintains that somatosensory modes are not the only way embodied phenomena may be explored. Dreams, emotions, visions and memories may also surface. Csordas comments on the tradition of Puerto Rican Espiritismo where “inspirations are not direct experiences of divine power but the work of spirits that enter or possess the healer” (p. 151). Other indigenous groups may have similar understandings of the notion of ‘spirit’ as being ‘embodied’ in specific ways.

Cultural phenomenology and embodiment prioritizes indigenous cultural contexts where the body may be understood in different modes to those found in Western paradigms. Krieger (2005) on the other hand, considers embodiment within the context of ecosocial theory – a holistic perspective – in which macro and micro-environmental influences upon the body, are examined. Embodied environmental influences may be considered from many viewpoints. According to Csordas (1999), embodiment is best elaborated in the cultural study of health and illness where ‘bodily-ness’ is made overtly problematic in a way that has wider meaning and pervasive cultural relevance. For example, studies of embodiment are sensitive to the body as being the existential ground of culture (Csordas, 1999). Arguments are not limited to disease but engage us in the broader notions of issues of self, emotion, religion, meaning, transformation, social interaction, institutional control of experience, and the human interface with technology (Krieger, 2005). Embodiment may be seen as interpreting action in different modes and expressions in different idioms, which has relevance for participants’ modes of action and
idioms of expression in regard to long-term musculoskeletal pain. From an indigenous perspective, as bodies ‘were’ and ‘continue to be’ removed further and further away from connection with traditional culture, nature and lands, and as exposure to an increasingly toxic and processed environment ensues, embodied cultural contexts may change with time and may or may not cease to be relevant. Krieger advances three critical claims related to embodiment and ecosocial theory that may inform the current thesis as follows:

1. Bodies tell stories about – and cannot be divorced from – the conditions of our existence.
2. Bodies tell stories that often – but not always – match people’s stated accounts.
3. Bodies tell stories that people cannot or will not tell, either because they are unable, or choose, not to tell.

Ecosocial theory recognizes that humans are at once social beings and biological organisms and as such our living bodies tell stories about lives that may or may not be able to be consciously expressed (Krieger, 2005). Reynolds (2004) states that the body ‘knows’ things beneath the level of consciousness.

**Hermeneutic phenomenology and the interview**

The hermeneutic approach to phenomenology believes that humans are self-determining beings and that self-determination merits in-depth examination of how we shape the world through shared history and understanding (Rapport, 1995). This is different to the ethnographic approach, which documents cultural knowledge and how cultural knowledge influences participants’ daily lives, the use of artifacts and cultural understanding (Rapport, 1995). In ethnography, the focus is on culture and descriptions people give to their own and others’ sociocultural status, whereas hermeneutics is aligned with examination of ‘self-determination’, which considers “how meaning – be it cultural or otherwise – is revealed through ordinary language and embodied understanding” (Holloway, p. 136). Holloway discusses ‘action research’ as the method commonly used in critical social research where “the researcher becomes part of the phenomenon being studied” (p. 136) in an attempt to balance out political and social agendas and to come up with solutions for breaking down difference to promote social cohesion. It is important to make distinctions between methods as the current research
attempts to uncover reality as it is experienced in a self-determined way rather than being designed to prompt specific activities for change or being focused on culture alone.

Interviewing to gather personal stories is described by Rapport (2005) as “a vehicle for gathering rich in-depth data that are dependent on the partners description of events as an example of the original” (p. 134). According to van Manen (1998), the hermeneutic conversational interview serves two purposes: Firstly, it is the means of exploring and gathering experiential narrative material that serves as a resource for developing a deeper and richer understanding of human phenomenon. Secondly, it is used as a vehicle to develop a “conversational relation with a partner/interviewee about the meaning of experience” (p. 66). In both senses, the conversation needs to be “disciplined by the fundamental question that drove the need for it in the first instance” (as cited in van Manen, p. 66). Conversational interviews are recognized as having a structure (Rapport, 2005) in that the conversation is not just between two or more people. The topic of mutual interest emerges in the conversation as the speakers become enlivened by the idea to which they have both become oriented. According to van Manen (1998), while there is a conversational relation between the interviewer and interviewee, these ‘speakers’ are also involved with the phenomenon itself. The conversation, therefore, has a triadic structure where relation to the topic of conversation remains intact. In this way, the conversation has a hermeneutic thrust, which is oriented to sense making and interpreting of the topic that drives the conversation. In the conversation, the views of participants are incorporated with the views of the researcher. This positioning acknowledges that a truthful conversation emerges through the mutual intent of participant and researcher to remain oriented to the topic. Although in the final analysis the focus is on the participant’s narrative, the narrative arises out of intimate conversations intent on building trust. While trust is built through the judicious use of prompts and active listening techniques (Rapport, 2005), Walters (1995) suggests that the researcher should be “confident in adding their own perspective to the process when necessary in order to signify their own being in the world” (as cited in Rapport, 2005, p. 136).

The word ‘kōrero’ meaning ‘conversation’ is widely understood in New Zealand and is used in place of the word ‘interview’ in communication with participants. Kōrero invites a culturally appropriate conversational style in which two people explore a topic of
interest in a relaxed, comfortable, but focused manner. Other researchers have recognized that a power imbalance may come into play when people are asked to participate in an ‘interview’, where the interviewer is seen as being in control (Basset & Tango, 2002). The word ‘interview’ may appear formal and cause some people to become self-conscious when sharing their experiences. Engaging in ‘kōrero’ with participants may counteract self-consciousness as well as encourage the use of Māori language.

**Data analysis, interpretation, description and hermeneutic phenomenology**

Phenomenology does not solve problems; rather, it seeks to ascertain meaning and significance of a particular phenomenon so that it can be more deeply understood. In this way, a deeper understanding may influence more thoughtful or tactful action in specific situations (van Manen, 1998). Interpretive phenomenology or hermeneutics is the science of the interpretation of texts whereby language in its written or spoken form is scrutinized to reveal meaning in phenomena (Rapport, 2005). Ordinary “everyday language” or “the words we use on a day to day basis” are highlighted because they are what is used to describe and explain the lived everyday experiences involving behaviour, action, cultural mores, or events (Rapport, 2005, p. 125). The emphasis is therefore focused upon the relationship between ordinary language and daily social life. Understanding of the life-world is extracted through the process of examining language in its contemporary cultural contexts so that the very nature of ‘human being’ is revealed in the present. Plausible explanations are given in an attempt to make meaning clear and in this way the hermeneutic phenomenologist sheds light upon what it means to be human in the life-world, or as van Manen (1998) suggests, in the world as we immediately experience it.

There is some debate regarding the terms ‘interpretative’ and ‘descriptive’ in human science. It is possible to make a distinction between phenomenology as ‘pure description’ of lived experience and hermeneutics as ‘interpretation of’ experience through a text or symbolic form (van Manen, 1998) Rapport (2005) asserts that an interpretative approach upholds that meaning cannot be described and therefore interpretation is vital in order to move beyond the data. However, a descriptive approach argues that unified meaning can be teased out and described precisely as it presents itself. Gadamer (1986) distinguishes between two senses of interpretation: firstly, that it is a “pointing to something”, and secondly that it is “pointing out” the meaning of something (as cited in
van Manen, p. 26). The first kind of interpretation reveals what the thing itself already points to, where “we attempt to interpret that which at the same time conceals itself” (van Manen, p. 26). The second kind of interpretation is used when we interpret something that is already “an interpretation” as in a work of art (van Manen, p. 26). Interpretation means ‘explaining’ and in a sense is like mediating between two parties. This mediation occurs between “interpreted meaning and the thing towards which the interpretations point” (van Manen, 1998, p. 26). A description ‘names something’ and may also be interpretive in that it also points to something, allowing it to show itself. According to van Manen, however, a purely descriptive approach may fail to aim at lived-experience and instead “may have the character of conceptualization, journalistic accounts, personal opinions, or descriptions of some other state of affairs” (van Manen, 1998, p. 27). A good description resonates with our sense of lived-life where the reader “may recognize the experience as being one they might have had or could have, themselves” (van Manen, 1998, p. 27). This is described as something “we can nod to” and is best captured in what van Manen (1988) terms the “validating circle of inquiry” (p. 27) where a good phenomenological description is collected by lived experience and recollects lived experience and is validated by lived experience and validates lived experience. Distinguishing between the terms ‘descriptive and interpretive’ may be helpful in the process of analyzing data.

In hermeneutics, where ordinary language is the ground for interpreting meaning, what is said may speak for itself while any interpretation the researcher makes may orient the reader to the deeper meaning behind what is said (van Manen, 1998). While purely descriptive phenomenology is useful in other kinds of qualitative research, in hermeneutic phenomenology interpretation – which may include elements of description – is not however, purely descriptive.

Phenomenological research is a process of discovery and does not subscribe to a method determined by fixed signposts. It has often been said “in the method of phenomenology and hermeneutics, there is no method” (van Manen, 1998, p. 30). There is, however, a body of knowledge and insights as well as tradition, which is both “the source of” and “the methodological ground for” human science research practices (van Manen, 1998, p. 30). In this sense phenomenology is broad and flexible as it neither ignores nor follows tradition to the letter (van Manen, 1998). While having no set method for analyzing data
may appear frustrating, there is a creative element in phenomenological research that fits well with Kaupapa Māori research. According to van Manen (1998) “method and methodology [...] animate inventiveness and stimulate insight” (p. 30). In this way phenomenological research is not constrained by method and in a sense is dynamic and original. Having a guide for how to approach research is useful for the beginner as this may guide the choices the researcher makes in how to apply methodology to the research process.

*The reduction method of data analysis*

Phenomenological research involves reflection and several authors recommend keeping a diary, or keeping research notes (van Manen, 1998; Rapport, 2005). As a qualitative method, phenomenology is able to capture the human experience as it is lived, which requires a process of reduction (van Manen, 1998). Reduction in this sense is not the same as ‘reductionist’ in positivist methods. In coming to an understanding of the essential structure of ‘meaning’, we need to reflect on it by practising a certain reduction. Firstly, reduction involves “awakening of a profound sense of wonder and amazement at the mysteriousness of belief in the world” (van Manen, 1998, p. 185). This awakening animates the questioning of what it means to experience something in and of the world. Next, there is a need to overcome subjective or private feelings, persuasions, preferences, or expectations that might inhibit coming to terms with an experience or phenomenon as it is lived through. The third step is to strip away any scientific theories or conceptions which may overlay the phenomenon and may inhibit seeing the phenomenon in a non-abstracting manner (van Manen, 1998). Phenomenology is an important methodology for understanding nursing experience because it is useful for studying those things that do not lend themselves to quantification, control, or comparison. A ‘phenomenon’ may be defined as something that is revealed or manifest in experience. Phenomenology is able to broaden knowledge through enhancing perspectives in relation to everyday human issues (O’Brien, 2003). Van Manen (1990) suggests that phenomenological research may be seen as a dynamic interplay of six activities (as cited in O’Brien, 2003, p. 133):

1. Turning to a phenomenon which seriously interests us and commits us to the world;
2. Investigating experience as we live it rather than as we conceptualize it;
3. Reflecting on essential themes which characterize the phenomenon;
4. Describing the phenomenon through the art of writing and rewriting;
5. Maintaining a strong and oriented relation to the phenomenon;
6. Balancing the research context by considering the parts and the whole.

Interpretation concentrates on one’s own response to the language used by participants, which involves one’s own and the participants’ personal and historical backgrounds (Rapport, 2005). Explanation is correlated with desiring to know the phenomenon in all its forms and developing an interpretive account. Rapport (2005) suggests that when a number of interviews are analyzed together, the variety of constructions that exist around the phenomenon may be brought to light to reveal the essential quality of the phenomenon. There is a fusing of horizons where comparing and contrasting various ideas that have been expressed aids the process of arriving at a definitive understanding of the text. The researcher is in dialogue with the text, a hermeneutic conversation, which is built on to reveal new understanding. Understanding, explication and interpretation describe the hermeneutic circle. Parts of the text and whole texts are independent of each other, but by moving between them, the researcher seeks to turn them into explications by analyzing and making clearer and more explicit both the whole and its parts.

Rapport (2005) describes van Manen’s (1990) selective highlighting approach to thematic analysis in which structures or themes are elucidated from the narrative. The researcher searches for structures of meaning in the narrative and describes how these are thematic of the phenomenon. The search for essential and incidental themes continues and the researcher explains and interprets these as well (Rapport, 2005). Structures of experience are reflected in sentences of great relevance to the research thesis (Rapport, 2005), which stand out because they are thematic of the phenomenon and are chosen because they help demystify recurring themes and incongruities or puzzles within the data (Rapport, 2005). Quotations may serve as structures of experience and help to illustrate the study’s findings while also demonstrating how each theme is representative of the phenomenon. Analysis involves focusing in on essential and incidental themes, which if not included, would render the phenomenon incomplete (Rapport, 2005). A thoughtful and controlled response to the participants’ narratives involves a cognitive process, where themes are identified which give shape to the data. The researchers own knowledge is conjoined with the emergent themes and in this sense
the hermeneutic conversation is in play. On completion of thematic analysis, the researcher returns to the process of writing and publication, completing van Manen’s (1998) six-step approach.

**Narrative analysis and Māori cultural contexts**

Māori language and cultural context cannot be overlooked when meaning is ascribed to embodied phenomena Māori people may experience. It cannot be assumed that Western culture contains the necessary language, symbols, or metaphors for adequately expressing Māori people’s understanding or lived experiences. Māori language is traditionally oral and as such lends itself to poetic expression, anecdote and metaphor in a way that is dynamic and responsive to changes in the environment. Tohunga Hohepa Delamere is not so concerned with translation (Moon, 2003); however, he considers the use of anecdote and metaphor important when describing Māori concepts in the English language because these forms of communicating often capture the essence of Māori meaning and therefore avoid the problems associated with direct translation. Tohunga Rose Pere however asserts that meaning may be lost in the process of translation (Pere, 1991) due to differences in cultural contexts.

Some differences between English and Māori cultural contexts are well documented. The context of how Māori understand time is a good example as Māori may look forward as well as backwards (Durie, 2004b). The Māori cultural context of time is embodied in the phrases ‘I nga ra o mua’, which in English literally translates to ‘the days in front’. However, Māori use the phrase when referring to the ‘past’, while ‘I nga ra o muri’ literally means ‘the days behind’ and is used when talking about the ‘future’. One explanation offered for understanding the Māori cultural context of time suggests that humans do not move through time; rather, time rushes on and past us as though we are standing still. In this sense, we can see the events of the past and, therefore, the past remains within our view or ‘in front of us’, while the future remains unseen or at our backs and therefore is ‘behind us’ (“Upokopakaru,” 2013). This concept of time may influence how Māori understand and respond to problem solving or decision-making. Embodiment of a Māori cultural context of time in-which looking backward is as essential as looking forward, signifies a deeper understanding that restoration of the past is as important, if not more so, in future development (Durie, 2004b). The reverence Māori have for whakapapa may also be understood in relation to time where connections with tupuna/ancestors and
with papatuanuku the earth and the cosmos may all be called upon to guide human being in the present and future (Royal, 2003).

B) Methods

**Turning to the research question**

The decision to undertake Kaupapa Māori research was not a difficult one. Being Māori and having knowledge and experience of the disadvantage many Māori whānau contend with inspired the decision to commit to a project that would be meaningful, and that would – perhaps – make a difference. The thesis itself arose out of a personal and growing interest in the subject of pain – especially long-term musculoskeletal pain – an interest that developed steadily throughout five years of education and training to become an osteopath.

An initial search of the literature revealed limited research on the subject of Māori and pain, and specifically a dearth of qualitative research investigating Māori and long-term pain related to musculoskeletal disorders. This confirmed that a qualitative research project investigating Māori and long-term musculoskeletal pain would be worthwhile. Arriving at a thesis question was a challenging process. The research started out as ‘an exploration of’ the urban Māori adult experience of long-term pain related to musculoskeletal problems. The literature revealed that in contrast to Europeans, Māori adults have differing access to medical and rehabilitation services for the treatment of musculoskeletal disorders, and this seemed to be an area worth investigating. However, this also seemed somewhat limiting in its scope of enquiry. Consideration of whether Māori cultural values and practices influence the Māori experience of long-term pain and musculoskeletal problems was also of interest.

Following approval of an ethics proposal, a more in-depth investigation into Māori health research, Kaupapa Māori research and research regarding Māori and pain was undertaken and it was during this phase that many questions began to emerge that included the following: Why do Māori today face such stark disadvantages in health, education and justice? And, why do Māori not access rehabilitation services to the same degree as the European population for treatment of injuries, which may lead to long-term musculoskeletal pain? As an understanding of New Zealand’s colonial history became
clearer, the traumatic and painful reality of Māori history began to crystalize in my mind. At this point recent literature addressing historical trauma theory informed by Native American scholarship also began to emerge. Historical trauma theory in New Zealand recently informed the development of a unique Māori suicide prevention program (Lawson-Te Aho, 2013), which shot straight to the heart of the matter of pain and suffering that Māori have endured for over 150 years. Further questions began to emerge as follows:

- Is past trauma – as a cause of ‘psychic’ or ‘soul pain’ – relevant to the high rates of chronic musculoskeletal pain experienced within the Māori population?
- Are the effects of historical trauma or ‘soul pain’ passed on through the generations? And if so how does it manifest? Is it possible that it might manifest as long-term musculoskeletal pain?
- Is historical trauma reconciled in the present as ‘soul pain’? Is soul pain reflected in the emotions of sadness, shame, fear, anger, regret, or loss in Māori people who suffer with long-term pain? For example, if historical ‘loss of’ or ‘disconnection from’ traditional land represents historical trauma, is this reflected in the narratives of Māori who have long-term musculoskeletal pain?
- Are pain behaviours and the way we deal with pain passed on to the next generation? Are they intergenerational?
- What do Māori think and feel about long-term musculoskeletal pain?
- Does racism impact upon long-term musculoskeletal pain? If so, how?

After much deliberation and further research, on October 7th 2016 a diary entry reveals that a potential thesis was beginning to evolve: Long-term musculoskeletal pain among urban Māori adults may at least in part be caused by historical trauma or ‘soul pain’ held in the psycho-social-physical-cultural and/or spiritual being.

At the outset of the research, history was not considered important; however, it quickly became apparent that in order to understand the current status of Māori population health, an understanding of New Zealand’s relatively young colonial history was essential. Further refinement of the final thesis came about at the same time as understanding of New Zealand’s colonial past from the perspective of Māori, increased. This coincided with increased understanding of the key determinants necessary for
health, and, the realization that historical discrimination and the unequal distribution of resources has contributed to the disproportionately high rates of Māori ill-health across a wide spectrum of indicators including: mental health disorders and long-term musculoskeletal pain. Interestingly, recent developments in the scientific field of long-term pain also inform the current thesis, which is titled: *Effect of embodied historical trauma upon chronic musculoskeletal pain, in a group of urban Māori adults.*

While the thesis appears to have found its resolve for now, understanding that research is a process where, “as new understandings emerge, further questions may arise”, further evolution of the current thesis remains possible.

**Finding & enrolling participants**

During a search of Kaupapa Māori literature, it became clear that a recent resurgence in traditional Māori healing had occurred. The government had approved funding to help set up a number of traditional Māori healing clinics in which rongoā/traditional plant medicine and romiromi/deep body work and mirimiri/massage were being offered. Other groups and individual Māori who did not receive government funding were also operating. I began to investigate the mechanisms of such services because the idea surfaced that Māori adults who were not accessing mainstream services for long-term musculoskeletal problems and pain might be using traditional Māori healing instead. This led to the decision to try and source Māori participants with musculoskeletal problems and long-term pain from a group of Māori who ‘had’ used or who ‘were using’ traditional healing services. This would increase the possibility of gaining insight into a unique Māori perspective relative to the phenomenon of long-term pain.

Whānaungatanga is about building relationships through connections with whānau/family or colleagues, and this guided the search for participants. This initially involved the support of the Unitec Maia Māori staff, who were able to introduce me to traditional Māori healers. Advice was sought where necessary from Josie Keelan (Māori supervisor), Carol Ngawati (Maia support staff) and Kim Penitito (Maia support staff), who were all familiar with Kaupapa Māori research principles and tikanga protocol. A kaumātua from Te Kotahitanga Marae at Unitec was also available if needed for support with marae kawa/protocol. Manaakitanga/hosting and kanohi te kanohi/face to face were important to the process of searching for participants. Making connections with the
Maia Māori support team kānohi te kānohi /face to face not only allowed for introductions to traditional healers to be made but also meant establishing a wonderful connection with Te Kotahitanga Marae at Unitec. The stunning whare and the aroha emanating from whānau working within this space became an important avenue of continued support at a professional and personal level throughout the research process.

Maia Māori staff made contact with traditional Māori healers on my behalf. This reflects whānaungatanga in action and also highlights that direct contact from me was not considered tika/right. In the first instance, a member of the Maia team phoned a healer she knew and later took me to meet her at her home where she worked. We took cake, and over a cup of tea shared whakapapa with whaea ‘H’ and her daughter. I found myself in the position of being reluctant or whakama/shy to bring up the subject of ‘research’ as it did not feel tika/right. This response turned out to be tika/the right way because after an hour or so, after finishing our tea, questions were asked about the nature of the research, which made the conversation less formal. Whaea ‘H’ was very supportive; however, the introduction did not eventuate in sourcing participants for the study. It was an important learning experience where whānaungatanga/building relationships and sharing whakapapa provided insight into the process of meeting and having aroha/showing respect for the people from who I was seeking assistance. It was a humbling experience, particularly because it gave me insight into how a traditional Māori healer was operating in an urban environment.

In the second instance, a member of the Maia team contacted a key healer from a healing ropu/group on my behalf who were travelling and working abroad at the time. I had hoped that engaging with this particular healing ropu would lead to sourcing participants. I was informed by whaea Ngawati that the key healer from the ropu was happy to hear from me and so I sent her an email, which on reflection was far too long. Whaea ‘A’, the key healer from the healing ropu, was a very busy lady and replied briefly that she did not have the time to focus on my email at the present moment. The healing ropu/group were due back in a few weeks and were hosting a two-week healing wananga, and whaea ‘A’ suggested that I enrol in the wananga/workshop. However, although I enrolled in the wananga, this did not lead to sourcing participants either. Once again, whānaungatanga/building relationships and aroha/respect were both of central importance to the process of connecting with healers and by the end of the
wananga/workshop I felt as though I had become a member of a large international whānau.

In February 2016, I came across an article on the Internet about a Māori man named koro ‘R’ who was running a well-established traditional Māori healing ropu throughout the greater Auckland region. The service had been running for over 10 years and I initially phoned him thinking a family member might benefit from a one-on-one traditional Māori healing session with him. Koro ‘R’ was very open and friendly and I brought up the subject of my research with him and he was very interested in what I was doing. Koro ‘R’ knew whaea ‘A’ as they had both trained with the same Tohunga, who is well known for his healing work internationally with women who have difficulty conceiving. Koro ‘R’ was very encouraging and invited me to attend healing sessions and workshops he was running. I attended a healing session initially and then called koro ‘R’ later to ask if I could run my research idea past him with a view to sourcing Māori participants from the group of Māori using his service. I met with both koro ‘R’ and his partner whaea ‘T’ at an Auckland-based marae and they both gave me permission to approach people seeking treatment at the open evening healing sessions they ran together. This involved me attending one evening healing session per week over a period of six weeks. The group healing sessions ran from 7pm to 11pm and involved six healers working on six tables in one big open room. Those seeking healing arrived, paid a koha/donation and wrote their name on the list. Names were crossed off the list once their healing session was completed. Sometimes up to 40 people over one evening would arrive for a 20-minute healing session. Many returned for regular weekly healing sessions. The atmosphere was very relaxed and open with music playing in the background the whole time.

Manaakitanga was an important aspect of attending the healing sessions. I took a decent amount of kai to share at each session such as pizzas and cakes, which both the healers and those being healed appreciated greatly. The kai koha/donation helped to break the ice and became a means of connecting with people while they waited for their session to come up or while they waited for other whānau members’ sessions to end. I also had a healing session each time myself, which helped calm my nerves. I took information and consent forms with me and had some sitting on a table and others ready to hand out to people. If people were interested, I took their phone number and called them a few days
later to see if they were still interested. If they were, I contacted them again to arrange a time for a kōrero.

Having permission from koro ‘R’ and whaea ‘T’ meant people were mostly quite receptive to talking to me. It was, however, more difficult than I thought it would be. For example: at one point I was challenged by a female healer - in a good way - who questioned me about ‘who would benefit from the research and who would control it’. Although I felt challenged by her questioning, on reflection, I considered it fitting. I was determined in my resolve to adopt a participatory research methodology and the challenge made me realize how important it was to understand the views of those delivering the the healing service to Māori, because the service remained grounded in Kaupapa Māori values. While I was very enthusiastic at first, I found myself having to make a real effort to overcome being whakama/shy as the search for participants continued. Some nights I fared better than others in my level of confidence in approaching people and when eventually I had enough participants, I was just so relieved that the process was over. It was very confronting at times despite having support from koro ‘R’ and whaea ‘T’. I sometimes felt as though I was an outsider looking in, and then at other times I felt as though my viewpoint was very whitewashed or in other words, Westernized. I began questioning my own motives more deeply and seriously began to consider even more carefully, who the research would benefit. Further reflection made me acutely aware of the stark contrast between my training within a Westernized framework of osteopathy, and the relaxed, open atmosphere of traditional Māori healing. Another challenge that arose was when the non-Māori people who came for Māori healing appeared to be more interested in my research than the Māori who were attending and I had to clarify that I was seeking ‘Māori participants’ only. While I felt okay with this initially, and while people were also generally very understanding, I sensed the brief disappointment of those non-Māori and the feeling of exclusion that this created for them. I found myself apologizing to non-Māori and Māori alike, because I did not wish to offend anyone. I left with very mixed feelings of knowing what it feels like to be excluded and also, what it feels like to be the excluder. Overall, however, meeting and working with both the healers and those seeking healing, was a privilege and a pleasure. In adopting Kaupapa Māori research principles of whānaungatanga, manaakitanga, aroha and kanohi te kanohi, the sense that deeper
relationships were being formed through the research process, was both inspiring and humbling.

**Participants**

Six Māori adults agreed to participate in the study with the understanding that a kōrero regarding their musculoskeletal problems and long-term pain would take place. Many factors may influence the choice of how many participants one should use in qualitative research, and as such there are no specific guidelines. Time constraints, available resources and the chosen methodology in this case were limiting factors and the choice of six participants was strategic to ensuring the project was completed. Bassett and Tango (2002) interviewed six Māori participants using a similar phenomenological methodology while another similar study investigating Māori and pain (Mcgavock, 2011) also enrolled six participants. A small number of between six and 12 participants may be extremely valuable and adequate for research with populations who may be difficult to access (Baker & Edwards, 2012).

**Inclusion/exclusion criteria**

Participants sought were over the age of 25 years as this increased the chance of them needing treatment for musculoskeletal problems and long-term pain. Four Māori wāhine/female and two Māori tāne/male participants were enrolled and all were between the ages of 40 and 60. Ethnicity was self-identified, meaning that if the participant claimed Māori descent, then they were considered as meeting the criteria of being Māori. The presence of long-term pain for more than 6 weeks relating to a musculoskeletal problem was established through kōrero with potential participants before enrolment. It turned out that all participants had experienced pain over several years or more. Participants needed to have experienced traditional Māori healing and to be a resident of the wider Auckland region.

**Consent & deciding on a location for kōrero**

Participants were given an information sheet explaining the research and a consent form. All six participants read both documents and were given the opportunity to ask questions before signing the consent form. The venue and timing in which the kōrero took place was designed to suit the participants. They were given a choice of venue options such as
in nature at a park or beach, a room hired for the purpose at a local community centre, a room in the postgraduate building at Unitec, at their home, or at my home. I was advised that kōrero at the participant’s home may not be appropriate as this often meant that the participant felt they should behave like the host. Smith (1999) comments on a study where as a researcher she conducted interviews with young Māori mothers in their homes. Before she arrived, the mothers tidied their houses so that they were spick and span and chose a time when their child was asleep or being cared for, which detracted from the reality of day-to-day living as young mothers (Smith, 1999). In the current study, while participants were given the option of a kōrero at their homes, other options were highlighted as being more neutral for them. Two participants chose to kōrero at the community room, because it was close to home. Two chose my home because of its location to their workplace and one chose a beach because it was close to her workplace and she preferred to be outside. One participant chose her own home because she had no transport and insisted it was best for her. Providing a range of options showed a willingness and flexibility to meet with participants on terms that suited them. The choices participants made across the range of available options showed that they appreciated being given choices. Meeting with one participant in her own home, turned out to be very relaxed and there were no concerns.

*Kai/food and koha*

Providing and sharing kai and a cup of tea or drink before kōrero commenced allowed time for getting to know each other through sharing whakapapa. This was an invaluable part of the process because it helped both the participant and myself to feel more comfortable and relaxed in each other’s presence. This also prioritized whakawāhānaugatanga where an appreciation of the participant’s whakapapa/genealogy and their turangawaewae/place to stand in relation to my own was established. I found this process to be very rewarding and unsurprisingly two participants shared common whakapapa with me. Participants were given a koha/gift of a petrol or grocery voucher to thank them for taking part and to help with travel expenses.
**Kanohi te kanohi/face to face**

Conducting interviews kanohi te kanohi/face to face is considered appropriate in Kaupapa Māori research as it honours the person and engenders trust because participants get to know who the researcher is. For example, “the researcher sees them as they see the researcher” (Moyle, 2014). While Moyle (2014) suggests that using Skype calling may also be a form of kanohi te kanohi/face to face, it may not be as authentic, however, Moyle also points out that Skype may be useful for keeping participants informed about progress. Kanohi te kanohi/face to face gives face validity to the study because two people who come together are committed to a kōrero that is oriented toward the subject of the research (van Manen, 1990).

**Practice interview**

A practice kōrero/interview was conducted as it provided the opportunity to explore and reflect on potential difficulties or challenges that could arise during the kōrero process; for example, consideration of building rapport and trust and responding appropriately to private or sensitive information was crucial (O’Brien, 2003). The interview also served as a reminder of the essential things that needed to be attended to before commencing the interview, such as reminding participants’ of how confidentiality is maintained and advising them that they were able to stop the interview at any time. Remembering these important protocols reminded the participants that responsibility for their private information and their mana was considered to be of the utmost importance. The practice interview also highlighted that in a study about pain, sensitive information regarding the participants’ personal experiences may be divulged, which needs to be responded to in an appropriate manner. On reflection I noticed that humour was often used to establish rapport with the participant; however, I realized that this is not always appropriate when exploring personal health issues. This prompted me to keep inappropriate joking and nervous laughter in check in future interviews.

The practice kōrero also sealed in my mind Māori ethical guidelines such as, ‘kaua e takahia te mana o te tangata’, meaning ‘do not trample on the mana of people and, ‘kia tupato’ or ‘be careful’ and ‘aroha ki tangata’ meaning, ‘have respect for the people working with you’ (Moyle, 2014; Tipene-Matua, Phillips, Cram, Parsons, & Taupo, 2009). The practice kōrero was an opportunity to reflect on all aspects of the kōrero process,
such as focusing on the written ‘questions guide’ when stuck and efficiently handling the recording device. It was also a chance to practise and reflect on kōrero technique such as steering the kōrero by asking open-ended questions first that led to more closed questions when exploring a topic of interest. Reflection on the ethic ‘titiro, whakarongo, kōrero’ meaning ‘look, listen and speak later’ was also important as during the practice kōrero I was acutely aware of my own ‘need’ to speak and to feel in ‘control’ of steering the kōrero. On reflection I was reminded of the value of silence in allowing participants the time to gather their thoughts (van Manen, 1998). This meant paying attention to my sometimes-quick responses and taking care not to jump to conclusions or to make assumptions about what was being said. The kōrero is a mutual process and so letting go of the need to control is important for allowing exploration of the subject and a kōrero that emerges in the process that is not the one that I ‘wanted’ or ‘expected’ to hear. This affirmed ‘aroha ki tangata’ or ‘respect for the people working with me’ and ‘alongside me’ as opposed to ‘for me’. In this way the narratives are acknowledged as representing truth in their own right. Finally, the practice run was also useful for gauging how long each kōrero should be, confirming that no less than 45 minutes was required to allow an in-depth discussion to unfold.

**Gathering data and data analysis methods**

Semi-structured, open and in-depth conversational style interviewing or kōrero was the method chosen for gathering data, and thematic analysis employing interpretive phenomenology was used for analyzing data. Interviews were recorded on a Sony digital recording device and then uploaded to a computer to be processed for verbatim transcription. An independent transcriber was found using an Internet search and was chosen based on the prior work she had done transcribing interviews containing Māori language, which was a prerequisite. Transcripts were then printed out and scrutinized for any mistakes before analysis commenced. Initially the raw data – kōrero/conversations – were analyzed by listening to each recorded kōrero multiple times while at the same time following the typed transcripts. An A3 sized sheet of cartridge paper divided into six columns each side was used for noting down key themes, subthemes and supporting quotes in an orderly manner (see Appendix F). A single column was dedicated to a theme, and quotes pertaining to themes were recorded in the theme column. A time signature of when the quote occurred in the recording was noted.
so that the quote could be re-accessed easily, and brief reflections about quotes were also noted. Quotes and themes reflecting Māori cultural perspectives were highlighted. Once this process was completed for each participant, an attempt was made at presenting the data/kōrero with respect to key themes in order of their importance. Common themes were identified, and then common subthemes were also noted. A process of sorting and presenting emergent themes and subthemes alongside participant’s quotes and my interpretations was embarked upon; however, this was soon abandoned because it seemed that in the process, the essence of each person’s kōrero/narrative became lost. Breaking narratives into bits as representations of themes did not flow and became increasingly difficult to manage.

**Introducing a new method of data analysis**

It was at this point that a decision to incorporate a Kaupapa Māori approach to data analysis was made. The Rourou method developed by Glenis Mark (2012) is based on the whakatauki ‘Nau te rourou, naku te rourou, ka ora ai te iwi’ – meaning, ‘With your food basket and my food basket, together we will feed the people’. The Rourou method acknowledges that completing research is a collective process in which knowledge is ‘built up’ rather than being ‘broken down’ into parts. The ‘basket of food’ is a metaphor for the ‘knowledge’ that each entity contains within itself and which it brings to the collective process of completing the research. Each person involved in the collaboration of research is respected for the knowledge they impart in a process that seeks to build understanding through uniting or joining together the ‘knowledge baskets’ held by different entities. Knowledge baskets are combined to create a new basket of knowledge and the participants, the researcher and each institution’s leaders are ‘knowledge holders’ who come together to tell a story that resembles the life-worlds of participants (Marks, 2012).

Marks (2012) maintains that rather than breaking down the participant’s kōrero into the sum of its parts – as is common in positivist methodologies – the Rourou method seeks to build upon the participant’s experiences in an expansive manner, where the narratives grow in their meaning through each process. The individual narratives are expanded upon through group analysis, which acknowledges the group as a ‘knowing’ entity. Meaning making is expanded further when the learning and expertise of the researcher are combined with insights gleaned from the group. The thesis is made whole by way of
inclusivity, which is appropriate for the process of undertaking a Kaupapa Māori research project. While respect and aroha is shown for the whole, it is acknowledged that the whole is only made possible through uniting each entity, or basket of knowledge.

According to Marks (2012), while the participant’s kōrero are the main focus, the researcher brings further understanding through having deeper knowledge of the subject in the world and this may be considered from the viewpoint that the researcher is both an insider and outsider at once (Rapport, 2005). Being ‘insider’ is exemplified in the notion that the researcher is ‘a Māori person’ who knows something about being Māori in the world. Moyle’s reference to being ‘outsider’ suggests that other contexts of the researcher’s life-world may impact upon the research process, whether it be as woman, mother, teacher, citizen or student, such roles shape a researchers understanding and interpretation of the subject. While the researcher has a voice that is integral to the process of commencing and completing the research, it is for the benefit of the people. The researcher’s reflections, descriptions, interpretations, declarations of bias and experience, give voice to the researcher and the researcher’s voice is heard along with participant’s voices, which come together to formulate new knowledge that is made up of the collective kōrero/narratives and combined knowledge of all involved.

**The Rourou method and process outlined**

The Rourou method has three phases that were applied in the current research to attend to the issue of maintaining the integrity of each participant and their kōrero throughout the process of analyzing data. In the first phase, each participant’s kōrero was analyzed in its entirety and presented in a summary form, which preserved the essence or ‘mauri’ of the participant and their kōrero. Participants’ summaries in total then became the foundation for the next phase of analysis in which these summaries were analyzed ‘together’. Emerging common themes, subthemes and significant quotes were identified and collated. Expansion of knowledge occurred as themes and subthemes came together as ‘findings’ in which the collective knowledge of the group emerged and the material for discussion was revealed. In phase three, the researcher’s interpretations, descriptions and understanding of the findings and of the subjects being examined were joined with the knowledge of the group, which further expanded on the knowledge gained in the ‘discussion’, from which a summary and conclusions of the research can be drawn.
Conclusion – methodology and methods

The methodologies that inform the undertaking of the current research have been explored in depth, highlighting that a Kaupapapa Māori research approach and understanding is central. Hermeneutic phenomenology, cultural phenomenology, embodiment and ecosocial theories have also been addressed as these inform understanding of the thesis within the context of how bodies are situated in societies and the world, all of which have a history. Understanding of qualitative methodologies applied to both the interview and data analysis processes has been shown and an appreciation of Māori cultural contexts pertaining to language and communication has also been briefly addressed. The methods applied to conducting the research have also been outlined. Key difficulties that were encountered along the way have been highlighted and the learning that came from these experiences, presented. The late adoption of a Kaupapa Māori research approach to data analysis has been explained as supporting the ethic of maintaining participants’ mauri, mana and integrity throughout the research process. The following two chapters present the findings, discussion of the findings and conclusions.


Chapter 4 – Findings and Discussion

The following chapter begins with a small section in which each participant is introduced in a very brief summary. This is followed by the findings and discussion, which are presented over three sections. Each section represents one of three overarching themes that emerged out of the data and begins with an introduction to the theme followed by the findings, which are presented under key subtheme headings. Each overarching theme has 3-4 subthemes, and each subtheme is discussed over 2-7 subheadings. The findings of each overarching theme are followed by a brief conclusion and then a discussion of the findings is presented. The discussion is presented in the same format as the findings in that the same overarching themes and subthemes are used to guide the discussion; however, where necessary, additional subheadings are included in the discussion to accommodate a broader exploration of the topic. To minimize repetition, the discussion is only briefly introduced; however, it is followed by a broader conclusion that ends each section. In the final chapter, a summary conclusion of both the findings and discussion is given. Participants are identified using the first initial of their name followed by either the letter ‘M’ or ‘F’, signifying they are male or female.

Introducing participants

In the following brief summaries, key themes pertaining to each participant are identified. Participants are introduced so that important aspects of their life-worlds are highlighted in relation to the meaning each makes of long-term pain. A short pain history for each participant is given and then a quote reflecting a key theme drawn from each narrative provides deeper insight into each participant’s life-world. The aim here is to reveal the essence or mauri of the person to provide the reader with a sense of who they are. The first three participants have been using Māori healing for many years while the final three were introduced to healing in the previous six months.

Introducing JF – Te reo, whānau and faith

JF is in her late forties and teaches te reo/Māori language at an Auckland Kura Kaupapa/Māori language unit. Her hapū is Ngāti Hine. She was brought up in a small, close-knit rural community surrounded by a large extended whānau/family where the Māori way of life dominated. She moved to Auckland as a teenager to go to high school
and now has four grown up children and a six-year-old grandson. JF has had two lots of surgery in the past five years and since having a hysterectomy has suffered ongoing iatrogenic lower back pain. She has a calm centeredness about her, a spiritual side that is conveyed in her kōrero about faith and whānau. Healing is a whānau affair and a way of life that encompasses te reo/Māori language, whanau and faith.

JF: Everyone has the same light, but it’s making the connection. To me it’s just that our tupuna were so on to it you know, they know [...]

**Introducing KF – Healing the spirit**

KF is in her early fifties. She has three grown up children and two grandchildren and has lived and worked in Auckland most of her life. Her relationship with Māori healing began when she was in her twenties and the whole whānau became involved. KF has introduced many relatives and friends to Māori healing and has witnessed extraordinary transformations in people’s lives in the process. KF has osteoarthritis in her knees, which has become increasingly painful over the years. She considers Māori healing to be a holistic approach that deals with pain on a physical and spiritual level. Her insights into spiritual healing highlight important aspects of Māori healing philosophy and cultural perspectives of pain.

KF: In mirimiri they’re saying that the pain is a symptom of something... for example they might say that this area [of your body] represents grief.

**Introducing LF – Whenua, identity and healing the past**

LF is a widow in her late fifties who has no children. She is descended from Ngāti Tuwharetoa iwi on her father’s side, and Ngāpuhi on her mother’s side, whose whakapapa includes three hapū: Ngātiwai, Ngātikahu and Ngai Te Rangi. LF has had intermittent long-term pain mostly in her neck and upper back. She was in a bus accident as a teenager and remembers having physiotherapy back then for whiplash. LF was raised in a radical Māori family in which physical discipline on a daily basis as she was growing up was normal. This came up for her in her first experience of romiromi/Māori healing. Through Māori healing, LF recognizes that her embodied pain is connected to her identity and living a life dominated by her mother’s struggle to maintain her whenua.
LF: You know I’m glad I had a radical stance about not letting anyone into my space [...] this was in order for me to have a say, my own cultural say, and so I’m glad I had that resistance.

**Introducing RF – Whakapapa, identity and healing the past**

RF is a single female in her late fifties. Her hapū is Ngāti Pākau descended from Ngāpuhi iwi. She was brought up on a Northland farm by her grandparents who cared for 13 children, many of them whangai/adopted. RF moved to Auckland as a young woman and now has two grown up sons. She has had ongoing lower back and hip pain over many years. Having been brought up surrounded by tikanga Māori in a time of rapid cultural change, it seems RF witnessed much that was lost. RF’s experience of Māori healing takes her back to the distant past and her story begins with her tupuna. Her story of a struggle with whakapapa, identity, te reo/Māori language and culture is told and may be significant to RF’s lived experience of long-term pain.

RF: I don’t know who I am, what I am, and it’s all part of it.

**Introducing BM – Healing embodied emotions**

BM is a male in his early forties and comes from Gisborne on the East Coast of the North Island. While he is descended from Te Arawa and Ngātiporou iwi, he considers there are wider connections in his whakapapa also. He was brought up in Auckland where he lives with his partner and their two children. He is self-employed and into alternative medicine, health and fitness. He sought traditional healing to see if it would help his long-term lower back pain, which he thinks is related to an ankle injury he sustained playing basketball in his twenties. Māori healing seems to encourage BM to view his pain from different perspectives, which leads him to consider the emotional, mental and spiritual aspects of his pain.

BM. Yeah, I’ve been coming about seven weeks now and it’s been helping me learn a bit about my body and how we hold emotions and all that in different parts of our body.
Introducing FM – Safety and the collective whānau construct

FM is a male in his mid-fifties and comes from te Uruwera, Lake Waikaremoana. He is a descendant of Tuhoe, Ngāti Kahungungu and Tuwharetoa iwi. While he spent some of his childhood living in the country, he claims to be a ‘city person’. He is married, has no children and loves riding motorbikes. FM has had long-term musculoskeletal pain over many years in his upper back, neck and shoulders, which he believes is related to having had major motorbike accidents decades ago. BM is more interested in caring for his body now that he is older, and the shared experience of Māori healing suits his sensitive nature.

FM: Having [Māori] healing in a group, it's like a shared experience, you know, and you're all in the same boat, and there’s something in that I think.

Findings Theme 1

Māori identity, embodied historical trauma and pain

Subthemes

- Whenua
- Whakapapa
- Whānau
- Te Reo/Māori Language and Culture

Introducing Theme 1

The colonization of New Zealand generated collective losses for Māori people of their lands, tribal and social structure, culture and language. The term ‘embodied historical trauma’ refers to the historical and ongoing intergenerational effects that these losses had and may continue to have upon Māori bodies. Central to colonization is the marginalization of the Māori identity where displacement of the Māori worldview and its value system impacts upon Māori people in ways that may be unseen or hidden from view. An embodied struggle to maintain and/or reclaim Māori identity is evident in the life-worlds of participants and this is examined across four subthemes as follows: whenua, whakapapa, whānau and te reo/Māori language and culture. These four subthemes have been identified as sites of cultural conflict evident in the life-worlds of participants as either an internal struggle with personal identity or as an external
struggle with the Western world and its value system. It is proposed that embodiment of cultural conflict and a marginalized Māori identity may affect participants’ experiences of long-term pain.

**Subtheme 1 – Whenua/Land**

Findings make evident that soul pain and the suffering associated with historical loss of Māori whenua may be passed on from one generation to the next, leading to both an internal and external struggle with Māori identity and sense of belonging. While maintaining connections with tribal whenua or ‘turangawaewae’/place to stand affirms identity and belonging, it may also be an added stress for some participants. Whenua is made visible as a source of pain and suffering, identity, belonging and of healing, which may all be relevant to the experiences participants have of long-term pain.

**Embodied historical trauma and confiscation of whenua**

In her first encounter with Māori healing, LF recognized that her identity and her view of the world has been shaped by the soul pain and suffering her mother endured in relation to confiscation of her tribal whenua/land. Her mother’s radical view of things within her own family meant that LF and her siblings endured an upbringing where harsh physical discipline meted out daily was normal.

LF: [...] the land stuff, it became an obstacle [...] in her days, and I put up my radical stance just like she did. Yeah, she had a radical view of things even within her own family [...] because we only learnt through beatings and you’d either stand up straight and comply [...] or just get beatings day after day.

I. Are you talking about land confiscation?

LF. Yeah, that’s right, well I had learnt something about that you see, all the pain and suffering that she went through [...] she fought for the land you know, and she became... well let’s put it this way, my mother wasn’t very approachable after all of that, and I carried it too.

The physical discipline inflicted upon LF’s body is perhaps/seems symbolic of the pain her mother felt in being displaced from her whenua. In identifying as a radical, it is as though LF’s body carries her mother’s cause and her pain into the present and future.
**Whenua is a source of belonging and identity**

In allowing a Māori healer to enter her personal space, LF is becoming aware of herself as ‘vulnerable’ and she is beginning to understand that whenua/land is something to which she ‘rightfully belongs’, as a Māori woman.

LF: I learnt that I had to allow myself to be vulnerable in order to have a comfortable and exciting life and when you make that connection you will tune into everything else that you rightfully belong to, like that tree out there and the birds that were lined up here before, and out there [looks to ocean] […] I’m drawn to it you know, the water, it’s healing […] After a long day you know, I jump in the shower and it takes it all off me, any conflicts, or things that have disagreed with me that day.

JF refers to ‘Ngaiotonga’ her mountain, which is a specific landmark that affirms her whānau identity. Having ‘knowledge of’ and being connected to whenua or turangawaewae is highlighted in JF’s kōrero as a means of establishing identity and kinship within the wider community.

JF. We go back home a lot, and at Christmas time my sons walked from Whangaruru over Ngaiotonga, our maunga, to Waikare, and, when one of my son’s lecturers asked, “Does anyone know of a place called Whangaruru?” well, and my son said, “We’re from Waikare”, so his lecturer is from just over the hill and we’re related.

**Whenua is a source of grounding and healing**

Rich descriptions of the past given by RF reflect an embodied connection with whenua and whānau established from a very young age. Memories of rituals performed by her ‘daddy’, who was a tohunga, stir up deep emotions. It seems her grief reflects a sense of loss and longing for the ways of her tupuna/ancestors who were once completely reliant on whenua for subsistence, healing and wellbeing. The second quote has spiritual significance for RF’s recovery from a major childhood trauma, which almost resulted in her losing a lower limb.
RF. You see when I was born I was given to an aunty and I remember her too, the smell of her and her singing and the open fires. They lived wild back in those days, we mainly lived outside and in a small shack [...] and daddy came and got me.

RF: Another time daddy came and got me from the hospital and took me for a walk along the beach. He carried me then because I couldn't walk. I was about 9, and I remember listening to the birds and the sound of the waves, it was like a meditation. I can still smell and hear the ocean, and he was reciting karakia [RF crying] and somehow, they didn't ‘cut my leg off’, my leg, it should have been amputated. I mean it's why I feel so connected to the ocean as well, which is interesting because we grew up inland [...] 

Whenua seems to have a grounding effect for both RF and LF. Using rongoā/plant medicine derived from whenua helps LF accept emotions related to her past.

RF: I was brought up in a family steeped in tikanga Māori. Daddy had a karakia for everything. He'd often get us all up at 3 in the morning and we'd have to get out of bed, to go down to the river, I was just a babe in arms and at 3am we'd all go down there, and he always carried me everywhere. He'd wet us all with leaves dipped in the river, all the time saying karakia. Yeah, it's really grounding having all these memories you know [...] 

LF. Rongoā put me in a serene state, not so argumentative. It was sort of like everything I disagreed with was put on hold, does that make sense? It made me want to talk about the past, I mean things happen and you can feel really out of it, like right up here [indicates above her head], well the rongoā brought me down a bit and that's when I felt I needed to cry.
Subtheme 2 – Whakapapa/Genealogy/Descent

Findings indicate that having knowledge of one's whakapapa/genealogy is important for maintaining a secure Māori identity. Uncertainty regarding whakapapa leads to uncertainty about identity, which has implications for one participant's experience of long-term pain. Pain and suffering that is rooted in the past continues to affect some participants' lives in the present and for two participants, reflects the need for healing whakapapa.

Healing whakapapa may restore having a voice

Central to RF’s life-world is an embodied struggle with her Māori identity. The feeling that she does not have a voice seems to be perpetuated by what can only be termed a ‘soul pain’ related to not knowing aspects of her whakapapa. She considers the possibility that healing ‘beyond the grave’ may be needed to address suffering that has its origins in previous generations of her female line.

RF: I don’t have a voice. I’ve often attributed not having a voice to my sexual abuse, but I’ve had years of counseling and things and I still don’t have a voice. I mean I’m just not sure it’s my stuff and it’s got me thinking that it might be something that needs to be dealt with beyond the grave so to speak, back through the generations. So, I connect not having a voice to my whakapapa/genealogy, because my grandmother couldn’t say “this is the father of my child” and my mother couldn’t say “this is the father of me”.

Healing whakapapa may transform the present

KF’s description of her daughter’s healing experience makes visible the notion that healing the past may transform the present. Māori healers attended to her daughter’s physical and spiritual suffering, which benefitted the whole whānau.

KF. I took my daughter for healing when she was 14, she had a lot going on, and she was really angry [...]. When she got on the table she was crying and shouting because she was in a lot of pain. The tohunga was doing karakia for her because he knew what was going on and it ended up that she was carrying a whole lot of
raru/problems from previous generations, that wasn’t hers. They [healers] said it came from her father’s side and they told her where in her whakapapa it had come from and straight away she was happy to understand that. She could relate to that [...] it had such a negative effect on her whole āhua/aura, but after that she became easier to talk to and to see that change in her from just a bit of physical and spiritual attention, it was worth it, a huge relief.

Subtheme 3 – Whānau/Family

For some participants, Māori healing is a whānau affair that enhances wellbeing for the whole whānau. A struggle to maintain whānau connections in the urban environment is evident for two participants, who as mothers worry about their teenage sons. The issue of ‘whānaungatanga’ being taught in universities is brought up by one participant and indicates that collective whānau values have been displaced by Western values that prioritize the individual. For one participant, soul pain related to the breakdown of whānau is evident and has many layers. For two participants, Māori healing helps restore collective whānau values.

Whānau support of health and wellbeing

In discussing their early experiences with Māori healing, it is evident that for JF, KF and FM, healing is a whānau affair. JF refers to four generations of her whānau being involved in Māori healing, and extended whānau influence her health choices following surgery. KF expresses the benefits of healing for her and her children, and for FM, Māori healing is an experience he and his wife share in.

I: Can you tell me about your early experience with mirimiri?

JF: Well with my mother’s Ngātihine people, different people would just turn up and we’d be off for mirimiri and later on romiromi. It was a way of life growing up really, my grandmother always used rongoā on all of us and the same with mirimiri for me. I guess it’s just the norm. My sister and I would go together for romiromi when we were teenagers and when I started having kids I took them all along too. And now the kids tell me ‘hey mum it’s time to go for mirimiri’. [...] Straight after my surgery I went home and stayed with my sister, she and the
family had organized a healing wananga once a month at our marae, so I went back for that.

KF: I've been seeing Māori healers for years. I felt the benefits of it and started taking my children. Now they're adults and they take themselves. It's their preferred intervention.

FM. My wife jumped at the chance to get involved with Māori healing... it's a safe environment for us, and something we can do together that has real benefits.

**Maintaining whānau values may be stressful for Māori mums in the city**

The challenge of maintaining whānau values in the urban environment is evident in JF’s and RF’s kōrero, where ‘worry’ for their teenage sons has implications for how they may cope with their long-term pain. RF’s reaction to her son leaving home may be indicative of a heightened stress response.

JF. My grandmother had a big impact on our lives. She always made sure that as a whānau we were all really tight with our first cousins. It took a long time to make some friends outside the family and it’s been the same way with my children, their best mates are whānau. My youngest boy, he’s in year eleven this year and hasn’t had mates apart from cousins, but this year he’s been on his own and it’s the first time one of my kids has been at school by himself, without siblings or cousins. He was a bit lost at the beginning of the year, really lost actually. I was worried about him.

RF: Another thing that came up after I think the third healing session, my son went off the radar. He just turned 18 and left home a few weeks ago and I hadn’t heard from him in a while. Well I thought I’d be fine with it, but I kept wondering if he was okay and I wanted to track him down, and I realized I was really feeling it in my body, the worry for him and it was all tied up with these feelings of loss and pain to do with the past and it just wiped me out. I actually had a couple of days of vomiting and had to stay in bed and that’s just not like me. I never get sick that way.
Displacement of cultural values pertaining to whānau is a source of soul pain

JF has strong Māori values regarding whānau and has tried to instill these in her children. When she talks about her son learning ‘whānaungatanga’ and ‘iwitanga’ in his university course, JF appears frustrated as though she feels her efforts to raise her children a Māori way may go unheeded.

JF. My eldest boy went away with his university for the weekend and when he came back I asked him what it was all about, and he goes, “Ohm it was about whānaungatanga and iwitanga” and I said, “Well what do you think we do together when we go from Ngāpuhi down to Tuwharetoa?” I said, “Buddy, that’s us practising our iwitanga.”

JF: You know, so many of our young ones just don't know how to be Māori because they weren’t raised that way.

It seems RF was raised in a time of transition where Māori kinship values and tikanga/customary protocols regarding the preservation of Māori knowledge were replaced by Western social values.

RF: Here's a photo of granddaddy ... (I. Wow, what an amazing photo).

RF. Yeah, steeped in tohungatanga, his beautiful cloak and ornaments. They all say I look like him, and of course he taught everything to daddy. I remember, nobody was allowed to talk to him, tapu surrounded him. My mother’s younger brother [names him] was chosen, and was taught, you know, he’s been through all the rituals. But yeah, he didn’t take it on, I just don’t know what happened [RF crying].

The grief that arises suggests RF carries a soul pain related to the breakdown of whānau values and the institution of whakapapa, which in older times would have ensured that tohunga knowledge was preserved in the act of being passed on to a chosen family member. Having been raised by tohunga, it seems RF is lamenting both the knowledge that was lost, and the meaning that this perhaps has for her own identity. Embodiment of historical trauma is evident in RF’s sorrow, where instead of being passed on, centuries of healing knowledge held within RF’s whānau, is lost forever.
A struggle with whānau identity leads to a life marred by gangs, violence and alcohol

In describing her thoughts about pain, memories of RF’s relationship with her mother surface. Despite not knowing her mother until she was older, it seems RF tried to emulate the tough image she held of her. She describes becoming caught up in a world dominated by violence and alcoholism that defined her upbringing.

I: And what about pain, what do you think about it?

RF: Well the thing is I hate pain. I hate being hurt physically or emotionally you know, and just saying that reminded me of my mum. I mean, I didn’t meet her till I was thirteen, but I heard all these stories about how tough she was, and I realize now that I was trying to be like her, you know tough. But I’m not tough, my heart is soft and yet I got attracted into violent relationships, into gangs and all that tough stuff. Some horrific things went on and I just hated the violence. You know, our whānau we had such an amazing upbringing as children and yet we all ended up alcoholics and thieves and I just don’t understand how it happened really.

Collective values restore Māori identity and belonging

FM’s evaluation of Māori healing in a group suggests he identifies strongly with collective values. The familiarity of the shared healing experience seems to affirm FM as a Māori man whose unique cultural heritage is partly defined by collective ways of doing things, which has significance for FM on a healing level.

FM: People want to know what’s going on here, and yeah, yeah it was a new environment for me, but it reminded me of like having a shared experience at the marae really, and on a healing level for me anyway, I would think that would have to add to it.

It seems that for LF, Māori healing has helped restore whānau values. The significance of her role as ‘aunty’ takes on new meaning in an unexpected way, which causes her to reflect on her responsibility to whānau. There is the sense that her identity as a Māori woman within her whānau is being honoured in many ways.
LF. When my sister passed away last year, RM [healer] he started calling me aunty all the time just like out of nowhere and I mean all the kids call me aunty, but, about four months after my sister, I realized I had become an aunty again, in another way like, in having a kaitiaki/caretaker role for my nieces. It’s my role now to manaaki these kids, like I’ve come to that level and in calling me aunty all the time RM [healer] reminded me of that and yeah that’s when I realized, I understood what he was talking about. I tuned into that and yeah, it’s come right back to whanau.

Subtheme 4 – Te reo/Māori Language and Culture

Findings reveal that participants are faced with an ongoing struggle to either maintain or ‘reclaim through learning’, their te reo. The struggle impacts upon participants and their whānau identity as Māori. External conflict is evident in mainstream schooling where a teacher’s pronunciation of te reo is incorrect and confusing for one participant’s mokopuna. Internal conflict is evident as two participants reveal that they have tried over many years to learn te reo unsuccesfully.

Te reo Māori and the marginalized Māori identity

JF reinforces Māori values with her grandson whenever she can. While there is humour in JF’s narrative, her grandson is perhaps whakama about her speaking te reo to him in front of his friends. In seeking affirmation of his Māoriness from his ‘nan’, it seems that her mokopuna is proud of being Māori, however he is also aware there is difference in the world.

JF: I find I can speak Māori to my moko/grandchild, but if we’re going to his league games, before we get out of the car, he’ll say, “now speak properly, nan”. It’s like he knows when and where, and he’ll say [JF uses whisper voice], “Nan!” and he’ll look around because he’s got his friends around. Yeah, and sometimes he’ll say out of the blue, “I’m Māori, aye nan?” I say, “Are you?”, and he says, “Yeah”, and then I say, “What’s that?” and he goes, “You know, our whānau is Māori aye nan?”, and I laugh.

JF gives anecdotal evidence of the challenges her grandson faces on a daily basis being Māori in a mainstream school. An ongoing struggle for autonomy is evident in JF having
to reinforce correct pronunciation and meaning of te reo/Māori language with her grandson.

JF: Well he’s in a mainstream school because his mum’s not into things Māori and he says, “Why do they say A-rar-hoe-ee?” and I say, “I don’t know, why do they say that?” and he goes, “The teachers at my school say our school is A-rar-hoe-ee” and I said, “Is it?” and he goes, “Our school’s Arahoe.” And I said, “What does Arahoe mean?” He goes, “Um, you know” and I say, “What’s a kai-hoe?” and he says, “That’s my dad and he’s paddling, and he’s on the waka” I say, “Yep” and, “What about ‘ara’ what’s ‘ara’?” […] and then I say, “Haere taua hikoi ki runga te ara?” and then he goes, “Ooh… I get it”, yeah, so we play lots of games like that.

**A struggle with learning te reo**

It seems RF has struggled for many years with trying to learn te reo/Māori language. Other things keep getting in the way of her learning, which impacts upon her emotionally. There is internal conflict as though RF feels under pressure to learn her language but is somehow kept from doing so.

I: So te reo is key for you?

RF: Definitely, you know, it’s just so important and the thing is I’ve tried over the years to make it happen, but it still hasn’t come together, and I’m not sure why because I want to learn so much. It’s another reason I’m feeling really flat again because it’s like I’m doing the same thing as last year […] and then this year I thought well I’m gonna change that and I had to let some things go so that I could prioritize because this year I’m gonna FOCUS you know LEARN MY MĀORI LANGUAGE, I’ve just got to do it!

While BM appears to be getting back into it with teaching his children te reo at home, there is a sense that he too has struggled with learning te reo in the past.

BM: It sort of depended on who your mum was and whether they liked te reo and wanted to teach you at home whether you could speak or not, but I just have a basic knowledge. I have cousins who have Master’s degrees in Māori. I mean I’d like to extend my knowledge a lot more… but yeah, I’ll get back into it like with my
children, I’ve been sort of trying to make an effort teaching them te reo and learning it at home.

Discussion Theme 1

Māori identity, embodied historical trauma and long-term pain

Subthemes

- Whenua
- Whakapapa
- Whānau
- Te reo/Māori language and culture

Introduction

The following section discusses the findings in relation to participants’ long-term pain and the four subthemes identified above. Each subtheme is an important marker of Māori identity and may reflect points of embodied struggle in the participants’ life-worlds. Embodied struggle is recognized within the contexts of historical trauma and its impact upon Māori identity and wellbeing. Internalized and externalized conflict related to Māori identity is evident and may affect participants’ experiences of long-term pain.

Subtheme 1 – Whenua

One female participant’s experience of long-term pain is discussed in relation to the historical confiscation of whenua/land from her whānau/family. The embodied spiritual connection Māori people have with whenua is highlighted and makes visible the spiritual emotional and physical trauma that may be associated with disruption to this connection. Whenua as a source of identity and belonging is also highlighted and the stress participants may experience with maintaining ties to rural whenua in addition to maintaining an urban lifestyle are addressed.
Embodied historical trauma and confiscation of whenua

In LF’s life-world, government confiscation of whenua dominated her upbringing. Conflict and trauma related to her mother’s struggle to maintain tribal whenua/land became the organizing principles in her mother’s life-world (B. Duran et al., 1998). It is evident that LF’s body became the scapegoat for her mother’s soul pain/wound (E. Duran, 2006). Anger, grief, resentment and hopelessness are visible signs of her mother’s ‘unapproachable’ behavior and in her mother’s adoption of a Western military style of harsh physical punishment of her children. In LF’s early experiences of Māori healing, romiromi/deep bodywork triggered the arousal of both pain in her body and painful memories of the physical punishment she endured as a child. It is then that LF realized “she carried it [her mother’s soul pain/wound] too”. This makes visible the intergenerational impact of historical trauma in which trauma is literally transferred from one body to another within a whānau to become embodied in the present (B. Duran et al., 1998; E. Duran, 2006; Lawson-Te Aho, 2013; Walters et al., 2011). LF recognizes that she too has become “unapproachable like her mother” and realizes that in order to heal, she needs to let people into her personal space, which is why she embraces Māori healing into her life.

Harsh physical punishment of children is considered to have been rare to non-existent in early Māori society (Jenkins, Mountain Harte, & M., 2011; Pere, 1991). Prior to colonization, nga tamariki/children were considered central to the ongoing survival of the tribe and in this way resembled hope for the future. The term ‘tamariki’ derives from tama-te-ra ‘the central sun’ and Pere likens this to the ‘divine spark’ combined with ‘ariki’ meaning ‘senior most status’, which implies that absolute reverence for children was observed in adherence with the natural order (Pere, 1991; Royal, 2003). Unraveling the meaning of the Māori term for child is not done to idealize pre-colonial Māori society but to highlight the Māori spiritual perspective that violence toward children is intolerable (Cooper, 2012a; Jenkins et al., 2011; Kruger et al., 2004; Royal, 2003). Kruger et al., (2004, p. 29) state that for Māori people,

Survival has been expensive. The price is the loss of cultural knowledge, identity and practices, the breakdown of whānau, hapū and iwi, the confiscation and theft of Māori land and the pauperisation of Māori. The contemporary outcomes are epidemic whānau violence and systemic dysfunction.
It seems appropriate and integral to her healing experience that LF re-establishes a connection with the natural environment “to all of that [to which] she rightfully belongs”, “the birds, trees” and the ocean [the ocean] out there”. In seeking healing within Māori traditions, LF is exercising her autonomy where self-determination is evident as restoration of kinship and reconnection with whenua, which may be effective in countering the disenfranchising, disempowering, oppressive effects of the colonialist relationship (Lawson-Te Aho, 2013). Lawson Te Aho (2013, p. 201) states that: “healing is birthed in the consciousness of the root of spiritual suffering [inherent in] historical trauma and must be accompanied by the healing of history, whenua and kinship”. It is proposed that LF’s experience of long-term pain may in part be an effect of intergenerational embodied historical trauma related to whānau violence that shaped her upbringing where trauma was ‘inscribed’ upon her body (Kirmayer, 1996).

**Whenua embodied is grounding and healing**

An embodied connection to whenua/land is evident in RF’s vivid sensorial recollections of a childhood spent in nature with her tupuna/ancestors. She describes visual, audial and olfactory aspects of memories as though she is reliving the past through her senses. Her ‘daddy’ carrying her in his arms walking along the beach while reciting karakia was ‘like a meditation’ and RF says she can still “smell” and “hear” the ocean as it was on that day. Further memories of the children having to get up and go to the river with daddy in the dark, early morning hours where he would “wet them all with leaves dipped in the river” while reciting karakia, brings the spiritual nature of ancient Māori rituals encompassing whenua into present view. RF conveys through tears that the vivid memories she has of her tupuna and whenua are “very grounding”. While she seems to be mourning the old ways of her tupuna, acknowledging her past appears to have a healing effect.

The embodied relationship of Māori people to whenua/land is captured by Walker (1990) who states that “people are the land and the land is the people” (As cited in Durie, 2004) and in the Whanganui Iwi/tribe belief that the Whanganui River is their tupuna/ancestor, acknowledged in the whakatauki “I am the river and the river is me” ¹

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¹ The recent successful resolution of the long-standing Treaty of Waitangi claim by Whanganui iwi is a world first in that it granted Whanganui River the same rights as a
Indigenous peoples share similar understandings of a spiritual connection with the whenua/land, such that ‘the individual is a part of all creation’. The idea that, ‘the world or creation exists for the purpose of human domination and exploitation is absent from indigenous worldviews’ (Durie, 2004b; Walters et al., 2011). Mark (2012) found that Māori healers communicate with rongoā/plants for healing and sending healing to the land, people and ancestors, which informs understanding of indigenous people’s reverence for the environment, for people and for ancestors (Durie, 2004b; Kirmayer et al., 2001; Royal, 2003; Walters et al., 2011).

LF describes the effects of using rongoā/plant medicine derived from the whenua as “bringing her down” meaning ‘down to earth’ when she felt she was somewhat “out of her body”. Upon coming down, LF noticed that she “wanted to cry”. While RF’s and LF’s kōrero differ, it is evident that whenua and rongoā/plant medicine from the whenua has a ‘grounding’ effect, which appears to enable a grieving/healing process to begin. This reflects indigenous people’s understanding that when approached with respect, Papatuanuku the primordial earth mother is a source of sustenance, soothing, emotion regulation, guidance and healing (Kirmayer, Dandeneau, Marshall, & Phillips, 2011; Kirmayer et al., 2001; Royal, 2003). LF also describes that using rongoā/plant medicine made her want to “talk about the past, about everything that happened”, which may be viewed as being symbolic of reconnecting to whakapapa/genealogy, to ancestors and to an ancestral heritage that reaches back in time to the beginning of creation and to the ultimate parents Ranginui/sky father and Papatuanuku/earth mother (Lawson-Te Aho, 2013; Royal, 2003). Lawson te Aho (2013) clarifies the significance of whenua in relation to ancestors and whakapapa (p. 220):

Standing on the land where the ancestors once stood with the knowledge that those who once lived there continue to have influence through kinship, embodies the spiritual essence of whakapapa/genealogy and as such to be landless is to be

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living person “from the mountains to the sea” (Stuff, 2017).
disconnected from whakapapa [...] [where] the essence of wairua as it inhabits whakapapa is likewise disconnected.

It is proposed that for some Māori people, being landless, displaced or disconnected from whenua/land may be experienced as a spiritual suffering embedded in the historical trauma of being cut off from one’s whakapapa or sense of identity (Farrelly, Rudegeair, & Rickard, 2006; Lawson-Te Aho, 2013). In a discussion of ‘dissociation’ Farelly et al., (2006) refer to Māori spiritual illnesses such as ‘mate Māori’, ‘makutu’, ‘whakama’ and ‘whakamorimori’ as bearing resemblance to what in clinical psychological terms may be referred to as ‘dissociative disorders’ in which the person feels ‘possessed’, ‘cursed’ or overwhelmed by deep ‘shame’ or ‘sadness’, which reflects the meaning of the Māori terms above respectively. Dissociation is a key feature of post-traumatic stress, where painful memories of the traumatic event are split from the conscious memory and are lodged in the unconscious as fearful images, disparate feelings, nightmares and sensations that may be triggered in the present by things that remind the person of the trauma (van der Kolk & Fisler, 1995). It is proposed that the initial trauma of ancestors who were forcibly disconnected from land has had intergenerational effects upon psychic structures. Historical trauma research with American Indian Alaskan Natives reflects similar understandings of spiritual suffering as a result of disconnection from the land (Walters et al., 2011).

The pain of being disconnected or ‘dissociated’ from whenua and one’s identity or whakapapa, may be recognized as a feeling or sensation that the spirit has left the body (G. T. Mark, 2012). Lawson Te Aho (2013) maintains that “spiritual damage [may] take place in the disconnected space between the working knowledge of one’s identity or whakapapa [...] [and] a loss of a sense of belonging” (p. 157). This may explain why LF felt like she was “out of her body” and also why RF found that the memories of the rituals her daddy performed were “very grounding”, implying she was previously ‘not grounded’. Such statements convey the participants’ sense of being spiritually disconnected (Marks, 2012). It is proposed that when the spirit is disembodied, ill health may take hold causing physical and spiritual pain and suffering for the person (G. T Mark, 2012).
**Whenua is a source of belonging and identity**

JF’s reference to “going back home at Christmas”, where her children “walked over their maunga/mountain, Ngaiotonga”, exemplifies her sense of belonging to whenua/land. JF is pleased that her son’s knowledge of his maunga ‘Ngaiotonga’ enables him to establish whānau/family connections (whānaungatanga) in the wider Māori community. In Māori terms, this affirms his turangawaewae/place to stand in relation to others who belong to the same hapū/sub tribe or iwi/tribe, making visible the continued importance of whenua/land for secure Māori identity. Pere (1991) asserts that turangawaewae is not easily translated by a single English word and is best defined as the place of one’s ancestors where one feels that she/he has the right to stand up and be counted, a place of belonging and identity. Durie (1998) maintains that Māori identity is intrinsically linked to the land/whenua through the sense Māori have of belonging to it, of being part of it and of being bonded with it.

JF’s kōrero makes evident that Māori identity continues to be established through whakapapa that links whānau and hapū through a common ancestor to whenua (Metge, 1990). Cohesiveness of whānau and hapū is maintained through a sense of shared responsibility and collective agency in kaitiakitanga/guardianship of whenua (Durie, 1998; Metge, 1990). JF’s kōrero also makes evident that land loss incurred during the colonial period and the subsequent impoverishment this created among rural Māori communities birthed the diaspora (Lawson-Te Aho, 2013) where rapid urbanization disrupted whānau, hapū and iwi relationships. Many Māori were alienated from knowledge of whakapapa and tikanga/customs associated with whenua that were central to maintaining tribal unity and a secure Māori identity rooted in land and people – mana whenua and mana tangata (Durie, 1998; King, 1983-2007, 2003; Lawson-Te Aho, 2013; Pere, 1991; Royal, 2003; Waitangi Tribunal, 2002, 2014a; Walker, 1990:2004). The Hunn Report (1960) highlights research by the Māori Women’s Welfare League (as cited in Armitage, 1995, p. 182) confirming that,

> Community contact was immediate and close if you lived within tribal boundaries. A Māori sense of identity was related in large measure to tribal identity [and the] understanding [of] social, spiritual and cultural responsibilities [which] gave
confidence and self-esteem. [Living] outside the tribal region it was distant and difficult to sustain for trips back for turangawaewae [standing in the tribe] [which] were essential to give support to whānau and hapū, to tangihanga [funerals] and other hui [gatherings] associated with the protection of land and food resource areas.

Of all six participants, JF is the only one who talks about maintaining strong connections to her turangawaewae which means making regular trips “back home” so that her children remain connected to their whenua and know “who they are” in relation to where they are from. In this sense, JF lives between two worlds, the urban and the rural. Little is known about the pressures Māori may face with maintaining connections to tribal whenua. In the 1960s, Jane and James Ritchie (1970, pp. 139-145) conducted interviews with Māori mothers who had moved to towns and cities to assess their child-raising practices and reported concern about the high levels of stress and anxiety they displayed. Māori mothers reported that frequent visits back home relieved anxiety (as cited in Metge, 1990). While JF is not new to the city, stress may be a factor in her experience of long-term pain (Chapman et al., 2008). Making regular trips back home must be balanced with keeping on top of her busy urban lifestyle as a teacher, mother and grandmother.

In other research, Lawson Te Aho (2013) reports that urbanization created tension over whenua between whānau who stayed and those who moved to the cities, where those who stayed claimed ahi kaaroa/fires burning status (p. 220). Stress and tension related to whenua is corroborated by G. T. Mark (2012) who found that one of the main reasons Māori people may seek healing is for illnesses they believe are related to transgressions of whenua such as fighting over the land, taking land that wasn’t theirs and signing land away’. In (Cooper, 2012a), representatives of the Ngātihine hapū convey the difficulty of reaching those who are disconnected from the hapū because many whānau who have moved away and are overseas do not want to be part of hapū affairs. Statistics from 2014 showed that 62% of Māori had been to their marae but only 34% had visited within the last 6 months (Statistics New Zealand, 2014b). This suggests that maintaining connection to tribal whenua and marae is a challenge for many urban Māori who remain disconnected from their hapū (Cherington, 2009). It is proposed that disconnected identity, identity under threat and stress and tension related to whenua are effects of historical trauma that may keep some Māori whānau apart. This may contribute to some
participants’ experience of long-term pain. Māori people may continue to experience pain and suffering as a result of land loss.

**Subtheme 2 – Whakapapa**

All six participants in the current study have knowledge of their whakapapa in that they are able to name both their hapū and iwi. One participant in particular, however, has struggled with her identity and is one of two participants who identify that whakapapa has spiritual significance for healing pain and suffering that is rooted in the past. Lawson Te Aho (2013) maintains that while whakapapa has a “spiritual heart”, it “may be construed as the title deed to land and kinship relationships, and the foundation for claiming one’s identity” (p. 220).

**Healing whakapapa may restore the voice of Māori women**

There are two aspects running through RF’s kōrero regarding whakapapa. The first relates to a struggle with identity where not knowing the truth about her paternal whakapapa/genealogy causes her anguish. Secondly, this is interwoven with suffering related to sexual abuse she endured as a child, which RF conveys may have been intergenerational in her maternal line. While she has “spent many years” in mainstream counseling and other therapies, she continues to feel that she does not have a voice and suffers pain in her wairua/spirit and tinana/body. Recently, RF has started to wonder whether the pain she is carrying “is even hers”. She has come to believe that historical factors embedded in her whakapapa/genealogy may be contributing to her continued suffering. She expresses that healing “beyond the grave” or “healing [in her] whakapapa” may be needed.

**Whakapapa and identity**

Lawson te Aho (2013) maintains that when one is disconnected from whakapapa, consciousness of one’s identity becomes disconnected (Lawson-Te Aho, 2013; O’Conor, 2007). Māori illnesses as described earlier may be related to disruptions to whakapapa and a struggle with identity (Lawson-Te Aho, 2013; G. T. Mark, 2012; O’Conor, 2007),

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2 For RF this is evident in recurring nightmares and feeling disconnected from identity.
which is a significant factor in RF’s life-world of long-term pain. In O’Connor, (2007), a Māori healer relays whakatauki that were often used by his elders – ‘tukino maho whakapapa koe eheki’ meaning ‘let your whakapapa lift you’ and ‘titiro ki to whakapapa’ meaning ‘look to your whakapapa’, which reminds us that we are connected to a family of ancestors who may imbue us with a sense of pride in who we are, and/or who may be able to guide us in times of need. In Māori terms, a lack of knowledge of whakapapa may represent a barrier to knowing good things about who one is (O’Conor, 2007).

**Whakapapa and historical trauma**

RF’s sense that the pain she carries “may not be hers” may be understood from a Māori worldview of whakapapa. In G. T. Mark (2012) a healer conveys that “something could’ve happened way back in your great-great-great [...] grandmother’s time [and] that has a physical influence on your state of health today [and] could be something that’s repeated in generations” (p. 113). It is proposed that intergenerational sexual abuse in RF’s whakapapa is related to social changes that occurred within Māori society where colonial influences of Eurocentric notions of women as ‘inferior’ disrupted the gender balance inherent in Māori society (Cooper, 2012a; Lawson-Te Aho, 2014; Mikaere, 2005). Disruption to social structures and tikanga/customs rendered Māori women and children more vulnerable to interpersonal violence. Vulnerability of women and children is echoed in other historical trauma research among American Indian Alaskan Native communities (BraveHeart, 2000). Legislation in which the wife and children were deemed the property of men and which also sanctioned physical discipline of them confirms the assertion. Mikaere (2005) rejects European representations of women and places manawahine/the strength of women firmly within the context of whakapapa (p. 136):

The roles of men and women in traditional Māori society can be understood only in the context of a Māori worldview, which acknowledged the natural order […]. Both men and women were essential parts in the collective whole, both formed part of the whakapapa that linked Māori people back to the beginning of the world, and women in particular played a key role in linking the past with the present and future… therefore every person within the group had his or her own intrinsic value.
An understanding the Māori perspective of historical trauma relative to the construct of whakapapa is discussed by E. Duran (2006) who states that “spirit seeks after spirit”. For example, if whakapapa is ‘the container’ within which the unresolved trauma of the past generations is held, then until that container is purged of the spirit of trauma and replaced with the spirit of aroha/compassion for life through healing and reconnection, it is possible that trauma in the mind, body and spirit may continue to be passed on to future generations (B. Duran et al., 1998; E. Duran, 2006; Lawson-Te Aho, 2013; G. T. Mark, 2012; O’Conor, 2007; Walters et al., 2011). In the current study, although RF feels she does not “have a voice”, in sharing her kōrero/narrative, it seems she is able to give authentic voice to the person she is in relation to the very spiritual nature of her upbringing. She articulates clearly a spiritual understanding of her embodied pain in relation to her past and her whakapapa and this appears to affirm her identity as a Māori woman. Lawson Te Aho (2013, p. 210) maintains that,

> Soul healing therapies are theorized as being best situated in whakapapa/kinship relationships and histories thereby creating imperatives for the rebuilding of a deep consciousness of those histories, their trajectories and impact on the conceptualisation of a Māori understanding of ‘te tapu o te tangata’, being the sacredness of the divine nature of the individual.

The preservation and integrity of whakapapa is spiritually significant in that it encodes tikanga/Māori customary practices of conduct and responsibility for one another to promote the healthy functioning of kin relationships upon which ‘te tapu o te tangata’ or ‘the sacredness of humanity’ is based (Cooper, 2012a; Kruger et al., 2004; Lawson-Te Aho, 2013). In research exploring whānau violence in a single tribe, Cooper (2012) sought the views of Ngāti hine iwi/tribal representatives who expressed the importance of whakapapa protection. One kaumatua/elder expressed the following (p. 146):

> We’ve got to start talking about mana and [...] about whakapapa protection and that we are actually protecting the whakapapa of the ‘uri o Hine-a-maru’ ['the descendants of [the ancestress named] Hine-a-maru'.

The same elder suggested that knowing and affirming one’s whakapapa status may help victims to make a stand against abuse. In the act of saying “Actually you can’t abuse me... he uri ahau no Hine-a-muri [I am a descendant of Hine-a-muri]” (p. 146), the sanctity of
the wahine/female [ancestor] Hine-a-muri is being reinstated, which may be viewed as symbolic of restoring the mana of Māori women in the tribe. While RF continues to experience pain and suffering on different levels, it seems that Māori healing has enabled a deeper inquiry into the meaning of her pain as being embedded in her whakapapa. In reconnecting with Māori ways of ‘being’ and ‘knowing’, RF is honouring her own thoughts on the matter of intergenerational sexual abuse, healing her whakapapa and her Māori identity, which may be considered symbolic of restoring her voice and the voice of Māori women.

**Whakapapa healing is transformative**

KF describes witnessing her teenage daughter’s experience of whakapapa healing, which sheds further light on the understanding of Māori cultural perspectives regarding healing the past and present. The tohunga who treated KF’s daughter recognized she was suffering from embodiment of ‘raruraru/a problem’ she was carrying from the past related to her father’s whakapapa. KF explains that the benefits of Māori healing for her daughter were that it approached the problem from both a “physical and spiritual” perspective. Healing involved a focus on whakapapa through karakia/prayer while at the same time applying romiromi/deep tissue bodywork in order to remove the negative entity/energy from her body. Healing both the body and the spirit are central to Māori healing practices and in the case of KF’s daughter, led to transformational change. Māori healing practices transcend time in that they include ancestors as part of the healing group (G. T. Mark, 2012; O’Conor, 2007). Such beliefs are common among indigenous peoples and are central to healing the psychic pain and suffering of historical trauma (Brave-Heart 2000; Walters et al., 2011).

Tohunga Papa Joe shares his understanding that when a person dies, a part of their wairua/spirit may pass to someone close to them, which may explain the links Māori people may make between the living and tupuna/ancestors who have passed on (Moon, 2003). In Marks (2012), healers describe that they are merely the intermediaries for healing, and that it is the wairua/spirit of tipuna/tupuna/ancestors who give the messages for healing. It is evident that a person’s ancestors may also require healing (G. T. Mark, 2012; O’Conor, 2007). The illness of ‘mate Māori’ relates to transgressions of tapu and ‘makutu’ involving external spiritual forces and embodiment of ngangara/spiritual entities, that are considered to be related specifically to the person’s
whakapapa (G. T. Mark, 2012; Moon, 2011; O’Conor, 2007). Research shows that spiritual beliefs remain highly significant to Māori people and are central to Māori health constructs (Bacal & Jansen, 2006; Cooper, 2012a; Cram et al., 2003; Durie, 2004b; Lawson-Te Aho, 2013; G. T. Mark, 2012; Moon, 2003; O’Conor, 2007; Roberts, 2005; Royal, 2003; Statistics New Zealand, 2014b). KF’s view of her daughter’s healing experience is that “while it was painful to witness, it was worth it”. KF says that the “stuff she had been carrying around with her” that was “making her angry” was transformed, which eased whānau tension. This in turn may have helped eased KF’s stress and her long-term pain, making evident that healing may radiate outwardly to affect others. This exemplifies the positive aspect in the notion that spirit seeks after spirit (E. Duran, 2006).

Subtheme 3 – Whānau

All participants have a strong sense of whānau values and an appreciation of collective agency. A discussion of the collective health and wellbeing with two participants highlights how the meaning of whānau/family has changed over time. The life-worlds of two participants who experience ‘worry’ about their teenage sons becoming isolated from whānau in the urban environment reflect historical trauma. The concept of whānau values being taught in the educational setting indicates that whānau values were lost along with cultural knowledge that was held within whānau. For one participant in particular, such loss is a source of historical trauma. Reclaiming and restoring collective values of whānau/family is highlighted as being an important source of healing for some participants.

Whānau support of health and wellbeing

For KF and JF, the involvement of whānau in Māori healing is reflective of the collective values they share, where whānau do certain things together (Pere, 1991). While KF became involved in Māori healing and included her whānau in the experience in her later years, JF’s experience of Māori healing began with her grandmother, who she remembers, “often used rongoā and mirimiri/massage” with her, her siblings and cousins, as a natural part of life growing up. JF’s way of life embodies the whānau values she was raised with, wherein Māori healing continues to be a central mechanism for maintaining the health and wellbeing of her whānau. JF’s whānau way of life is most representative of what
Metge (1990) refers to as the classic\(^3\) Māori whānau, within which three generations or more of her extended whānau live together or/and in close proximity. JF spent her childhood in a small rural community and was raised with the belief that the needs of the collective come before the needs of the individual. She grew up with aunties, uncles and grandparents around her, who shared in the workload of raising the children, caring for the marae and providing manaakitanga/hosting for hui and tangihanga. As a child JF, like all Māori children, was free to move between whānau and often ended up at her grandmother’s house. JF’s relationship with her grandmother reflects a core value of kinship where kaumātua/elders take responsibility for caring for and imparting knowledge and wisdom to younger generations (Pihama, Smith, Taki, & Lee, 2004). JF maintains that her grandmother always made sure that she and her cousins were ‘really tight’.

While JF and KF both have strong whānau values, in JF’s life-world, being raised in the classic sense of whānau means that children are included in Māori healing practices from the time they are born, where nurturing and bonding through mirimiri/massage and other healing practices are normalized. In JF’s life-world, embodied wellbeing is modeled as being central to a whānau way of life and, it is possible that such practices may be protective against health risks (Atkinson, 2013). This raises the possibility that for some Māori whānau who have conformed to English nuclear family norms, reduced support systems may pose a risk to health outcomes where isolation may increase stress and lead to other health demoting behaviours (Metge, 1990; Rangihau, 1988). Risk to health outcomes may include risk of developing long-term pain conditions. It is proposed that for some Māori people, long-term pain might be an effect of embodied historical trauma related to societal changes to ‘classic whānau’ structures that were wide systems of support, care and nurturing of children and whānau.

\(^{3}\) Denotes 19th-century meaning of the term whānau (Metge, 1990)
**Maintaining whānau values may be stressful for Māori mums in the city**

RF and JF both express feeling worried about their teenage sons becoming isolated from whānau in the urban environment; however, RF seemed to experience a heightened response to stress when her son left home, which may have been exacerbated by a recent Māori healing session in which awareness of her body became amplified. RF recognizes that she is “feeling the worry for her son in her body” and that it is “all tied up with the past and emotions that came up in healing”. The worry for her son makes her feel physically ill and she finds herself retching then has to lie down for a day. RF’s symptoms indicate she may have been experiencing a state of physiological hyper-arousal – an over-reactive response to stress that may be driven by anxiety (Gatchel et al., 2007; van der Kolk & Saporta, 1991). Hyper-arousal and anxiety are also associated with idiopathic long-term musculoskeletal pain conditions (Gatchel et al., 2007; McFarlane, 2010).

In contrast to RF’s heightened stress response, JF’s “worry” about her youngest son being “the only one of her children to experience being at school without siblings or cousins” does not appear to have impacted upon her body as far as her kōrero conveys. While it is possible that repeated exposure to micro stressors of daily life, prolonged worry or anxiety may be associated with exacerbation of long-term musculoskeletal pain conditions (Cornwall & Donderi, 1988; Crockett et al., 2007), it is unclear whether these are factors in JF’s long-term pain. JF has a high level of cultural efficacy in that she speaks fluent te reo and has regular contact with her turangawaewae and wider whānau, whereas RF does not speak fluent te reo and does not keep regular contact with her wider whānau or turangawaewae. It is possible that JF’s high level of cultural efficacy may be protective against the bodily effects of stress or worry, while RF’s struggle with identity and comparatively low cultural efficacy may put her at an increased risk for impaired coping in response to stress (Crockett et al., 2007; Eccleston et al., 1997; Kirmayer).

The idea that a secure Māori identity may be protective against health risk has been advocated since the 1920s when Apirana Ngata realized the extent with which European dominance was taking hold (Walker, 1990:2004). The Hunn Report 1961 makes evident the effects of urbanization and assimilation upon the Māori identity, wherein it notes the expectation that a percentage of Māori might experience difficulties related to their Māori identity (Hunn, 1961). It is possible that problems with identity construction may exacerbate long-term pain conditions (Eccleston et al., 1997). In a 1995 report, Mason
Mason Durie commends the launch of the Massey University longitudinal study 'Te Hoe Nuku Roa', which seeks to understand the diverse realities that Māori live in, where Māori identity and change in Māori identity over time are measured based on involvement with Western and Māori social structures. In recent research that builds on the longitudinal study, Sibley and Hokamau (2014) devised and tested a comprehensive measure of cultural efficacy (92 questions over 6 domains) to establish differences in Māori identity (Sibley & Hokamau, 2014). The measure was used to screen for adverse mental health risk among 670 Māori and findings showed that a higher level of cultural efficacy has a buffering effect – meaning it offers protection – against risk of adverse mental health among those identifying as sole Māori, compared to sole Māori with low cultural efficacy. This has implications for how sole Māori with low cultural efficacy respond to stress where adverse mental health may be indicative of impaired coping related to isolation and poor support systems (Crockett et al., 2007), and where support of whānau is the foundation of a Māori way of life (Metge, 1990). Māori mental health statistics are of major concern (Oakley Brown, Wells, & Scott 2006) and research suggests that long-term pain is associated with poor mental health among Māori (Scott, McGee, Schaaf, & Baxter, 2008).

Cultural efficacy may impact upon the construction of Māori identity and may be critical for understanding the different experiences Māori people may have of long-term pain (Eccleston et al., 1997). It is likely that RF’s long-term pain is related to acculturative stress (Crockett et al., 2007) and identity construction, which may be viewed as being an embodied effect of historical trauma associated with 150 years of struggle against marginalization of the Māori culture and identity. In contrast to RF, while JF’s long-term pain may be exacerbated by repeated exposure to micro-stressors in her daily life (Lawson-Te Aho, 2013), it is unlikely to be related to Māori identity or low cultural efficacy.

**A struggle with identity leads to a life marred by gangs, violence and alcoholism**

In sharing her thoughts about what pain means to her, RF is taken back to memories of “not getting to know her real mum until she was thirteen”. RF explains that she tried to emulate the ‘tough’ image she held of her mum that she had formulated from the stories she heard about her being a strong, hard woman. She says that this may have influenced her attraction to a life of violence, gangs and alcoholism. RF, however, also contends that
she “doesn’t know how it happened” because despite having an amazing upbringing, she became an alcoholic and her whānau [siblings and cousins she grew up with] “all ended up thieves and alcoholics”. RF’s narrative makes visible the social problems that enveloped Māori whānau as they grappled with adjusting to the norms of Western society in the face of assimilation policies, adversity, racism and marginalization (Armitage, 1995; Hunn, 1961; Rangihau, 1988). While these matters are complex and difficult to attribute cause to, the reconstruction of Māori identity away from collective whānau values toward a Western ideology that prioritized the individual, seems central (King, 2003; Metge, 1990). However, the political forces that disrupted the integrity of whānau/family and Māori social values remain hidden from view and provide context to RF’s narrative that needs addressing.

While Māori in New Zealand were not exposed to the same level of oppressive family and child welfare measures that were part of assimilation policy in Australia and Canada (Armitage, 1995), from 1960 onwards all three countries followed a similar course of ‘integration’ where policies developed to meet the mainstream settler majority were imposed upon indigenous people. New State policies in New Zealand “cut across Māori philosophies and practices of seeing the child within the parameters of whānau and not as an isolated individual” (Armitage, 1995). The atawhai/Māori customary adoption system was extinguished (Metge, 1990) and extended family values were from then on ignored and denigrated because they no longer satisfied the view of Pākehā legislators and practitioners. Gang life for many Māori became a matter of survival, of maintaining identity through establishing, in a sense, another form of whānau. Involvement in gangs responded to the oppressive forces of entrenched poverty and despair that was common among many whānau and it is evident that urbanization added fuel to the fire (King, 2003).

Integration policy saw an exponential rise in the involvement of Māori youth in child protection and juvenile justice system services and it is probable that the 12 male cousins/siblings that RF grew up with “who all ended up thieves and alcoholics” were at the mercy of this system. In 1956, Māori made up 9.4% of the youth population and 21% of cases brought before the courts and in 1986 they made up 12.4% of the population and a staggering 54% of cases brought before the court (Armitage, 1995). By the early 1980s, it became evident that imposing a Pākehā system upon Māori was unacceptable. In 1986,
lawyer Moana Jackson challenged racialization and criminalization of Māori men in the justice system (Jackson, 1988), which is rooted in colonial history (Binney, 1983; Jackson, 1988; Waitangi Tribunal, 2014a). A Royal Commission of Enquiry in 1988 into the existence of institutionalized racism within the Social Welfare system led to whānau values being re-instated into Social Welfare policy; however, the damage was already done. In 2017, the Human Rights Commission called for an enquiry into the systematic physical and sexual abuse perpetrated upon many thousands of Māori children and youth in State care dating back to the 1950s (Human Rights Commission, 2017). This is indicative of structural violence and the historical attitude of the State in taking all care and little responsibility for the health and wellbeing of whānau. Despite changes, recent statistics continue to document high Māori incarceration rates (Ministry of Justice, 2016). The organization ‘Pillars’ identifies that at any one time at least 20,000 children in New Zealand have a parent who is in prison (MacGibbon, McFelin, & Gordon, 2011). Considering Māori make up over 50% of the prison population, it is likely that most of these children are Māori.

RF’s life-world growing up was influenced by the male cousins/siblings she grew up with. Exposure to sexual abuse, urbanization, gangs, alcohol and violence was no doubt traumatic in many ways. Research suggests that exposure to trauma that is overwhelming and repetitive may lead to dissociative states in which traumatic memories become locked into the unconscious. This in turn may lead to lasting alterations in the hypothalamic pituitary axis, which comprises the neuroendocrine system pathways that regulate homeostasis (van der Kolk & Fisler, 1995; van der Kolk & Saporta, 1991). Studies show that lasting alterations to homeostasis may occur that may also affect the onset and maintenance of long-term pain states and other disorders through various pathways of the hypothalamic pituitary axis. Lasting changes may also impair the body's ability to adequately respond to and bounce back from subsequent stressors (Courtney, 2009; Lumley et al., 2011; McFarlane, 2010; Ruden, 2008). Emerging epigenetic research shows that lasting biological changes to the hypothalamic pituitary axis that may occur as a result of exposure to trauma are passed on to future generations (Kellerman, 2013). This research supports the current thesis that an effect of embodied historical trauma is evident as long-term musculoskeletal pain in this group of urban Māori adults.
Durie maintains that “clinicians may only be able to treat the symptoms [of illness], but it is the wider social circumstances that mainly affect wellbeing” (Durie, 2004b). Cooper (2012b) asserts that when dealing with Māori clients, clinicians need to realize that history may be central to many of the problems Māori people come with and she encourages clinicians to learn as much as they can about New Zealand’s colonial history in order to understand how historical trauma may impact upon the present health of Māori clients. Further to this, Cooper maintains that non-Māori clinicians may tend to view the world through their own lenses and in doing so may fail to appreciate how colonization has impacted upon Māori identity, self-esteem and life circumstance (Cooper, 2012b).

**Displacement of cultural values pertaining to whānau is a source of soul pain**

It is evident that JF sees the irony in Māori values such as whānauangatanga being taught in the educational setting. For JF, it is a matter of having been brought up the Māori way where authentic expression of the cultural life-world she maintains at home with her children is somehow threatened by Western ways of being and doing things. JF makes the observation that the parents of children she teaches at her Kura Kaupapa represent “many Māori [who] don’t know how to be Māori because they were not brought up that way”. This raises the question of whether it is even possible to learn or integrate whānau values if they are not ‘lived’ in the home. Perhaps there is a sense of whānau values being given a token appreciation whereby if they are not integrated in the home, they may risk becoming another idealized relic of the Māori past that can be looked back upon fondly. In Māori society, the acquisition of knowledge begins the day you are born if not before and continues as an integrated process embedded within whānau, hapū and iwi dynamics where relationships such as those between tuakana/older sibling and teina/younger sibling and tupuna/grandparent and mokopuna/grandchild, are central (Pihama et al., 2004).

As a young girl, RF’s life-world was “steeped in tikanga” or Māori ways of being and knowing. At times, strict tradition determined how she behaved towards her koro/granddaddy – a tohunga – who lived under the auspices of tapu/sacred restriction. While on the surface RF appears capable and confident, there is an overwhelming sense of vulnerability, as though she is gathering up and putting back together the broken pieces of a talisman that once protected and nourished her mauri/life essence. As RF
describes the photo she shows of her koro/granddaddy wearing a traditional feather cloak, a deep sorrow arises, and she starts to tangi/cry. It seems RF is carrying a soul pain/wound (E. Duran, 2006) related to the breakdown of her whānau, whakapapa and tikanga where tohunga knowledge that was held in her family would normally have been preserved in the act of being passed on to a chosen family member (King, 1992). Instead, centuries of whakapapa and healing knowledge held within RF’s whānau is suspended in time. There is the sense that RF is mourning a part of her identity that was shaped by the tohunga who raised her and the rituals that seemed so central to her life-world growing up.

Historical trauma related to cultural discontinuity or loss of one’s culture may lead to stress and anxiety disorders (Danieli, 1998). Kirmayer (1996) advocates that cultural bereavement needs to be included in research and in clinical practice because it acknowledges that it is through narrative traditions and participation in communal life that people come to value themselves. This has implications for how people who experience both loss of culture and participation in communal life come to ‘devalue’ themselves. It is evident that for RF, loss of culture is significant and while JF does her best to maintain the Māori values she was raised with, she recognizes that authentic ways of ‘being Māori’ are under threat of becoming Westernized. It is possible that loss of culture and threat to authentic cultural identity may play a part in both RF’s and JF’s experience of long-term pain (Crockett et al., 2007).

**Collective values restore Māori identity and belonging**

The narratives of FM and LF make visible that reconnecting with Māori healing practices is an avenue for restoring Māori identity and collective values, which may ameliorate the effects of stress associated with cultural discontinuity (Hunn, 1961; Kirmayer, 1996). For both FM and LF, Māori identity is strengthened through engaging with Māori healing practices that prioritize collective whānau. FM explains that the group healing experience is comparable with “having a shared experience at the marae”, which is an acknowledgment of his cultural heritage that is largely defined by collective ways of ‘being’ and ‘knowing’. The experience is significant for FM on a healing level in that he thinks “it would have to add to it”. It is as though FM is reclaiming and embracing a part of his identity that he may have rejected at an earlier point in his life. Rejection is evident in statements he makes about “not really being into Māori healing” or “Māori things”
when he was younger and in the whakama/shyness he displays in using Māori terminology. A lack of confidence in one’s Māori identity is recognized in Māori who are ashamed of being Māori because they cannot speak te reo and have little knowledge of things Māori (Awatere, 1984; Rangihau, 1988).

A Māori healer and mentor has reminded LF of the value of whānau and the role she has in her nieces’ lives after her sister passed away. LF describes being suddenly struck, by the realization of the importance and value of whānau where the significance of her role as ‘kaitiaki’ or caretaker for her nieces became apparent. She uses the term ‘manaaki’ – which literally means to ‘uphold the mana/strength of’ – in referring to the support she is being called upon to provide. There is the sense that LF’s identity as a Māori woman is being affirmed through forces much greater than she imagined, as though she is being guided by spirit/wairua to live a life defined by collective whānau values. It also seems that in caring for her nieces, she is honouring her sister’s life. This is especially significant in light of the trauma LF experienced in her immediate whānau growing up. In reconnecting with whānau values, LF is also reclaiming mana wahine/womanly power, whakapapa and a sense of belonging. This appears to be a significant stage of healing in LF’s life. Acknowledging the healing that Māori participants in the current study are experiencing through engaging Māori healing practices is essential because it frames historical trauma as containing within it the potential for transformation, growth and learning (Lawson Te Aho, 2013).

Subtheme 4 – Te Reo Māori Language and Culture

While all participants speak fluent English only one female participant says she speaks fluent te reo/Māori language. One male participant said he understands te reo but cannot speak fluently. The remaining three women in the study have good basic knowledge of Māori words and some phrases, while the remaining male is tentative about using even basic words. Participants live in diverse realities where mainstream society and schooling continue to marginalise Māori language and culture. The lifetime struggle of two participants with learning te reo highlights the subtly painful effects of assimilation policy upon a particular subgroup of Māori.

Te reo Māori and the marginalized Māori identity
JF speaks fluent te reo and tries to reinforce Māori language with her grandson who attends a mainstream school. While her moko/grandson is proud to be Māori, he is aware of the differences between life with his ‘nan’ in which Māori is spoken regularly and life in his wider social sphere where communication in English is predominant. In telling his ‘nan’ to speak properly [meaning, to speak English] at his league games, it seems her moko is worried about feeling whakama/shame in front of his peers. He wants to be accepted by his peers, which means not standing out as being different from them. While JF shared the story with humour, it seems she perhaps regrets that her moko is living in two worlds, one in which his identity as Māori – in her moko’s mind – is not accepted as normal, as it was in her childhood. Rose Pere (1991) maintains that “language is the lifeline and sustenance of a culture that enables a child to link up with everything in his or her world. It is not just communication, but an important form of empowerment used to transmit the values and beliefs of a people” (p. 9). This speaks to the heart of the importance of Māori language for Māori children’s identity. A quote by Mason Durie at the Hui Taumata (2001) in Consedine and Consedine (2005) advocates for “the ability of Māori to move freely and comfortably between two worlds without compromising their Māori identity” (p. 129). The threat of whakama/shame JF’s moko feels in the presence of his mainstream peers suggests his Māori identity is somewhat compromised by the English sociocultural norms he is mainly exposed to. The Report of The Waitangi Tribunal on The Te Reo Māori Claim (1986) clarifies that language is first and foremost a social phenomenon that cannot flourish in a social vacuum (Waitangi Tribunal, 1986). The mastery of any language is affected by its use in a wide variety of social contexts. It is evident that social changes brought about in New Zealand’s recent history through assimilation strategies, urbanization, industrialization and consolidation of Māori schools under the public school system, have all greatly reduced the contexts in which Māori people are able to use te reo in day-to-day life (Waitangi Tribunal, 1986). This continues to be a central threat to the survival of Māori language (Waitangi Tribunal, 2011).

**Incorrect pronunciation of te reo by mainstream teachers and Māori identity**

The incorrect pronunciation of Māori language by JF’s moko’s/grandson’s teacher in his mainstream school raises questions regarding the secure identity of Māori children in mainstream schools. It is possible that exposure to incorrect pronunciation may cause
JF’s moko whakama/embarrassment, confusion or frustration brought about by wondering if the knowledge imparted by his teacher is correct or not. While his ‘nan’ is able to affirm her moko’s correct pronunciation there is a discrepancy wherein his position as a student is subordinate to his teacher’s powerful position as expert, which may in her moko’s mind mean that his teacher’s knowledge defies questioning. While questioning his teacher might be considered disrespectful, ineffective pronunciation of te reo by Pākehā teachers in mainstream schools – albeit unintended – may be doing more harm than good. While the teaching of Māori language in the mainstream setting is inherently positive, a limited appreciation of pronunciation and the diversity and depth of te reo may be considered a form of epistemological violence (L. T. Smith, 1999).

Pere (1991) maintains that the English translation of the various forms of te reo/Māori language had little to no appreciation of the depth of information and knowledge from which Māori language traditions were executed. A single word or phrase may convey a host of meanings depending on the context and the tone of voice in which it is said (Pere, 1991). The poetical nature and diversity of te reo is indicative of its innate power to move and transform, a quality that is lost in English translation (Pere, 1991) and incorrect pronunciation. Pere (1999) laments that “the problem at this time is there are many Māori who do not know its depths, or, the breadth of the language” (as cited in Pihama et al., 2004. p. 22). It is possible that if left unchecked, the teaching of te reo in mainstream schools may perpetuate the problems articulated by Pere. Current debates suggest that further marginalization of Māori identity is evident in the lack of concern for the preservation of unique iwi dialects (Waitangi Tribunal, 2011) and while recent steps have been taken to address the problem (Te Puni Kokiri, 2016), there is some way to go before a bicultural, bilingual society that many Māori leaders dream of is achieved. It is clear that the responsibility for maintaining the oral tradition of te reo falls upon all Māori people and for many, it may be a means of recovering ‘life essence’ or ‘mauri ora’ (Pihama et al., 2004); however, findings in the current study suggest that for a particular group of Māori, recovering te reo may be an ongoing struggle.

**Struggle with learning te reo**

RF and BM convey experiencing a lifelong struggle to become fluent in te reo. RF is approaching sixty years of age while BM is in his early forties. This is relevant because both participants fall into a group of first and second generations of Māori who were
encouraged to speak only English both at home and at school. While RF was exposed to tikanga and Māori language when she was younger, it is evident that in her high school years, Māori language and knowledge were still being actively suppressed within the public school system (Simon & Smith, 2001). While BM maintains that he can “understand te reo”, he is unable to speak fluently, and he puts this down to “whether your mother wanted to teach you at home or not”. It is evident that many Māori parents who moved to the cities succumbed to the effects of assimilation, deciding it was best that their children learn to speak only English as they assumed it would mean a better education and better employment prospects (Waitangi Tribunal, 1986). Such beliefs compromised Māori identity in the hope of a better future for the children. There is limited research on how assimilation policy impacted upon BM’s and RF’s generations specifically (Simon & Smith, 2001); however, emerging research suggests that the struggle with learning to speak te reo fluently in first, second and third generations of Māori adults who learnt only English growing up, may be normal (C. Smith, 2017). Cheryl Smith’s (2017) emerging research seeks to increase understanding of the trauma associated with disconnection from and loss of te reo among first, second and third generations of Māori who were taught only English (C. Smith, 2017). RF’s lifelong struggle with learning te reo impacts upon her sense of wellbeing where her recent experience of “feeling really flat” is attributed to “failing yet again” in her goal to become bilingual. She says that she “does not understand why” over the years she has not been able to achieve fluency because “it is just so important” to her. The difficulty of learning te reo in a social vacuum has been addressed and it is evident that to achieve proficient fluency in Māori language, te reo needs to be spoken both in the home and in wider social contexts (Te Puni Kokiri, 2016; Waitangi Tribunal, 1986, 2011). RF’s struggle may in part be influenced by being isolated from her wider whānau, which may limit her opportunities for engaging in te ao Māori.

While BM seems indifferent to the fact of not being able to speak fluent Māori, there is a sense of regret and almost whakama/shame in his demeanor when he speaks about the subject (he hangs his head and sighs), as though his identity is somehow being brought into question. While BM conveys a sense of pride in his relatives who have “Master’s degrees in Māori language”, sharing this information appears to highlight the fact that he himself is not fluent. BM is trying to teach his children to speak te reo at home and says he would like to “extend his knowledge”; however, unless opportunities are created for
both him and his children to use te reo within wider social contexts, it is unlikely that
BM’s efforts at home will alone lead to fluency for him or his children. The reclaiming and
restoration of Māori language is considered central to healing the collective soul
pain/wound (E. Duran, 2006; L. T. Smith, 1999) that some Māori may experience as a
sense of enduring loss and cultural discontinuity (Kirmayer, 1996). While there are many
avenues for adults to learn te reo in the educational setting (Waitangi 2011), RF’s and
BM’s life-worlds make evident that a struggle with learning te reo may lead to feelings of
anger, depression, anxiety about identity and perhaps feelings of
whakama/embarrassment, which may contribute to exacerbations in their long-term
pain (Sarno, 2011).

Conclusion – Theme 1

Whenua, whānau, whakapapa and te reo/Māori language and culture are integrated
constructs and have been made visible as important markers of Māori identity that also
represent sites of historical trauma. Struggle, alienation, pain and suffering as well as
grounding, healing, whānau support, wellbeing, belonging and transformation are
addressed. The intergenerational effects of historical trauma upon participants’ lives is
evident as ‘embodied soul pain’ in which displaced identity in relation to whenua/land,
culture and language is a central feature that is heartfelt. For two participants in
particular, historical trauma in relation to loss of whenua, whakapapa, whānau and Māori
language and culture is inscribed, meaning that it was embedded in their lives and bodies,
growing up. Participants’ efforts to maintain cultural values such as those pertaining to
whānau and te reo Māori language, in spite of the dominance of Western culture, is
evident and represents hope and determination among participants for maintaining their
Māori identity. Exploring participants’ experiences of long-term pain within the context
of Māori healing raises many questions about their autonomy in which personal and
collective agency and the freedom to pursue authentic Māori ways of being and knowing
on a daily basis is limited by the resources that are made available to Māori in modern
society. While Māori live in diverse realities, the ongoing struggle to maintain te reo Māori
language and culture suggests that much more needs to be done to ensure that Māori
identity does not continue to be compromised in the future. It is proposed that for most
if not all participants, an ongoing struggle to maintain Māori identity may be a factor in
their long-term pain because ‘struggle’ represents a response to things that potentially
threaten the intactness of the person. Perceived discrimination for some participants may be historically embedded and, it is proposed, is a natural response to historical racism that may operate on an unconscious level causing stress, which has implications for long-term pain. Processes that restore Māori identity and ways of being and knowing may be crucial to addressing the long-term pain and suffering that some Māori people may endure as an effect of embodied historical trauma. It seems in accessing Māori healing, some participants have been able to explore historical trauma in their lives more deeply so that healing may begin.

Findings Theme 2

Healing the Māori body in pain

Subthemes

- Acknowledging embodiment of thoughts and emotions
- Acknowledging the healer, breathing and releasing
- Acknowledging spiritual healing

Introduction

Theme 2 explores the meaning participants make of their long-term pain in relation to their experiences with Māori healing. Thoughts, emotions, stress and breathing are all significant factors that participants consider may be contributing to their long-term pain. Findings make visible the healers’ role in facilitating the release and letting go of pain. All participants value the spiritual approach of Māori healing; however, the women seem more in touch with spiritual concepts. The abilities of gifted Māori healers are acknowledged. Theme 2 makes visible the tensions that exist in the life-worlds of participants who are using the Māori system of healing that broadens their understanding of long-term pain beyond the physical body.
Subtheme 1 – Acknowledging Embodiment of Thoughts and Emotions

(Mind and emotions/hinengaro and whatumanawa)

Thoughts and emotions are a common feature of participants’ kōrero and play an important part in their experiences of long-term pain. Several participants acknowledge that emotions related to past experiences may affect the body. Participants’ experiences with deep bodywork indicate that accessing pain in the body may trigger old thinking patterns, memories and emotions from the past. The mental emotional stress of day-to-day living is a common theme for two participants who share their insights regarding how they manage stress.

Emotions ‘held’ in the body contribute to long-term pain

One male and several female participants convey their understanding that pain is more than just physical and may be related to holding emotions in the body. In Māori healing, different areas of the body may represent something specific that may be a factor in the participant’s experience of pain. BM proposes that his pain may relate to his “feminine side” and/or to “females in his life” while other female participants suggest that pain is a symptom of something else going on, for example dissonant emotions.

BM. Yeah, I’ve been coming about seven weeks now and it’s been helping me learn a bit about my body and how we hold emotions and all that in different parts of our body. I get lower back pain and pains here [indicates left lower leg] and apparently it’s my feminine side or something like that… and maybe to do with females in my life.

KF: In mirimiri they’re saying that the pain is a symptom of something, for example, they might say that this area represents grief, then they might ask you about what’s happening in your life to do with grief. And then you might explain things but there isn’t generally a lot of talking.

LF: I learnt that having pain can trigger a healthy response, that going through pain can have a good outcome.
I. (And that was?)

LF. Yeah, it was grief.

Long-term pain may represent embodiment of emotions related to past trauma

Letting a healer step into her emotional space brings up painful emotions from the past for LF. It seems that in getting to the “emotional vibration” of embodied grief, LF’s experience of long-term pain and suffering is transformed in the present, which enables her to move forward in her life.

LF: After my mother, in order for me to manoeuver myself into something I wanted to do for myself, it’s what I had to do, like putting myself through one of those machines, you know a mulcher [laughing].

I. So the pain in your body related to your mother?

LF. Yes it did, it related to her and my past and it came up in order that I would look back at it, and in order for me to get to the emotional vibration of it. I couldn’t describe it at the time, or even talk about it, I didn’t have the words, but now looking back I can describe the emotion. RM [healer] says let the emotional vibration do its work. I had to let a healer step into my emotional space in order to move forward.

As a healer works on painful points over RF’s chest area, memories and emotions related to childhood trauma surface along with an old familiar thinking pattern.

RF: Whatever he did on these points [indicates over chest area] well it’s made me go inwards, and a lot of stuff has come to the surface and it’s like I’ve gone back into my past again and I’m feeling really powerless a lot of the time. Like it’s the same old story, duuhhh ‘I don’t know how to do it’... ‘I don’t know what to say’ and you know, I’ve had to come right back to myself again, aarghhh it’s like so frustrating because I know it’s there and I have to find out why I don’t have a voice.

During the healing session, RF notices she is unable to release what she feels she is holding on to perhaps because of holding her breath or because of an underlying feeling of anxiety.
RF: It came up in the last healing session [...] the agony I felt back then, I mean I was only about 8 or 9 but it was like I was broken, and I remember crying and being in sooo much pain and I just couldn’t hold it in anymore. The treatment TM [healer] gave me, it was right above my heart, and he went in deep and it was painful. I mean I had to cry out [...] and it was like I was holding on to it all [...] and it didn’t get released because something else was operating… like anxiety.

*Maori men, suppressed emotions and long-term pain*

The social effect of gender and cultural stereotyping is made visible as both BM and FM convey that it is inappropriate to openly express grief or suffering. It is plausible that suppressed emotions may be a partial factor for both male participants’ long-term pain.

BM: As a guy you’re sort of taught even not to cry. Sort of sometimes crying can be seen as a form of weakness so you know like men may cry but sometimes it might be behind closed doors and things like that [...] you could see how as a guy if you start some of those things, like feelings that you may have about your life experiences with people that if you don’t let those feelings out they can come back and affect your health, you know.

FM: No one wants to see you sort of bellied up and crying. Hopelessness, you know, no one wants to see that stuff. I mean that might be a generational thing, it might have changed now, but Māori styles, keep it to yourself you know.

*Managing stress and what’s going on in life may help relieve long-term pain*

JF has regular romiromi healing, not just for managing her physical pain but also for stress relief, which she identifies as her brain needing a release.

JF: Sometimes it’s about the pain, but a lot of the time I’m going for stress relief. When I’m getting to that point you know where my brain needs the release... when I start forgetting stuff, that’s when I know something’s going on and I need to slow down and if I don’t it’ll catch up on me.

It’s not just the pain that’s in your body, there must be something else going on. Yeah, it’s about tuning in to what you’re going through in your life, knowing what brings that pain.
LF discusses how she manages stress on a day-to-day basis that she believes is mostly related to the emotional effects of interacting with others.

LF: It's like with water, you know at the end of the day, when I've picked up stuff from other people especially if it's stuff I don't agree with... I use water to take that off me. I can do that in the shower y'know at the end of my day... or if I'm near the beach I'll jump in the water... and have a karakia or just ask for stuff to be taken off, and I done that every day otherwise stuff build up and can affect you.

Subtheme 2 – Acknowledging the Healer, Breathing and Releasing

(Breath/hauora)

In Māori healing, participants' commonly experience 'releasing' or 'letting go' of pain, thinking patterns, emotions or energy held in the body. The healer facilitates the process, which highlights the importance of the relationship between the healer and the person being healed. Findings indicate that breathing is central to Māori healing processes and aids releasing and letting go. In romiromi healing, several participants recognize they are literally not breathing properly in their lives. Not breathing properly has symbolic meaning for some participants.

Releasing pain, thinking patterns, circulation and emotions

JF describes releasing pain and the thinking patterns associated with it, where her connection with the healer and breathing makes letting it all go possible. BM’s interest in eastern healing philosophy aids his understanding of Māori healers’ abilities to release energy and emotions from the body.

JF: With romiromi I just know that the release is what I really look forward to yeah releasing it all... the pain and even the thinking patterns around it. When TF [healer] mentions something and I think about what she's saying, and I get a connection, it's really good and I breathe through it and let it all go.

BM: I'm interested in energy and things like that and it's quite interesting that some of the points they are working with correspond to Indian chakras... and even releasing energies and things, like, they [healers] will release emotions from your body, yeah.
LF emphasizes feeling immediate improvement in her circulation after romiromi. The “obstacles” LF refers to may be symbolic of embodied emotions from her past.

LF: When I got off the table it was like where everything was clogged up in me, um like all the clogged-up blood, it was like obstacles that I had put in myself, and she [healer] loosened it all and I just bounced up the road. I felt like I could do somersaults if I wanted to, like I was really light or something and now when I think about it... I could literally feel my blood was actually circulating better.

I. Others have said that they were holding on to stuff that got released?

LF. Yeah, exactly, and I mean like the emotional stuff you know is what I’m talking about, and medication is not going to take that stuff away. You're gonna have to deal with that yourself.

**Suboptimal breathing may be symbolic of painful emotions, secrets held or stress**

Not breathing well is related to unusual sensations in the body, emotional pain and secrets held about identity. All participants convey how important breathing is to the healing process; however, three participants describe that Māori healing made them aware of the fact that they were not breathing properly in their lives. BM experiences unusual bodily sensations during Māori healing and he wonders if this has something to do with his breathing.

BM: After a while, I wondered if it had something to do with my breathing. I mean I don’t have that trembling anymore and I was wondering if it had to do with a lack of oxygenation in my body, like I was taking shallow breaths as opposed to full and deep ones. I think coming here has given my body the ability to start healing itself, you know.

LF’s inability to cry during an early Māori healing session is related to not being able to get her breath. When the healer instructed her to breathe, she realized the importance of breathing through the pain.

LF: Tears kind of came up but I couldn't cry, because I needed to get my breath to bring the tears up [...] I didn't realize at the time that I had held all of this stuff
inside of me, she [healer] told me to breathe and I went with it... but it was like I
had never breathed properly before, so it was all I could do, and I mean I went
with it the breathing and it opened me up to this restrained feeling inside. I
realized in order to get well you have to go through the pain, and, you have to
breathe.

RF also became aware of her inability to breathe properly through Māori healing, which
has symbolic meaning for her.

I: So all of this stuff from the past came up when you were having romiromi?
RF: Yeah, that’s right, but also what came up for me was my breathing. I know I’ve
never been able to breathe well, like taking a full breath, it’s like my breath is being
held and is not being expressed because there is a secret holding it, and I don’t
know the full secret. You know I don’t yet know who I am.

Subtheme 3 – Acknowledging Spiritual Healing

(Spirit/wairua)
In the following section, the meaning participants make of spiritual healing experiences
and constructs is explored. While all participants have awareness of Māori spiritual
healing practices, the women seem more accepting of spiritual concepts than the men.
Participants make evident that some Māori healers have unique healing abilities yet to be
explained by science that appear to have considerable benefits for some participants’
pain.

Female and male participants’ views of spiritual healing
For KF and RF, the holistic spiritual nature of Māori healing appears to be just as
important as the physical aspects.

KF: I’ve been seeing Māori healers for years. Initially I went because I wanted to
experience what mirimiri/massage was like and I found that it was more than just
physical – it was spiritual and it was holistic.

RF: After the treatment [...] I felt energized and I felt better, not so achy, it was
great. I really enjoyed the systematic movement of all of the joints and having
healing that was spiritual as well. It seemed to blend all facets of healing and that really attracted me.

In contrast to KF’s and RF’s views of spiritual healing, FM does not seem to have a framework for understanding what ‘spiritualism’ means for him; however, he does acknowledge that Māori healing has both tangible physical and intangible spiritual benefits.

FM: I find I don’t really connect much with spiritual stuff [...] I don’t know, I haven’t really had much to do with that side, even with the mirimiri I know they talk about parts of your body meaning different things yeah, yeah, I don’t know, I come from a spiritual culture and so I don’t deny that, yeah definitely there is spiritualism happening, but yeah it just hasn’t happened over here yet. I tend to deal with things more on the physical level here [...] but I do think if you come with any other worries, some of them will be sort of... not washed away but eased a bit, you can cope a little bit better, if not physically then at least mentally you feel a little bit better, yeah.

While he is open to exploring spiritual constructs in healing, BM is fearful of the notion that an embodied entity may be responsible for the strange trembling sensation he experiences in healing.

BM: To be honest it was a bit scary at first, eh. The emotions and that was all good eh, but then at certain parts of my body there was like a trembling inside, or a tremor, it was moving around my puku, like fluttering around like a little bird or a butterfly or something. It was a new experience for me, eh. She [the healer] was saying that it was like emotions but then she was actually saying that it could be something like even attached to me in my puku. Maybe it was like old suppressed emotions and things like that, yeah, you know what I mean eh, stuff that’s been buried down you know.
**Spiritu al healers have esoteric abilities that affect participants’ understanding of pain**

BM is amazed that a healer is able to identify the painful areas in his body without physically touching him. The experience appears to open him up to emotional and spiritual factors that may be relevant to his pain.

BM: TF [the healer], she actually feels where the problem is. She’s like an empath or something. Like she can feel disturbances in your aura or something like that. When she put her hands around my head and told me exactly what parts of my body were wrong with me and what they related to in my emotions. It was amazing to me and I felt sort of quite impressed. She didn’t even touch me, and she was bang on, she just said your lower back and your leg and even my head over here [indicates area on head]. And she was right cause I get like a bit hot on that part of my head sometimes, and she said it’s about my work and thinking about it all the time, which was interesting,

JF discusses working with a Māori spiritual healer in hospital who helps her get through post-surgery pain. KF describes recently seeking treatment with a healer who is a matakite/a seer, for exacerbation of her knee pain.

JF. After my surgery, I met a Māori woman doing hands-on healing in the hospital. She does reiki style but she also goes all the way back to our tupuna. I got rongoā from her as well, but you can tell she’s just got those tupuna connections. She does that spiritual side... yeah, it’s a different experience, pretty deep. She definitely tunes into your wairua. After the hysterectomy, I couldn’t get up with the pain and she helped me get through it, she got me up onto my feet [...] 

KF: Three months ago, I was seeing a whaea/aunty who is matakite/a seer because I was experiencing pain in both knees. I have osteoarthritis and the pain is sometimes triggered by the weather, but this time I felt it wasn’t to do with that. Whaea does reiki but combines this with her wairuatanga/spiritual knowledge. She was raised a healer. The first time I saw her, I lay down on the couch and she just sat there and held my feet for about an hour. I experienced a whole lot of physical sensations then I had a big cry. There was no conversation but a whole
lot of stuff came to the surface [...] I came away feeling a lot better, more mobile and not so creaky in my knees.

Discussion Theme 2

Healing the Māori body in pain

Subthemes

- Acknowledging embodiment of thoughts and emotions
- Acknowledging the healer, breathing and releasing
- Acknowledging spiritual healing

Introduction

The meaning participants make of long-term pain in relation to their experiences of Māori healing is discussed. Thoughts, emotions and stress in relation to participants' long-term pain, are addressed. The relationship between the healer and participants is discussed in relation to connecting, working the body, breathing, releasing and letting go. The value of the spiritual approach of Māori healers is acknowledged, as gifted healers may facilitate healing on esoteric levels that are yet to be explained by science.

Subtheme 1 - Acknowledging Embodiment of Thoughts and Emotions

(Mind and emotions/hinengaro and whatumanawa)

Participants' insights on thoughts, emotions and stress are discussed in relation to long-term pain and research pertaining to Māori healing constructs and other healing paradigms. The notion that long-term pain may represent embodiment of difficult emotions related to the past is addressed. The effect of suppressing emotions is also considered and may play a significant role in male participants' long-term pain. Managing mental and emotional stress associated with daily life is important as stress may exacerbate long-term pain.

Emotions 'held' in the body contribute to long-term pain

Most participants agree that difficult emotions may be held in the body and may contribute to their long-term pain. Emotions appear central to the meaning BM makes of
his long-term pain. As a newcomer to Māori healing, BM has learnt that emotions related perhaps to both his feminine side and to females in his life are held in his body and may be contributing to his physical pain. KF and LF have experienced Māori healing over many years and make explicit their belief that difficult emotions such as grief may be at play where physical pain is concerned. KF gives the example that “pain is a symptom of something”, and depending on where in the body it resides, may be representative of a particular emotion such as “grief”. KF gives the example that Māori healers may consider that pain represents grief and then they may ask the person about their life circumstances in relation to grief in order to understand the issue. LF says that grief is “the outcome” of deep romiromi healing, where physically feeling, and mentally understanding and then releasing the pain held in her body allows a grieving process to begin. Unexpressed grief is a central feature of historical trauma because cataclysmic losses endured by ancestors of their people, land and culture may not have been mourned for properly. Grief is at the heart of the soul wound and may be embedded in the collective psyche as psychological or emotional trauma (Brave-Heart, 2000; B. Duran et al., 1998).

It is evident that the meaning participants make of their pain is shaped by their Māori worldview. Before colonization, Māori health was only considered in terms of ‘spiritual’ or ‘physical’ afflictions where the ‘mind’ or ‘thoughts and emotions’ were considered spiritual aspects of the person (Mark, 2012). The healer who raises this point contends that the mind is like a bridge between the physical and spiritual aspects of the person where much rubbish resides that needs clearing (Mark, 2012). In the Māori health model ‘Te Whare Tapa Whā’, the domain ‘hinengaro’ encompasses ‘mind and emotions’ and is described as the ability to ‘think and feel’. The model makes explicit that ‘thinking and feeling’ are inseparable from the body (Durie, 1998). In Māori healing practices, embodiment of negative emotions is considered a normal construct in which difficulty with emotions in life may manifest as physical symptoms such as pain or other illness (Durie, 1998; G. Mark & Lyons, 2014; G. T. Mark, 2012; O’Conor, 2007). Other healing modalities share a similar belief that negative emotions may manifest in the physical and spiritual fields of the person (Warber et al., 2004). The term ‘whatumanawa’ is another Māori construct related to the emotions (Moon, 2003; O’Conor, 2007; Pere, 1991) and is translated literally to mean ‘the heart’s (Manawa) eyes (whatu)’. Whatumanawa is a state of balance in the ‘seat of the emotions’ (O’Conor, 2007; Pere, 1991) and is of central
importance to Māori healing practices where healing is enhanced through accessing whatumanawa (O’Conor, 2007). From a Māori healing perspective, accessing whatumanawa and deep bodywork helps resolve emotional difficulties (G. Mark & Lyons, 2014), and is important to the process of healing participants’ long-term pain.

G. Mark & Lyons (2014) discuss Māori healers’ understanding that emotions may become, trapped, held or stored in the body. Pain in different parts of the body may reflect emotional difficulty with male or female significant others (G. Mark & Lyons, 2014; A. Muru, personal communication, November 30th, 2015). While specific literature regarding a Māori perspective of feminine and masculine concepts related to the body could not be found, a Māori healer gave the basic example of a person with heart problems who may be experiencing a lack of aroha/love in their lives or difficulty with a partner (G. Mark & Lyons, 2014). In biomedical research, imaging and experimental studies show that both physical pain and emotional pain are mediated by similar regions of the brain such as the anterior cingulate cortex and the right ventral prefrontal cortex, giving new credibility to the metaphors ‘feeling hurt’ or ‘heart ache’ (Eisenberger et al., 2003; Rainville et al., 1997). These studies confirm that the brain’s processing of emotional and physical pain is integrated in ways that are not completely understood in scientific terms and there is a growing interest in research that seeks to understand the nature of emotions in relation to long-term pain (Atarodi & Hosier, 2011; Burns et al., 2008; Eisenberger et al., 2006; Lumley et al., 2012; Roditi & Robinson, 2011; Sawamoto et al., 2000).

**Long-term pain may represent embodiment of emotions related to past trauma**

Profound experiences with Māori healing have led to LF and RF ‘knowing’ that their physical pain is symbolic of strong emotions associated with past events and relationships. LF’s description of “putting herself through a mulching machine” is indicative of the transformation she experienced through Māori healing in which her pain was acknowledged as being more than just physical. LF explains that the deep pain she experienced in her body during healing presented itself so that she would “have to look at it” and “get to the emotional vibration” of it. LF relayed earlier that for much of her life she was afraid of people getting too close to her; however, a desire for healing meant overcoming her fear and letting a healer step into her personal “emotional” [in her words] space. This led her to address pain on a spiritual, emotional and physical level. RF conveys
that during a romiromi healing session a painful memory from childhood in which she remembered crying and feeling “broken and in sooo much [emotional] pain”, arose. At the same time the physical pain of the treatment made her want to “cry out” and as she does so she recognized that she was actually “holding it [the pain] all in” because something else was operating, which she describes as being “like anxiety”.

Biomedical research supports the proposal that dissonant emotions such as anxiety, fear and grief related to traumatic memories may contribute to both LF’s and RF’s experiences of long-term pain (Atarodi & Hosier, 2011; Gatchel et al., 2007; Lumley et al., 2011; McFarlane, 2010; Sarno, 2011). The effect of anxiety upon the trajectory of long-term pain is well established and is the subject of much research (Gatchel et al., 2007; McFarlane, 2010). Anxiety is an affective state involving memory, appraisal of threat and heightened emotions of fear, worry and anger and is a central feature of the body’s response to stress. Complex psychological, physiological and biochemical processes related to both anxiety and stress may increase tension in the body and contribute to the onset and maintenance of long-term pain (Chapman et al., 2008; Gatchel et al., 2007; McFarlane, 2010).

RF also explains that deep romiromi at certain points on her chest caused her to “go inwards” and she noticed an “old familiar thinking pattern” surface where she feels ‘powerless’. She describes her thinking as being like “duhhh... I don’t know what to say” or “do” as though her ability to express herself is being stifled, which leaves her feeling “frustrated” and as though she “does not have a voice”. It seems RF is experiencing low self-esteem where she believes she is not clever or able enough. Low self-esteem may also be a significant factor in RF’s experience of long-term pain. According to (Sarno, 2011), low self-esteem forms part of a triad of psychological traits in which maladaptive emotional responses may contribute to tension myositis syndrome. In tension myositis syndrome, unconscious difficult emotions related to past trauma may initiate responses in the brain and central nervous system that lead to the constriction of blood vessels, muscle ischemia and spasm in different parts of the body, which may led to persistent psychogenic pain states (Ruden, 2008; Sarno, 2011).
Māori men, suppressed emotions and long-term pain

The effects of social stigma upon Māori men expressing emotional and/or physical vulnerability are made visible in BM’s and FM’s kōrero. While BM explains that expressing grief or sadness may be considered a sign of weakness, he is aware of the possibility that “not letting some of those feelings out”, or in other words suppressing emotions, may be detrimental to his health. FM is adamant that it is unacceptable for others to see him crying or in a state of hopelessness and while he considers this to be related to being male in general and perhaps to his “generation”, he also contends that “the Māori style is to keep it to yourself”. In O’Connor (2007), several Māori male healers talk about their own Māori healing experiences wherein confronting their difficult life circumstances, relationship problems and associated emotions such as self-pity, grief, anger, shame and feeling powerless to change, was part of the healing process. Healing for these men occurred through connecting with Māori cultural modes of healing, where deep and painful bodywork brought embodied emotions into awareness so that they could be released (O’Connor, 2007).

While epidemiological research shows Māori men have the highest age standardized rates of long-term pain of all groups in New Zealand (Ministry of Health, 2008), little research exists examining why this is the case. It is proposed that historical and contemporary factors related to racialization, marginalization, impoverishment and stereotyping of Māori men as physically oriented, unintelligent and savage (Hokowhitu, 2010) may impact upon some Māori men in unseen ways and may also lead to difficulty with expressing emotions (Sarno, 2011). Difficulty expressing emotions may contribute to long-term pain. At a United States congressional hearing on pain, when asked why he thought people in poverty had such high rates of chronic pain, Doctor Sarno answered simply that “it’s because they are angry” at the social circumstances they find themselves in (“John E. Sarno: Back pain hearing,” 2012) Research shows there are differences in pain severity, frequency, disability and treatment by race and ethnicity (Poleshucka & Green, 2008). Blacks and other ethnic minorities, such as American Indian Alaskan Native peoples and Canadian Alaskans, have a higher prevalence of long-term pain and greater comorbidity compared with whites after socioeconomic status is accounted for (C. R. Green & Hart-Johnson, 2012; C. R. Green et al., 2003; Jimenez, Garroutte, Kundu, Morales,
Emerging studies suggest that perceived racism may exacerbate long-term pain (C. J. P. Harrell et al., 2011).

Māori healing is a means of managing mental stress and pain

JF has experienced Māori healing over many years and while she considers that regular healing helps relieve her pain, she also explains that it is a central means of reducing her mental stress. JF recognizes that when she “starts forgetting stuff”, she knows she needs to slow down and consider what’s going on inside or “things will catch up on her”. She explains that in her experience, physical pain is an indication that there is something else is going on and “tuning in” to “what’s going on in your life” may help clarify what is “bringing the pain”. JF’s kōrero makes clear her belief in a mind-body connection where managing mental stress related to daily life is just as important – and important for – managing pain. LF maintains that on a daily basis she may be affected by other people where she: “picks up on” and “has to deal with stuff” that comes from interacting with them. It seems the stuff may be analogous with stress that can build up in her mind and body creating tension especially if it is “something she disagrees with”. LF explains how she uses water and karakia together in a ritualistic way to clear herself of accumulated stuff/stress on a daily basis and also says that tuning into nature helps. Water is integral to ancient Māori healing rituals and may be considered the single most fundamental element for upholding Māori health and wellbeing (Reinfeld & Pihama, 2007). LF’s use of ancient ritual seems important for managing her long-term pain.

Stress, also referred to as allostatic load, is largely determined by a person’s interaction with others and the environment (Mcfarlane, 2010). If not managed well, stress or increased allostatic load may lead to dysregulation of the body’s homeostatic mechanisms. Research suggests that dysregulation of the stress response may contribute to long-term pain states (Mcfarlane, 2010). A growing body of research suggests that a multifaceted approach to healing both pain in the body and stress in the mind is most efficacious for treating long-term pain (Gatchel & Rollings, 2008; Lumley et al., 2011; Thompson, 2013; Ventegodt et al., 2006). It is evident that the physical touch of hands-on healing therapies reduces emotional stress and in this way may, therefore, also alleviate long-term pain (Thompson, 2013).
Subtheme 2 – Acknowledging the Healer, Breathing and Releasing

(Breath/hauora)

Participants commonly describe experiencing ‘releasing’ and ‘letting go’ of unwanted stuff during healing. Māori healers facilitate the process, highlighting the importance of ‘whānaungatanga’/interdependence in the therapeutic setting. In Māori culture, the breath has spiritual significance and in Māori healing practices it aids the process of releasing and letting go. Romiromi healing has made several participants aware of their breathing, which has both symbolic meaning and physiological significance for their experiences of long-term pain.

The healer aids releasing pain, thinking patterns, circulation and emotions

JF explains that in Māori healing, what she really looks forward to is releasing the pain and the thinking patterns around it. Interaction with the healer is central to this process. The healer shares information with JF that assists her with gaining a deeper understanding of what she is going through so that she can “let it all go”. JF conveys that if she gets a strong connection to what the healer says, that’s when the benefits from healing for her are most powerful. Interpersonal healing or ‘whakaora tangata ki te tangata’ is characterized as being about caring for and healing ‘people’ as opposed to treating an illness or its symptoms (G. Mark, Chamberlain, & Boulton, 2017). Mark et al. (2017) refer to Māori healing as “a relationship-based treatment grounded in aroha” (p. 84), in which a connection established between the healer and person being healed contributes to the healing process. A Māori healing approach closely resembles the three-step approach used in holistic clinical medicine where the healer facilitates a process of feeling, understanding and letting go (Atarodi & Hosier, 2011). Mark et al. (2017) discuss the views of a Māori healer who maintains that the healer’s role is to put the person being healed at ease, find out what is happening in their life and where they are from. This may also put the healer in touch with the ‘whenua’/land of the person, which may also be important for understanding the person’s problem.

BM’s interest in energy and chakras allows him to formulate in his mind how Māori healers may work to release energy and/or emotions from the body. BM’s kōrero highlights that while a Māori healing approach may be similar to other mind-body-spirit
healing philosophies, it is also a unique system of healing. Following one of her first romiromi sessions, LF felt her entire circulation improve and she describes that the clogged up feeling she had inside was like obstacles she had put in herself that were loosened up by the healer. The “obstacles” she refers to appear to be symbolic of deeply held unconscious emotions she had been carrying for a long time. It is evident that romiromi healing is a form of deep tissue bodywork that may – but not always – be painful (O’Connor, 2007); however, pain in the body from a Māori healing perspective may be a sign of blocked energy that hampers circulation and so needs to be cleared (O’Connor, 2007; Marks 2012). Blockages in energy are generally considered to be the result of conflicts in the emotional spiritual life-world of the person (G. T. Mark, 2012; O’Conor, 2007); however, lifestyle choices, trauma and injury may also be related factors.

Research in the field of relational medicine suggests that in the clinical encounter, expectations of both the doctor/healer and the patient/person may affect healing outcomes where positive encounters engender more positive expectations, which lead to better outcomes (Madrona & Mainguy, 2015). This has been termed placebo, while a negative encounter having a negative affect is termed nocebo (Madrona & Mainguy, 2015). However, Mark et al. (2017) maintain that such explanations do not adequately describe a Māori understanding of the interpersonal nature of the healing relationship, where healing pain may occur on emotional, spiritual and/or physical levels (G. Mark & Lyons, 2014; G. T. Mark, 2012; Muru, 2015; O’Conor, 2007). Pain is universal; however, definitions and descriptions of pain and pain control may also be culturally and spiritually specific (Free, 2002). A paradigm shift is needed that acknowledges pain and pain control as being inner, subjective and culture bound experiences of the person who is in pain (Napier et al., 2010).

**Suboptimal breathing may be symbolic of painful emotions, secrets held or stress**

The unusual trembling sensation BM experienced in his body during healing caused him to become aware that his breathing was very shallow. He began to breathe more deeply in subsequent healing sessions and the trembling sensation eased and BM describes “feeling his body start to heal itself”. In a Māori healing session, LF was aware that she was holding a lot of stuff inside and tears came up but she was not able to cry because she could not seem to get her breath. The healer instructed her to breathe and she suddenly realized that she had not been breathing properly all her life. She followed the healer’s
advice and started to breathe more deeply, which brought her to the feeling that she was “restrained inside” as though she was holding something in. LF discovered that breathing deeply through painful emotions and the physical pain she experiences in her body during healing is essential to getting herself well. In a healing session RF also became aware of her breathing; however, she describes knowing before having Māori healing that she was not able to breathe properly in her life. She explains that she often feels as though she cannot take a full breath, as though her breath is somehow being “held”, which she feels may be symbolic of “secrets” being “held” from her in regard to her identity, the realization of which seems key to her healing process.

In Māori culture the breath – ‘ha’ or ‘hau’ – has spiritual significance and means much more than just the exchange of air in the lungs. The term ‘hau’ is closely linked with mauri meaning ‘force of energy’ (Royal, 2003) and when both terms are qualified by the adjective ‘ora’ meaning ‘alive’, ‘well’ or ‘cured’ (Moorfield, 2003-2017) – as in ‘hauora’ and ‘mauriora’ – either term may be used to describe animate being (Royal, 2003). Brendan Hokowhitu describes breathing as “the physical and spiritual reality of a Māori philosophy of wellbeing” where good breathing encourages good circulation and mental aptitude (Hokowhitu, 2010). Hokowhitu (2010) highlights the explanation of kaumātua that the ‘hongi’ – a Māori greeting in which two people press noses – is the exchange of the breath or life force between two people. Further significance of the breath is evident in the whakatauki ‘te ha a koro ma a kui ma’, meaning ‘the breath of life that comes from forbearers’, which reflects a Māori spiritual understanding of being connected to one’s ancestors through the breath. From a Māori perspective, when people are angry or upset, negative emotions may become held in the puku/abdomen and deep breathing is advised to expel this negative energy (Hokowhitu, 2010). Emerging biomedical research shows that correcting suboptimal breathing patterns may help alleviate idiopathic long-term pain (Chaitow, 2004; Hansen-Honeycutt et al., 2016; Ma et al., 2017).

Normal fluctuations in breathing pattern, rate and regularity occur in response to the body’s physical demand for oxygen during exercise and to mental or emotional stress (Barker & Everard, 2015). Fluctuations in breathing are driven by the autonomic nervous system and reflect the body’s innate ability to maintain homeostasis. However, prolonged exposure to physiological or psychological stressors that are excessive and/or repetitive may challenge homeostatic feedback loops leading to neuroplastic changes in the brain.
which alter the breathing pattern so that it is maintained at suboptimal levels (Courtney, 2009). Suboptimal breathing may cause biochemical changes in the body in which an increase in carbon dioxide levels in the blood negatively affects the amount of oxygen that is available to the body’s tissues. A build-up of lactate in the muscles, muscle ischemia and the formation of trigger points, as well as numbness and tingling may occur and are all implicated in long-term musculoskeletal pain and other conditions (Chaitow, 2004). It is plausible that suboptimal breathing patterns may be contributing to the long-term pain participants’ experience. While we cannot be sure of the aetiology of their suboptimal breathing, it is evident that its symbolic meaning for some participants is rooted in the past, in trauma and associated emotions. Māori healing has increased participants’ awareness of their suboptimal breathing patterns and improved their breathing function and circulation, which may help alleviate their long-term pain.

Subtheme 3 – Acknowledging Spiritual Healing

(Spiritual/wairua)

In the following section, the meaning participants make of spiritual healing experiences in relation to pain are discussed. The women in this study seem more accepting of spiritual constructs than the men and their different views are addressed. Some Māori healers have unique esoteric healing abilities and participants’ encounters with gifted healers have considerable benefits for their experiences of long-term pain.

Female and male participants’ views of spiritual healing

All of the women in the current study consider Māori spiritual healing to be important; however, KF and RF express that Māori healing blends many facets of healing that are physical and spiritual in a way that is holistic, which is particularly appealing to them both. The spiritual aspects are central to the choice they both make to use Māori healing for maintaining health and for managing pain. It is proposed that the affinity the women have for spiritual healing is culturally bound and influenced by the roles that Māori women have in Māori society related to life and death rituals (Mikaere, 2005). Evident in the tangihanga/funeral rites, Māori women who are closely related to the departed person give full open expression to their grief where crying and wailing facilitates a process of letting go and healing of both the departed person's spirit (Bacal & Jansen,
and those left behind. Furthermore, Māori women must bear the pain of giving birth, which is without doubt a physical, spiritual and emotional experience at once.

While male participants convey an appreciation for the spiritual aspects of Māori healing, they appear to be more skeptical than the women in regard to accepting spiritual explanations for their pain. FM says he tends to “deal with things on a physical level” despite observing that spiritualism is happening in Māori healing. While BM is okay with the idea of suppressed emotions playing a part in his pain, he is fearful when the healer explains that the trembling sensation he has may be an “entity attached to him”.

Literature documenting tohunga knowledge makes explicit the Māori cultural belief in ‘kehua’ meaning ‘the spirit of a departed person that may linger after death and haunt the living’ (G. T. Mark, 2012; Moon, 2003; Royal, 2003). Māori people have very deeply held beliefs in the spiritual realm and the subject warrants a much deeper exploration than space in the current thesis allows. It is possible that both male participants have been influenced by Western scientific and social values in which knowledge is only valued if it can be validated by science (Royal, 2003) and where men are seen as being more physically and intellectually orientated.

**Spiritual healers’ esoteric abilities affect participants’ understanding of pain**

Three participants share their experiences of spiritual healing with Māori healers who have special healing abilities. This has relevance for their experience and understanding of pain. For example, a gifted healer describes exactly where the pain is in BM’s body and how this relates to his emotions without even touching him, which engenders awe, trust and respect in him. This opens BM up to the possibility of exploring the spiritual and emotional aspects of his pain that the healer raises with him. BM explains that the healer places her hands near his head where it seems she was able to “feel my aura”. History and more recent literature regarding the practices and views of tohunga and Māori healers suggests that esoteric spiritual healing practices that are not yet able to be explained by science may be important in healing long-term pain and other afflictions of the body (R. Jones, 2000; Keane, 2011; G. T. Mark, 2012; Moon, 2003; Ngata, 2014; O’Conor, 2007; Reinfeld & Pihama, 2007; Royal, 2003).
It is evident that JF’s spiritual health is of central importance to her. The Māori spiritual healer she meets in hospital is a ‘matakite’ and able to “tune into your [her] wairua” and “connect with ancestors”. She does a “reiki style’ of hands-on healing and JF credits her with helping her to get through pain and onto her feet after surgery. KF sees a whaea/aunty who is also a ‘matekite’ for her knee pain. Her whaea also uses a reiki style of healing which she combines with her wairuatanga/Māori spiritual healing knowledge. KF conveys that her whaea sat quietly with her and held her feet for an extended period, which led to an emotional release. KF came away from the experience feeling improvement in her knees. JF’s and KF’s kōrero make evident that Māori spiritual healing may be helpful for alleviating pain.

The term ‘matakite’ denotes a person who has the power of spiritual insight and perception who may “perceive mauri as an aura of light and energy radiating from all animate life” (Royal 2003, p. 50) and who may also have visions of the present or future (Keane, 2011; Royal, 2003). Clairvoyance is a related concept where a person may become a channel or medium for information from spiritual entities, ancestors or a higher spiritual source of energy such as God or ‘Io’, the supreme creator or the energy of whatumanawa (R. Jones, 2000; Keane, 2011; G. T. Mark, 2012; O’Conor, 2007; Royal, 2003). When matakite healers connect energetically with the person being healed, they may be able to gain an understanding through various sensory pathways such as touch, smell, hearing or visions of what the person needs for healing (R. Jones, 2000; G. T. Mark, 2012). Other healing modalities such as reiki and therapeutic touch that are based on healing a person's energy or biofield (Warber, Cornelio, Straughn, & Kile, 2004) share similarities with Māori spiritual healing and research indicates that these methods are useful for healing long-term pain (Warber et al., 2004). The similarity of Māori spiritual healing with reiki may explain why Māori healers are often referred to as practising ‘a reiki style’ of healing. Further Kaupapa Māori research exploring Māori spiritual healing and the benefits it may have for long-term pain is warranted.
Conclusion – Theme 2

Exploring Māori healing of participants’ painful bodies reveals a unique Māori perspective of pain. The interconnected nature of physical, mental, emotional and spiritual aspects of long-term pain is of central importance, and the relationship with the healer is vital for facilitating the release of embodied emotions and negative energy. While spiritual healing has a positive impact upon participants’ pain, it is met with some skepticism from the men in the study who may be influenced by Western positivistic ideas about knowledge. Further research is warranted that investigates the holistic and integrated nature of Māori healing and in particular, how spiritual healing may impact upon long-term pain.

Findings Theme 3

Understanding health beliefs, choices and behavior

Subthemes

• Safety
• Alternative and Western medicine
• Stoicism

Introduction

In theme 3, participants’ health beliefs, attitudes and behaviours in relation to the resources that are available to them for maintaining health and coping with their long-term pain are examined. The three subthemes identified above may inform understanding of the health choices participants make. Findings reveal that participants’ perspectives of what safety means in the therapeutic setting and in day-to-day life are relevant to their experiences of long-term pain. Participants’ views of using Western medicine and mainstream services as well as alternative approaches to health-care are uncovered, followed by an examination of stoicism in relation to the participants’ experiences of pain.
Subtheme 1 – Understanding Safety

The meaning participants attribute to safety in regard to their health and wellbeing makes visible that Māori constructs pertaining to safety remain important to them. Findings suggest that collective whānau values, respect for tapu and the use of karakia keep participants safe. For one participant, feeling unsafe in the therapeutic setting may be counterproductive to the goal of relieving his long-term pain. Two participants discuss tapu and safety and an embodied response triggers dissonant emotions in one of them. All but one participant comment on their use of karakia.

Māori healing in a group feels safer than one-on-one treatment

FM describes finding out about Māori healing happening in Auckland from a local newspaper article. The article contained a photo showing a lot of people involved, which really appealed to him. FM compares his embodied response to one-on-one treatment with a physiotherapist with his experience of Māori healing in a group, which highlights his feeling safer in the group.

FM: It looked like a safe environment for me. There was a brother administering some sort of healing which looked quite interesting and there were maybe four or five people getting massage from a few clinicians and I had never come across it before, like you know there’s a lot of people there and I thought I would maybe feel not so shy, or would whakama be the word?

I was seeing a physiotherapist [...] and it was sort of a safe environment, I mean she was very good and obviously there was nothing going on, but it was just sort of unusual for me. I find it a bit strange people touching me eh [...] but you know, obviously that brings maybe a closed off sort of tenseness within my body that I don’t want. The Māori healing wasn’t like that, it was more comfortable for me and feels safer cause there’s lots of people there.

Embodied knowing and respect for tapu keeps you safe

Growing up, KF and RF both learned that tapu/that which is forbidden is a safety mechanism. Disregarding the rules of tapu was avoided. A discussion with RF regarding her tupuna that takes place at the dining table where there is food out triggers an embodied response in RF.
KF: I’ve always from my earliest memory had a belief in, of, um, those things that are tapu, not fully understanding what they meant really except for I think the desired effect was things that are tapu you don’t go near you know, you keep clear of them and that’s for your own safety and protection no questions asked, message received.

RF: I’m feeling really guilty now about having all this kai on the table and I mean this is what I’m talking about, my upbringing, it’s what I want to reconnect with you know. I mean we never had food around, or even tea or coffee around discussion of these things, or important things like it was really tapu tapu talking about our tupuna. Yeah, I’m just going to clear the table.

**Karakia is about safety, healing, learning and a Māori way of life**

All female participants and one male participant commented on the use of karakia and findings suggest that karakia is an important concept in the participants’ life-worlds as it promotes an embodied sense of safety, calmness and connectedness, which may enhance positive thoughts and emotions.

LF: Even before I go places I always have a karakia, like travelling long distance you know before I hit the road, it’s about keeping yourself safe.

RF: I say karakia in the morning and at night and you know... always before kai. And when I do, I often feel like they’re all there, my tupuna, mummy and daddy they’re right there [...] I’ve dabbled in rongoā and I love the whole concept, but I want to be trained properly, traditionally, which means knowing the karakia that goes with it and that means learning my reo as well. Karakia is about being connected, having gratitude and acknowledgment and really knowing that nature is much bigger and greater than us.

KF: When I was older, we practised karakia because it was part of learning te reo/Māori language and [...] tikanga happening on the marae. The spiritual aspect of being Māori has always been present whether I wanted it or not.

BM: Karakia puts you into a relaxed mind state, what they’re saying and even the tone they say it in, and the vibration, it sort of prepares your mind for what’s about to happen, you know, with the body.
The importance of spiritual connection and karakia for healing are evident in JF’s kōrero. Her use of the phrase ‘kia piki to wairua’ meaning ‘flourish in your spiritual understanding’ suggests her faith is grounded in Māori ways of being and knowing.

JF: The light works for us and we have to tune our kids in or they won’t know [...] I’m lucky, my older brothers came to see me in hospital and just prayed over us as a whānau, it’s what we do, we have karakia every day.

I: So karakia for you is in English or Māori?

JF: Both, as long as you’re tau, ‘kia piki to wairua’... yeah my dad used to say doesn’t matter about the station as long as you’ve got the frequency, and when I’m at school, I even try to teach my kids that “when you’re tau then you’ll know”, you’ll be awake, alert to what’s around you and ready to take on your learning.

**Subtheme 2 – Views of Mainstream Medicine and Alternatives**

Findings make visible that participants have tried a range of alternative therapies alongside mainstream medical services. Several participants have experimented with using natural herbal remedies for treating pain and it is evident that the use of hands-on Māori healing combined with rongoā is beneficial for relieving pain and is considered ‘normal’ for one participant. Findings also reveal participants’ reluctance to take pain medication, mistrust of Western medicine and frustration at the clinical style of communication used in the hospital setting. Participants’ views on using other physical therapies and seeing the doctor suggest they are exercising autonomy in the choices they make for health-care.

*Alternative therapies are popular and reduce the need for pain medication*

Findings indicate that while participants may choose to use mainstream medicine from time to time, using alternatives is a normal part of participant’s day-to-day lives.

JF: Rongoā it’s just so the norm and that’s how it should be for everybody, but then I guess my way of life isn’t the norm but all I know is that it works, it’s like having another pou/post in your whare that is gonna hold up your whānau [...] Rongoā it’s who you are, what makes you better, what keeps you well, healthy... your
mind... your body... that’s all it’s doing. It keeps your body and mind safe and it works.

BM: Yeah, natural therapy is my preference, like we use homeopathy with the kids and yeah, it’s the reason I went to romiromi as well. It’s a more holistic approach.

RF: I love all kinds of healing, even clairvoyants and the spiritual stuff. But I’ve always wanted to learn Māori healing [...] I was studying homeopathy and loved it.

JF uses a rongoā balm and mirimiri that helps speed up healing of her foot after surgery and BM has good results with natural remedies such as turmeric and rongoā for pain relief.

JF: The surgeon said not to expect to have any feeling in it for about 18 months. I make sure I get regular mirimiri and tupakihi rubbed into it with RM and TF [healers] and it’s still a bit numb on top, but I can feel under my foot now... it’s been about 8 months.

BM: I was wondering if my pain was due to inflammation because at certain times I’d be really sore, but after taking turmeric and water the pain would go away. I also drink the kawakawa tea and I have a kawakawa bath. I’ve got a tree in my back yard and I boil the leaves and pour it into the bath, eh. Yeah, it’s very good for my body. I find it really relaxing and it relieves my back [...] and when I drink the tea it like balances out my mind.

Reluctance to take medication reflects a preference for alternatives, historical mistrust or difference in communication

While participants may use pain medication in extreme circumstances, most participants are reluctant to use it and prefer to find other ways to manage pain.

JF: I don’t want to use drugs like morphine because I find it really hard to come out of that fog. I mean I had to on the first day after surgery with my foot. And then I just had the rongoā.
BM: I don’t like to take painkillers or anything like that. I’d rather know what’s happening you know. I mean I would like to be pain free, but I’d rather get rid of pain naturally.

FM: No no, I don’t really take pain medication. I mean I might take Panadol for a sore neck but only if it’s really sore, oh sorry, I mean yes, I do but not very often. I can’t remember the last time I took Panadol, it would have been years ago.

RF: I’ve never really taken painkillers in my life. If I’m feeling achy, I just have a rest.

Comments from two participants suggest an underlying mistrust of conventional Western medicine and it seems that historical factors may continue to influence the health-care decisions they make.

BM. Ohh, I’m not really a fan to be honest, of conventional medicine. If things got really bad, I would go to the doctor but it’s my last option, you know. I mean the only time I’ve been to hospital is when I was born (laughs) […]. It’s only through negative experiences that some of my family had in the past, yeah, it’s just that some of the medication they were being prescribed caused other problems and that’s not medicine to me, eh… it wasn’t too pleasant.

I. What about other [female] check-ups?

LF. Oh no, I don’t do smears. I mean they just wanna create stuff, we’re just guinea pigs for them you know […]. It’s like when my husband was in hospital. They wanted him to try a new drug, but I just looked at him and shook my head. I didn’t agree with it because it’s like they just wanted to try them out on him.

One participant expresses frustration regarding communication with health professionals in the hospital setting. She compares this with “chatting” with a Māori healer in a Māori healing encounter. Her kōrero makes evident her preference for a less clinical approach:

KF: I’ve just spent a week with my husband in hospital and with every encounter it’s like, “What’s wrong? Tell us your story again from the start”, and so many questions. “Where does it hurt? How does it hurt?” you know, and it’s frustrating
for the sick person to have to keep retelling the story almost as if they’re missing some information or not disclosing everything [...]. And when I think about the second time I saw whaea, she chatted with me the whole time but she wasn’t like asking me about the pain in my knees, she was asking how are the kids? What have you been up to? When was the last time you went back home? You know, sussing out what was going on in my life, and from our conversation she says, “Well you know you need to drink more water and get back to the pool”, giving gentle encouragement, not, you should be doing this or don’t do that.

**Regular hands-on healing is good pain relief and has overall benefits for health**

Māori healing provides good back pain relief for two participants, and a third expresses her understanding that Māori healing is preferable because it addresses more than just the physical pain.

BM: I’ve been having romiromi for 6 weeks or so, and I’m getting really good relief […], with my back it lasts about six days and then I need to come back, hopefully over time it’ll get longer.

JF: Since having the hysterectomy, I’ve had really bad back pain, it’s like I’m having early labour pains. That’s one of the reasons I go and see RM and TF [healers] once a week, and it’s good, it helps with the pain, for the week my lower back is pretty good but by Monday I need to go again.

KF: I’d prefer to seek mirimiri as an option because of the overall benefits I’ve experienced […]. My understanding is that perhaps some things manifest as physical when there’s actually more to it and mirimiri is more than just dealing with the physical pain.

**Views of other physical therapy**

Three participants discuss using other physical therapies and one recognizes that physiotherapy might have helped her after her accident had she not resisted it. Another describes physiotherapy as being more focused on an exercise plan.

JF: I did have physio for my foot, but I found it hoha/annoying going. You know, they just wanted to hurry things up like, you’ve run out of time... you’ve got to
come back and we've got to fix the pain [...] I saw a chiropractor once too, but I
gave up on that because it was expensive.

LF. I had physio for what do you call it, whiplash sort of thing after the bus accident
in 1970 something. But it didn't help that I resisted it though, because I maybe
wouldn't be carrying so much pain now.

FM: My experience with physiotherapy, well it was more like your rubber band
plan you know, like go home and do these exercises and then if I didn't do them
I'd feel a bit you know, embarrassed next time. It did help though with the range
of motion in my shoulders, the physiotherapist was very good.

BM: I had physio, but I only went for a few weeks and that was maybe 17 or more
years ago now. To be straight up with you, I didn't enjoy it. I should have kept
going but I saw it as a hassle, eh. It was probably an age thing and a boy thing.

Specific criteria for seeing the doctor reflects autonomy in choices for health-care

Participants were asked about their thoughts on seeing a doctor and common responses
conveyed that needing a medical certificate, other documentation, having regular blood
tests or other diagnostic procedures are important reasons participants see their GP.

JF: I go to the doctor if I need a medical certificate for work, otherwise, I'll just use
rongoā and mirimiri if I'm feeling unwell.

FM: I'll go to the doctor if I'm really sick, but I don't go that often. If I need a
medical certificate I'll go in and deal with whatever I need to at the same time...
but yeah, no I really don't go to the doctor much.

RF. I see the doctor if I want tests, blood tests or X-rays, that's the main reason I'd
go. I mean there would be WINZ stuff as well but not so much now. There's
diabetes and stroke in my female line so I have blood tests to keep an eye on that
stuff.

LF. Yeah, I go for a check-up once every 3 months or so because I'm on the verge
of diabetes and I need regular blood tests.
KF: I had to push my doctor to get X-rays for my knees because I suspected that I had arthritis and I wanted to know. Now I know that only one of my knees is bad.

Subtheme 3 – Stoicism and Pain

Stoicism is significant in the life-worlds of all participants. For the men, stoicism or handling pain without complaint reflects upbringing and stereotypes about being young, Māori and male, while for the women, stoicism is evident in the treatment setting where tolerating the pain of treatment is part of the healing process.

Being strong and handling the pain may be normal for young Māori men

Findings suggest that as young men, it was important to both FM and BM that they were perceived as being strong. BM has regrets about continuing to play basketball after sustaining a bad ankle injury when he was younger and believes there is a connection between the poor healing of his ankle and the pain he suffers now.

FM. My experience with pain, you tend to sort of handle it or cope with it, as a boy, as a man. Cause you’re of that age where you think I’m strong, but no one wants to see me weak, sort of, you know? Māori men especially, eh, or, maybe even a male thing really. I would think though, yeah, have to be strong you know.

BM: Yeah, I think it was a torn ligament and I think I cracked one of my anklebones, and yeah it was pretty bad eh [...]. At the time I just wanted to go hang with the boys, you know, and keep playing basketball. That was the priority so I never really did the rehab. I just kept going. In hindsight I should’ve done the rehab cause it wouldn’t have maybe built up so much scar tissue. I mean its okay like I can sprint on it now but the rotations not so good [...] and the pain in my leg and back is probably like compensation.

Māori women may believe ‘the healing is in the pain’

Female participants describe the experience of mirimiri or romiromi as being painful but less so the more it continues. It seems ”the healing is in the pain” as the women seem used to breathing through it so they can get the release.

JF: Having romiromi can be painful but if you go regularly, you can handle more than you think, you learn to breathe through it.
LF: The first healing I had, it was brutal, but I had to have faith because it’s ours, our practice, OURS. She [the healer] was telling me off and saying, “Why are you holding on to that?” and “What’s this got to do with you?” Basically she was saying this is your life and you need to live it and not live someone else’s life.

KF: The longer you have between sessions, the more pain you’ll go through next time because your body has accumulated a lot of raruha that creates blockages in your energy or you’re carrying a lot more negativity. So, to release it takes more effort than it does if you’re going regularly.

Discussion Theme 3

Understanding health beliefs, choices and behaviour

Subthemes

- Understanding safety
- Alternative and Western medicine
- Stoicism

Introduction

Theme 3 discusses participants’ health beliefs, attitudes and behaviours in relation to the resources that are available to them for coping with their long-term pain. The three subthemes identified above inform understanding of the health choices participants make. Participants’ perspectives of what safety means in the therapeutic setting and in day-to-day life are examined in relation to their experiences of long-term pain, the choices they make for treatment and the treatment outcomes. Participant’s views on using Western medicine and mainstream services, as well as alternative approaches to health and pain are explored and this is followed by an examination of stoicism. Stoicism is a common theme among participants and may reflect deeply embedded cultural values and an embodied response to ongoing colonization processes.
Subtheme 1 – Understanding Safety

Safety is important to participants in the therapeutic setting and in daily life and feeling unsafe may affect their long-term pain. Collective whānau values, respect for tapu and the use of karakia are important constructs for participants’ safety. A male participant’s resistance to one-on-one treatment emphasizes the importance of whānau in the therapeutic setting and highlights the Māori concept of whakama/embarrassment. Embodied understanding of tapu highlights the relevance that tapu may have for the experience of long-term pain. Participants’ use of karakia indicates that it is an important daily spiritual practice that promotes feeling safe, calm and centered.

Māori healing in a group feels safer than one-on-one treatment

In a photograph in the paper, FM sees “a brother” meaning ‘another Māori man’ administering Māori healing with lots of other people around and he thinks Māori healing might be a good option because he might not be so ‘whakama’/embarrassed. His views are reflective of embodied cultural values in which the whānau collective “is the basic support structure for Māori that could buffer the individual from the effects of the wider world” (Cram et al., 2003). Māori healing feels more comfortable and safer than one-on-one treatment with a physiotherapist for FM because “there are other people around”, highlighting the need that some Māori may have for support from whānau in the therapeutic setting. Having whānau present in the clinical encounter may reduce the whakama Māori may experience in a health-care encounter, and while the development of cultural competency standards suggests that health professionals recognize the need Māori may have for whānau support (Bacal & Jansen, 2006; Ratima, Waetford, & Wikaire, 2006). it is evident that Māori continue to experience health encounters in which having whānau support is questioned and even discouraged by health professionals (Jansen et al., 2008).

The embodied resistance FM experiences in one-on-one treatment with a female physiotherapist may be indicative of him feeling whakama, which FM also perceives as feeling unsafe. His comment that “obviously there was nothing going on” suggests that he felt it was inappropriate being a Māori man having treatment with a woman and there is the sense that he felt his conduct in such circumstances might be under scrutiny. FM’s feeling of whakama may partly be explained by the social stigma associated with being
Māori and male (Hokowhitu, 2010; Jackson, 1988), where racialization of Māori men as ‘violent warrior types’ in mainstream society may influence people’s views of Māori men as a group (McCreanor, 2008). Mana or personal power may also be compromised in situations where power differences exist and may be central to Māori men’s need for support from whānau in the health encounter (Cram et al., 2003; Ratima et al., 2006).

Research suggests that Māori men may feel much safer seeing a clinician who is male and Māori (Jansen et al., 2008; N. White, Mavoa, & Bassett, 1999). In a study investigating the views of 19 Māori from Ngāti Tama iwi about their perceptions of health, illness and using physiotherapy services, six participants said they would prefer treatment with a Māori practitioner and one considered that ‘hands-on’ treatment might cause some Māori whakama/embarrassment and as such they may prefer a Māori person touching them. Another male participant in the study expressed that for him it was a “male-female thing”; however, he also explained that he would much prefer to see a “Māori male” and not a “Pākehā woman”, suggesting that culture and gender compatibility are both important (N. White et al., 1999).

It seems that having a choice of practitioners based on culture and/or gender may be important factors for Māori men needing physiotherapy or similar modes of treatment. Feeling unsafe or uncomfortable in the therapeutic setting is likely to have a negative effect on the outcome of treatment (Madrona & Mainguy, 2015) where the nocebo effect may cause symptoms to worsen following a negative clinical experience. It is possible that the “closed off tenseness” that FM felt in his body during physiotherapy may have negated the positive effects of the treatment. It is also possible that difficult emotions such as whakama/embarrassment may exacerbate long-term pain (Sarno, 2011; Schechter et al., 2007).

**Embodied understanding of tapu triggers emotional response**

KF and RF were brought up with an awareness of the implications of tapu, a spiritual concept that denotes something that is forbidden (Pere, 1991). Their comments suggest that it is an important construct for understanding how Māori may think about their health, illness, pain or suffering. Pere (1991) maintains that tapu was never talked about openly; rather, it was learned about through the role modelling in whānau life where a child grew up knowing what they needed to do to keep themselves safe. When talking
about her tupuna at the table, RF experienced an embodied reaction where she felt “guilty” about having kai/food on the table. She rectified the situation by removing all food from the table. This makes visible that tapu is an embodied value that she was brought up with. RF’s desire to “reconnect with” the Māori values she was brought up with, suggests that she has put them aside for Western values. The strong influence of culturally embedded values is interesting to observe, whereby her embodied reaction triggers an emotional response of “guilt” and possibly “fear” that causes her to act.

Research suggests that Māori maintain strong beliefs regarding tapu where transgression of tapu may result in ‘mate Māori’, a Māori sickness (Accident Compensation Corporation, 2008; Bacal & Jansen, 2006; Durie, 1998; Reinfeld & Pihama, 2007). A recently published resource booklet prepared for the Medical Council of New Zealand aims to increase health practitioners’ understanding of Māori values such as tapu, wherein it is made clear that food and items related to food such as tea towels are kept separate from bodily items such as clothes. This is especially important where the deceased body is concerned (Bacal & Jansen, 2006). It is proposed that putting the embodied Māori value of tapu aside, there may be consequences for RF’s health and wellbeing. While RF may not be experiencing ‘mate Māori’, repeatedly going against her deeply embedded beliefs regarding tapu may cause her inner conflict or spiritual emotional problems related to feelings of guilt, fear of retribution, or anxiety, which may all exacerbate RF’s long-term pain (Sarno, 2011).

**Karakia is about safety, healing, learning and a Māori way of life**

All but one participant discussed their understanding and use of karakia and it is evident that karakia is an important construct for the participants as a group. Karakia instills positive feelings of safety, calm and connectedness. Several participants indicate that karakia aids learning about the Māori world. For example, JF uses karakia to create calm and prepare her students’ minds for learning at the kura/school she teaches in. KF associates learning karakia with marae protocol and RF says that learning about rongoā would mean learning “the karakia that goes with that”, which also promotes her learning of te reo/Māori language. In this sense, karakia may also be important for restoring and maintaining Māori identity. JF’s reference to “the light” that works for her whānau is indicative of the spiritual life she leads and is an important construct of Māori and other spiritual healing practices (Brennan, 1993; Chia & Chia, 1993; G. T. Mark, 2012; Mello & Oliveira, 2013; Royal, 2003); however, this not able to be discussed at length here but
suffice it to say that the “healing light” concerns the aura or energy field of animate beings, which in Māori terms may be considered as mauriora/force of life energy that is interconnected with all life (Royal, 2003).

Kaupapa Māori research suggests that ‘wairuatanga’ or spirituality and karakia keep the Māori person safe and healthy (Cram et al., 2003; Dew et al., 2015; Te Karu et al., 2013). In research by Cram et al., (2003) wairua/spirit was the most talked about aspect of Māori health and was considered important in relation to treating the ‘whole person’ and not just the symptoms of an illness. Similar views were expressed in a study by Reinfeld and Pihama (2007) where the narratives of 60 kaumātua from the Taranaki region make evident that karakia is the most fundamental and commonly used form of Māori healing practice and relates to the oratorical nature of Māori knowledge systems in which it is believed the spoken word may literally draw down the energy of the divine for healing (Reinfeld & Pihama, 2007). Kaumātua explain that there are many karakia used for different purpose and karakia is believed to have the power to transform sickness. Passing on karakia to future generations is considered extremely important (Reinfeld & Pihama, 2007) and aligns with participants’ views in the current study that karakia are important for learning about the Māori world and maintaining Māori identity and safety.

Spiritual practices are especially important in times of illness and death and increasing respect for the use of karakia and Māori tikanga in the hospital setting is evident in New Zealand (Aukst-Margeti & Margeti, 2005; Bacal & Jansen, 2006). Karakia for Māori people may be important for coping with hospitalization stress, as studies show that those who use religious practices in hospital may cope more effectively (Aukst-Margeti & Margeti, 2005). Religious practices such as karakia or other forms of prayer may have a positive impact upon cardiovascular health, immune function (Seeman, Dubin, & Seeman, 2003) and psychological health (Aukst-Margeti & Margeti, 2005). Further to this, Aukst-Margeti and Margeti (2005) maintain that religious practices prevent pessimistic attribution and may influence the stress-vulnerability equilibrium in times of trauma, decreasing feelings of hopelessness. In this way karakia may be helpful for alleviating long-term pain.

**Subtheme 2 – Views of Mainstream Western Medicine and Alternatives**

Participants’ use of alternative therapies for maintaining health and decreasing pain are addressed under this subtheme, as well as their views of Western mainstream medicine.
Participants’ reluctance toward taking medication is explored in relation to historical mistrust of State health-care and communication difficulties between Māori and European in the health setting. The benefits of Māori hands-on healing for pain are uncovered and participants’ views of other physical therapies and seeing their doctor are discussed.

**Alternative therapies are popular and reduce the need for medication**

In the life-worlds of participants, using natural approaches for maintaining wellbeing and managing their pain is ‘normal’ and not necessarily alternative. For example, JF makes explicit that for her “rongoā is the norm” and that “it should be that way for everybody”. BM and RF both use homeopathy and BM expresses that “natural therapies are his preference”, which is why he decided to try Māori healing. RF says she loves all kinds of healing and especially spiritual healing.

Qualitative research makes evident that Māori may indeed have a preference for using natural approaches to health-care and in particular rongoā, alongside Western medicine (Cram et al., 2003; Dew et al., 2015; Evans, Duncan, McHugh, Shaw, & Wilson, 2008; Te Karu et al., 2013; N. White et al., 1999). Research with inpatients at a Gisborne hospital about their use of complementary-alternative medicine showed that approximately 62% of the 37 Māori patients interviewed used rongoā, while spiritual healing and hypnotherapy were also popular among Māori patients (Evans et al., 2008). Studies suggest that rural and older Māori may be more likely to using rongoā and that Māori are much more likely than European to try alternatives including rongoā and spiritual healing for cancer treatment (Cram et al., 2003; Dew et al., 2015; Mcgavock, 2011; Te Karu et al., 2013).

The success that two participants have had with using natural remedies for healing nerve damage after surgery and for pain relief validates the use of natural alternatives for them. There is the sense that while JF was cognisant of her surgeon’s comments regarding the time it would take for her foot to heal, she also knew that using rongoā and having regular mirimiri could lead to a better healing outcome, which it did. JF’s experience and BM’s experimentation with using turmeric for pain relief is analogous with empirical research where observation and evaluation may determine efficacy. Empirical approaches are evident in all cultures and while Western systems of knowledge remain dominant in New
Zealand, the perpetuation of dominance and universality may ignore the value contained in other systems of healing knowledge (Napier et al., 2010). BM’s and JF’s use of Māori healing combined with herbal remedies reduces their need for pain medication, which for them is a good outcome. Greater support for and understanding of Māori healing approaches by mainstream practitioners is needed so that Māori are encouraged to use both alternatives and mainstream services where appropriate.

In a separate study, 300 doctors were canvassed in regard to their knowledge of complementary-alternative medicine in New Zealand (Poynton, Dowell, Dew, & T., 2006). Results showed that 30% viewed Māori medicine as moderately beneficial or higher while 25% selected ‘don’t know,’ suggesting that the majority of doctors have little appreciation for or knowledge of Māori medicine and its benefits for Māori people. A large number (n=179) also disagreed that the complementary-alternative medicine approach was more holistic, implying that doctors have particular views on what holistic means that may be different from the meaning complementary-alternative medicine practitioners have of the term. Doctors’ lack of knowledge regarding Māori medicine is considered concerning because of the risk for adverse interactions with Western medications (Poynton et al., 2006). While the concern is valid it is also proposed that a lack of awareness of the inter-relatedness of the tangible physical and intangible spiritual benefits of rongoā and Māori spiritual/hands-on healing may also be of concern as it reflects the mono-cultural thinking extant in mainstream medicine in which colonization may be ongoing (P. Reid & Robson, 2006).

Understanding what holistic means from a Māori perspective includes acknowledging that for many Māori people, spiritual health is a foundation for physical health and rongoā is more than just taking a medication as it involves spiritual processes in regard to its preparation, administration and effect. While the Medical Council of New Zealand recommends that doctors be mindful of their patients’ cultural beliefs, mores and behaviours, it is evident that a lack of knowledge regarding Māori healing methods and a Māori worldview may hamper progress toward achieving Māori health equality because Māori systems of healing may in many cases be more appropriate for Māori people, especially where the Māori life-world is affected by historical trauma (Bacal & Jansen, 2006; Poynton et al., 2006; P. Reid & Robson, 2006; United Nations, 2008).
**Reluctance to take medication reflects preference for alternatives, historical mistrust or difference in communication**

Participants have different reasons for not taking pain medication. Both FM and RF express that pain medication is just not something they really rely on in their daily lived-experiences of pain. This indicates their general reluctance toward taking pain medication, and also that they may tolerate pain. BM’s insistence that he would rather “know what’s happening in his body” and get rid of pain naturally, reflects a preference for alternatives to medication, although historical factors are also evident. For LF, historical research with Māori people influences her views of health-care. JF’s use of morphine on the day after foot surgery and rongoā following that, because she “finds it hard to come out of that fog”, indicates that she does not tolerate the side effects of morphine and also prefers to use a natural Māori approach to pain.

**Medication**

Māori reluctance to take medication, and in particular pain medication, is evident in the research (Jansen et al., 2008; McGavock, 2011; McGavock et al., 2012; Te Karu et al., 2013). In a large population study by Jansen et al. (2008), 651 Māori were surveyed about their views of health services and 51% of respondents agreed that they did not like taking medication for an illness. When the group were divided into two by age, the percentage of younger respondents who opposed taking medication increased (Jansen et al., 2008). Miscommunication, fear and confusion regarding the use of morphine in palliative care among Māori is also evident in Penney, Fieldhouse and Kerr’s (2009) research, where whānau were uncertain whether morphine was given to make their whānau/relative more comfortable or to hasten their death. This led to patients refusing medication and tolerating excruciating pain (as cited in McGavock, 2011). It is possible that views regarding the use of morphine expressed in this study may be related to historical mistrust of Western medicine and hospitals, which were historically considered by many Māori as places one went to die (Dow, 1999). Such views held among whānau may strongly influence future generations’ views of taking medication (Jansen et al., 2008). A qualitative research by McGavock (2011) found fear of addiction and intolerance of side effects amongst urban Māori with chronic pain. One participant in the study reported that when he brought up addiction with his doctor, his doctor explained that he should see it as ‘reliance’ and not addiction. In general, participants viewed the side effects of pain
medication as problematic, which is similar to findings in the current study. The marked difference in participants’ use of pain medication in Mcgavock’s research (2011) compared with the current research, in which participants prefer natural remedies, may be reflective of the selection process for the current research, whereby participants were sourced from a Māori healing group indicating a bias for alternative approaches to managing pain. The problems associated with side effects, addiction and the poor effectiveness of pain medication is well documented (Casey, 2014) and may cause many people to discontinue taking medication for chronic pain, which may lead to feelings of hopelessness. Clearly, effective alternatives to medication for managing long-term pain day to day are needed.

**Historical mistrust**

Of all participants, BM appears to be the most resistant to using any form of Western conventional medicine and while he explains that this is related to the bad side effects of medication members of his family experienced in the past, it is also evident that BM has an anti-establishment attitude in that he is anti-education and anti-technology, which may be reflective of his wider iwi affiliations. Research suggests that Māori attitudes to health-care may be shaped by past personal experiences and the past experiences of whānau (Cram et al., 2003; Jansen et al., 2008), where negative experiences and perceptions of bias may prevent Māori from accessing care (Human Rights Commission, 2012).

While it is not certain, it is possible that embedded historical and cultural factors related to BM’s wider whānau, hapū and iwi affiliations may be a factor in his refusal to engage with State health-care because institutions of the State may represent corruption, injustice, oppression and dominance. The historical and recent maltreatment of the Tuhoe Nation’s people by the State is evident in the literature (Binney, 1983) and in the media (Lines-Mckenize, 2017). A formal State apology to Tuhoe people and Rua’s descendants was forthcoming in 2017 (Fraser, 2017) and Rua Kenana was pardoned of false charges laid against him 100 years ago. However, many Tuhoe people continue to bear the pain and suffering of historical and contemporary State injustices.

Historical factors may also be a feature in LF’s resistance to having smear tests, whereby her comments reflect an awareness of how Western research conducted in the past
dehumanized Māori (L. T. Smith, 1999). Her statement that “we are just guinea pigs for them” is indicative of embedded beliefs related to being ‘other’ where mistrust and resistance to ‘them’ conducting research on ‘us’ Māori is apparent. Resistance also qualifies her decision to dissuade her husband from “trying a new drug” because this would reduce him to being like a “guinea pig” for ‘them’. Other historical factors in LF’s whānau related to land confiscation and marginalization of her people make visible that historical resistance in her whānau has shaped her attitudes and beliefs in regard to the State and health-care. It is proposed that both BM and LF perceive that racism is embedded in State institutions. Research suggests that perceived racism may exacerbate long-term pain conditions (J. P. Harrell et al., 2003; D. R. Williams et al., 2003).

**Communication in health-care**

KF’s kōrero makes visible her preference for a less clinical approach to communication in the hospital setting. It is possible that the frustration she and her husband have experienced with the style of communication used in the hospital may create barriers for them both to accessing hospital care in the future (Cram et al., 2003; Jansen et al., 2008). Jansen et al. (2008) found that 73% of older Māori who had used hospital services rated them as good, compared with just 37% of younger Māori. Hui consultations revealed that poor staff communication in the hospital setting, a general lack of respect and long waiting times were central factors of negative experiences for Māori. When asked whether they agreed or disagreed with the statement, “It’s hard to get a straight answer from people in the health system”, 40% of respondents in the population study agreed (Jansen et al., 2008). Jansen’s extensive research makes evident that while Māori overall are around 80% satisfied with mainstream health-care and hospital services, communication is identified as needing improvement. Cultural factors indicate that for Māori, communication is about building rapport and putting the person at ease before discussing their health issues (Bacal & Jansen, 2006; Cram et al., 2003) and disregard for this may be seen as a lack of respect that may lead to Māori avoiding services, misunderstanding information and being reluctant to take medication (Bacal & Jansen, 2006; Cram et al., 2003; Dew et al., 2015; Te Karu et al., 2013).

**Regular hands-on healing gives good pain relief and has overall benefits for health**
While all participants experience benefits from mirimiri and romiromi, three participants convey that Māori hands-on healing helps their pain. Both BM and JF experience good relief from lower back pain that lasts for about a week, and then they need to go back again. KF has a preference for mirimiri because it is compatible with her beliefs about pain that “while things may manifest as physical” [meaning pain], in her experience “there is more to it”. For KF, mirimiri addresses the other intangible aspects of pain and gives her “overall benefits” that help her pain. There is little research regarding the effects of Māori hands-on healing for pain relief; however, O’Connor (2007) presents a perspective given by Māori healers of Te Oo Mai Reia who are a group of healers trained in the methods of the late Tohunga Papa Joe Delamere of Tuhoe descent. Te Oo Mai Reia healers propose that memories are embodied, a concept underpinned by the understanding that the cells of the body have ‘cellular memory’. The interplay between embodied memory and the mind is central to understanding the Māori healing approach where painful events, trauma and associated negative emotions such as grief and anger may be stored in unconscious memory and may affect a person’s thoughts, actions and body (O’Conor, 2007). The views expressed by Te Oo Mai Reia healers align very closely with current thinking in trauma theory and epigenetic research (Kellerman, 2013) in which the effects of trauma may lead to lasting change in gene expression that may be passed on to future generations. Other commentators suggest that unconscious emotions may be expressed in the body as physical pain because the body itself is an idiom of distress (Kirmayer, 1996; Penney, 2010; Sarno, 2011). Penney (2010) suggests that long-term pain may be viewed as a homeostatic emotion that drives behaviour. O’Connor (2007, p. 160) quotes Te Oo Mai Reia healer (Mildon, 2005):

Romiromi can release a lifetime of physical and psychological pain as well as negative energies that whānau have suffered through the generations. Often these experiences are trapped in the cellular memory of the body and cause emotional and physical blockages

Further Kaupapa Māori research investigating the effect of rongoā and Māori spiritual and hands-on healing upon long-term pain, dissonant emotions and other illnesses – from the perspective of those receiving healing – is warranted.

*Views of other physical therapies*
Participants’ use of physiotherapy and chiropractic treatment reflects various perspectives that may be viewed in contrast to their experiences of Māori healing. JF expresses annoyance at the physiotherapists focus on time, getting rid of pain and fixing things. It is possible that JF feels that physiotherapy focuses more on the problem and not on her as a person. In contrast to physiotherapy, Māori healing is a holistic approach that considers the person in mind body and spirit (G. T. Mark, 2012), which JF seems to prefer. Recent developments in cultural competency guidelines for physiotherapists suggest increased awareness within the physiotherapy profession of the Māori need for a more holistic approach (Ratima et al., 2006). In two studies (Basset & Tango, 2002; N. White et al., 1999), Māori experiences of physiotherapy were explored (n=6 and n=10 respective). In the study by N. White (1999), all but one respondent reported positive experiences of physiotherapy; however, cost was thought to prohibit some Māori from accessing physiotherapy. JF discontinued seeing a chiropractor as it was “too expensive”, which makes evident that for some Māori cost may be a barrier to accessing more mainstream physical therapies (Jansen et al., 2008).

LF explains that she resisted physiotherapy 30 years ago; however, she recognizes now that had she not resisted it, she “wouldn’t be carrying so much pain now”. Perhaps having experienced regular bodywork such as romiromi, LF now sees the benefits of physical therapy. BM expresses a similar view, where he explains that if he had followed through with rehabilitation 17 years ago, a better healing result and less pain in other parts of his body might have been the outcome. While prior injuries may lead to arthritis later in life, research suggests that prior injury and/or degeneration is not a definitive cause of long-term pain (Balagué et al., 2012). Imaging studies show that arthritis and degeneration are present in the normal population in the absence of long-term pain and regardless of prior injury (Balagué et al., 2012). FM describes his experience of physiotherapy as being like a “rubber band plan”, which reflects the focus of the physiotherapy profession on rehabilitation and exercise using therabands (Basset & Tango, 2002). While physiotherapy had benefits for FM such as improved range of motion in his shoulders, he “felt guilty” when he did not do his exercises, which may have been counterproductive to his healing process. However, it is evident that regular Māori healing helps FM to feel more relaxed in treatment and in his life.

Specific criteria for seeing the doctor reflects autonomy in health-care choices
It is evident that participants have very specific reasons for going to see their doctor. JF, FM and RF go when they need documentation such as medical certificates and JF implies that it is “the only reason she goes to the doctor” because she uses rongoā for everything else. This finding is not obvious in other literature reviewed by the writer. KF, LF and RF see their doctors when they need diagnostic tests such as X-rays and regular blood tests because diabetes and stroke are identified familial risk factors. KF says she had to push her doctor for X-rays for her knees, which may reflect her doctor’s lack of attention to her care. Discrepancies in the treatment of Māori in general practice are evident in the research (Crengle et al., 2001) and may reflect historically embedded attitudes about the ‘other’ based on deficit thinking and victim blaming (Human Rights Commission, 2012).

Perceptions of bias may result in some Māori relying on other than mainstream means for managing their health or their pain (Jansen et al., 2008). Interestingly, no participants in the current study see their doctor for pain and yet pain is the most common reason people see their doctor (Penney, 2010). This indicates that as a group, participants in the current study are exercising full autonomy in the choices they make, where they are able to utilize both mainstream services and a Māori approach for managing their health and their pain. While research advocates that everybody has an equal right to adequate pain relief (Pain, 2004), it is proposed that this right should not preclude the use of natural remedies or spiritual cultural approaches such as Māori healing for Māori people who have pain (United Nations, 2008). It is also proposed that greater recognition of indigenous approaches to health as being culturally appropriate for the people whose culture they belong to, is needed to improve indigenous health and wellbeing internationally (Napier et al., 2010).
Subtheme 3 – Stoicism and Pain

Stoicism is evident in both male and female participants’ life-worlds. For BM and FM, conforming to stereotypes associated with being Māori and male has implications for seeking health-care. For female participants, stoicism is evident in Māori healing where pain tolerance contributes to the healing process.

**Being strong and handling the pain may be normal for young Māori men**

While FM’s admission of “handling the pain and getting on with life” might be common among men in general, in the case where pain may be indicative of something more sinister, delay in seeking health-care advice may be detrimental, where an early diagnosis may result in a better outcome or an extension of life years. Research suggests that stoicism may be common among Māori (Mcgavock, 2011; Te Karu et al., 2013) and may also be culturally determined by concepts such as whakama and mana, which may influence Māori men’s decision not to seek health-care. Appearing weak may be seen as a loss of face and may be unacceptable to Māori men in particular (Accident Compensation Corporation, 2008; Bacal & Jansen, 2006; Dew et al., 2015; Sachdev, 1990). Te Karu et al. (2013) found that Māori with gout tolerated excruciating pain before seeing their doctor.

The anecdotal account BM gives of continuing to play basketball on his injured ankle and ignoring rehabilitation may be indicative of a stoic attitude, which may have affected the healing outcome of his ankle. Māori men have the highest rates of injury of any group in New Zealand and yet continue to have the lowest rate of access to accident compensation and rehabilitation services (Accident Compensation Corporation, 2008), suggesting that stoicism in Māori men may need challenging in ways that appeal to them (Hokowhitu, 2010). Evidence of higher injury rates among Māori men and lower access to services raises the possibility that Māori men may also have higher rates of poorly managed long-term pain that may go unnoticed because they may not present for care.
Māori women may believe ‘the healing is in the pain’

Female participants explain that while romiromi and mirimiri can be painful, it becomes less so with regular treatment. LF explains that initially, the pain of Māori healing was “brutal” for her but going through the pain revealed to her its symbolic meaning, which in her case was about “living her own life” and not somebody else’s. KF’s reference to more “raruhara” accumulating in the body the longer the space of time between healing sessions, highlights the special perspective of a Māori healing approach to pain (O’Conor, 2007). The term ‘raru’ means trouble and ‘hara’ means ‘violation of tapu’, ‘sin’ or ‘transgression’ (Moorfield, 2003-2017). For KF, ‘raruhara’ represents “blockages in energy” or “carrying more negativity” in the body, which requires “more effort” meaning more physical bodywork to release it. It is evident that pain is a natural part of the healing process for the women in this study who express feeling it, understanding it and releasing it. In their study, Basset and Tango (2002) found that Māori participants were likely to tolerate pain rather than complain. The authors concluded that physiotherapists should be mindful of their Māori patients putting up with pain and check with them about treatment intensity to reduce any discomfort.

Female participants in the current study appear to believe that “the healing is in the pain” and other research suggests that this view may be culturally bound (O’Connor, 2007), whereby accessing deep pain held in the body may uncover spiritual or emotional issues that are associated with physical pain. One other prospective study by Nelson (2006) is worth mentioning here in which Māori women in childbirth were found to have less pain relief and epidurals compared with non-Māori women, which is similar to findings in international studies with indigenous minorities in other Westernized countries (Nelson, 2006). The authors were unsure why this was the case for Māori women and recommended that further research is needed to understand the phenomenon. It is possible that tolerating the pain of childbirth may also be culturally defined where going through the pain is viewed as a natural part of the birthing process and may even be celebrated. Through the birthing process, pain is transformed into joy at the sight of new life. From a Māori perspective, this reflects manawahine/the power of women (Lawson-Te Aho, 2014; Mikaere, 2005). The notion that “the healing is the pain” is also a foundation for American Indian Alaskan Native healing practices (E. Duran, 2006) and it is an appropriate topic on which to end this discussion. Facing the possibility that there
is pain embedded in our histories that may impact negatively upon our minds, bodies and spirits, may be a first and necessary step toward enabling the understanding and letting go of long-term pain. Accepting that the healing is in the pain may allow for its transformation so that freedom from the bondages of the past is made possible, which in turn may restore authenticity to the Māori life-world.

**Conclusion – Theme 3**

The collective construct of whānau, and tapu and karakia is important for feeling safe, calm and centered and karakia also aids learning and healing in the participants’ life-worlds of long-term pain. Acknowledging these everyday healing constructs honours participants’ autonomy and their ability to cope with long-term pain. While natural remedies are popular with participants, they have specific reasons for accessing mainstream services suggesting they are exercising autonomy in the choices they make for health and wellbeing. Exercising autonomy is evident in the participants’ choices not to use painkillers for managing everyday pain and using alternatives such as Māori healing and rongoā. This finding differs from findings in other qualitative research. For example, in Mcgavock’s (2011) research, some Māori participants who were struggling with long-term pain became reliant on using strong pain medication. However, in the current study, stoicism is relevant to both male and female participants in different ways, whereby the men are influenced by stereotypes and the women express toleration of pain in healing. Female participants make evident that pain may be symbolic of something that needs to be felt, understood and let go. This makes evident that the meaning participants make of their pain is important to healing their pain. The belief that “the healing is in the pain” may be central to healing the pain of trauma embedded in many Māori people’s histories.
Chapter 5 – Summary/Conclusion

The research findings suggest that participants’ long-term musculoskeletal pain may in part be an embodied effect of historical trauma in which disruptions to cultural continuity and the structures and systems that affirm positive Māori identity affect participants’ lives in profound ways that may remain hidden from view. Historical trauma related to cultural discontinuity and disconnection from whenua, whakapapa, whānau and Māori language and culture is evident in the participants’ life-worlds, and it is proposed that disruption to these important markers of Māori identity has historical, contemporary and ongoing intergenerational consequences for participants’ physical and spiritual (mental/emotional/psychic) health and wellbeing.

Whenua represents a person’s turangawaewae/place to stand and affirms Māori identity and belonging. This is exemplified in the connection one participant maintains with her maunga/mountain, Ngaiotonga. The term whenua also means ‘placenta’ which epitomizes the nurturing, and sustaining aspects of whenua/placenta/land of the fetus and of the person. The Māori term for a pregnant woman is ‘hapū’, however, it also signifies the extended wider family group. These analogies embody the meaning that whenua has for Māori identity and belonging as well as respect for ‘manawahine’ – ‘the strength of women’ – and the role they have in procreation of the iwi/tribe. The traditional Māori practice of burying or planting the newborn’s placenta (whenua) upon the land (whenua) secured the child’s right to a place where they could stand tall and thrive and the umbilical cord planted in the earth may be viewed as being symbolic of a rope or force that is always drawing or pulling the person back to their place of belonging. This understanding exemplifies the deeper symbolic meaning that whenua may have for participants’ identity in this study. It also informs understanding of the possible physical, spiritual and social consequences of being alienated from whenua.

The direct and indirect intergenerational effects of loss of and disconnection from whenua/land, is visible in participants’ life-worlds. The spiritual (mental/emotional/psychic) disharmony within one participant’s whānau may be symbolic of a wider conflict in which a position of resistance against the oppressive forces of the State system was maintained in her mother’s fight to maintain her whenua/land. It is proposed that hopelessness, anger and bitter resentment related to loss of tribal land
and Māori identity were literally inscribed upon the participant’s body through physical and psychological violence within her whānau, which shaped her perception of the world as ‘unsafe’. This is apparent in her fear of letting people get close to her. It is argued that a history of trauma in early life and an ongoing struggle to maintain a positive and autonomous Māori identity under threatening conditions can have detrimental effects upon homeostatic mechanisms such as the neuroendocrine system, which could be a contributing factor in the widespread long-term musculoskeletal pain the participant has experienced over many years. In accessing Māori healing in a group, it is evident that re-establishing connection with kin and whenua has physical and psychological benefits that increase her ability to cope with long-term musculoskeletal pain. It is evident that Māori healing methods may be important for healing both historical and contemporary trauma for Māori people because re-establishing kinship with other Māori and whenua may be a form of empowerment. Research suggests that high rates of intergenerational violence evident in Māori whānau may be viewed as stemming from internalized and externalized responses to the violence of colonization that was originally endured by tupuna/ancestors.

In the life-world of a second participant, wairua and sense of belonging was disrupted by rapid social change, influence of Western social norms and urbanization. A spiritual connection with whenua and whānau inscribed in her childhood by her ‘daddy’ – a tohunga – was normalized in daily karakia and rituals on the whenua. Her deep grief conveys the sense of loss she continues to experience in regard to tohunga knowledge that was held within her whānau perhaps for centuries being forever lost. It is proposed that her grief represents a spiritual (mental/emotional/psychic) or soul suffering that has its roots in historical trauma and cultural discontinuity where the breakdown of whānau and whakapapa structures and disconnection from tribal whenua impacted upon the participant’s identity construction and spirituality. Findings make visible that the wonderful early years of her life are in stark contrast to the new world she entered into during adolescence, which was influenced by sexual abuse, involvement in gang life and alcoholism. It is argued that her long-term musculoskeletal pain may in part be an embodied effect of historical trauma in which grief may mask deeper emotions of fear, anger, guilt and shame – which are all evident in her kōrero. Findings make visible that the deep bodywork of romiromi healing triggers memories of her traumatic past and it is
as though history and trauma inscribed in the tissues of her body are being accessed. Further research is needed that explores historical trauma and embodiment of other illnesses that may be related to dysregulation of the hypothalamic pituitary axis.

Historical trauma is evident in the life-worlds of the above two participants, who also describe the sense they have at times of being “out of their body” or not grounded. Their kōrero regarding whenua and taking rongoā derived from whenua suggests that whenua has the ability to ground the spirit. Connecting with whenua through kōrero and rongoā appears to open both participants up to the past and their emotions, which may be symbolic of reconnecting with whakapapa. Being landless may disrupt whakapapa and it is argued that for some Māori people, this may be experienced as both spiritual suffering and physical pain. It is proposed that the above participants’ descriptions of not being grounded may reflect disembodiment of the spirit, which in modern clinical terms may be considered as a form of dissociation that has implications for Māori mental health. Dissociative states are indicated in the clinical symptoms of post-traumatic stress, in which traumatic experiences may overwhelm the homeostatic mechanism leading to lasting changes in the hypothalamic pituitary adrenal axis. Such changes may be relevant to both participants’ long-term musculoskeletal pain. Epigenetic research suggests that such changes may be passed on to future generations, which, it is argued, may increase the risk for long-term musculoskeletal pain in their offspring. Further research is needed that investigates the spiritual (mental/emotional/psychic) effects of historical land loss and disconnection from whenua and whakapapa upon Māori health and in particular Māori spiritual (mental/emotional/psychic) health. Consideration of how loss of whenua has impacted upon the safety of Māori women and children may also warrant further research as studies suggest that exposure to violence early in life may predispose a person to developing long-term musculoskeletal pain and other disorders later in life.

Māori healing modalities that include re-establishing kinship and re- connecting with whenua may be vital to restoring the physical, spiritual and psychological health of some Māori people, which may also aid recovery from long-term musculoskeletal pain and other ailments that may be related to hyper-arousal of the hypothalamic pituitary adrenal axis. Research investigating group therapy for the treatment of long-term pain suggests that establishing trusting relationships, finding support networks and sharing resources for coping with pain and maintaining health and wellbeing, is an effective form of
treatment for people with idiopathic long-term musculoskeletal pain. The research informs understanding of the benefits of Māori healing for Māori people whose collective values may be embedded in the psyche. Māori healing in a group may work in similar ways in which building trust in relationships with like-minded people promotes feelings of safety so that painful historical issues that may arise when working with the body in pain may be addressed in a supportive environment.

Findings make visible that whakapapa is an important marker of Māori identity and is also a system of storing knowledge and healing the past. Whakapapa embodies the Māori cultural construct of time in which the past, present and future are thought to co-exist. Whakapapa links the spirits of ancestors who have passed on with peoples lives in the present and future, which may be central to some Māori people's spiritual beliefs. Research with Māori healers suggests that whakapapa contains within it all knowledge for healing the past, present and future and findings in this study suggest whakapapa healing may be beneficial in the treatment of long-term musculoskeletal pain as it epitomizes the importance of resolving past trauma so that health in the present is possible.

Two participants discuss whakapapa healing. One conveys her daughter's experience of healing whakapapa in which an entity from the past related to her father's whakapapa was attached to her and needed removing. The healing had beneficial effects for the whole whānau because communication was restored. While such esoteric constructs may be difficult for some people to grasp, from an indigenous spiritual perspective such understandings are considered normal and should not be overlooked when a person's ailment is recognized by a tohunga or matakite as being spiritual in nature. In Māori healing, physical pain may be considered a reflection of spiritual (mental/emotional/psychic) disharmony that may be addressed through healing whakapapa. Findings in this study make visible that healing whakapapa may be important for Māori youth who may experience spiritual (mental/emotional/psychic) disharmony. A whakapapa framework based on re-establishing connections with hapū and iwi has already been established in the treatment of Māori mental ill health; however, limited resources, structural racism and the ongoing effects of colonization may prevent the implementation, assessment and further development of such programs. The continued disproportionately high rates of Māori mental illness, self-harm and suicide
evident today suggests that resources are not reaching those who need them most. This has implications for a potential rise in the prevalence of long-term musculoskeletal pain in future in the Māori population because poor mental (spiritual) health is strongly associated with long-term musculoskeletal pain.

The desire to access whakapapa healing is expressed by a second participant because she has come to believe that the pain she is carrying in her body and spirit may not be hers. She senses that the origins of her problem are embedded in her whakapapa. Her early life experience of sexual abuse has made her feel she does not have a voice, which, it is argued, may be symbolic of the loss of whakapapa protection of Māori women and children. Kauapapa Māori research investigating historical trauma and intergenerational sexual abuse in one hapū suggests that a framework for addressing both historical trauma and whakapapa disconnection may help expose hidden secrets that have been kept within hapū for generations. The approach may help bring long-standing difficult issues such as sexual abuse out into the open so that healing may begin. Māori commentators convey that perhaps the greatest loss to Māoridom resulting from colonization is loss of ancient knowledge, which was maintained along lines of whakapapa. Other Kaupapa Māori research suggests that loss of and disruptions to whakapapa knowledge and tikanga/customary social practices may have rendered Māori women and children vulnerable to both physical and sexual abuse. In early Māori society, women held rangatira status that was not welcomed by Pākehā men. Rampant social change and changing values surrounding the roles of men and women meant that as Māori men adopted Western values, they too began to oppress Māori women and children. Literature suggests that whakapapa and tikanga social practices need to be reinstated into the Māori psyche so that traditional methods of protection of Māori women and children are re-established. Further, Māori commentators indicate that until Māori-oriented programs are established to deal with such historically ingrained problems related to loss of protection of women and children, the situation will remain unchanged.

The findings of this study suggest that whānau values are deeply embedded in participants’ worldviews, which affects participants’ health and wellbeing in profound ways. The importance of extended whānau values to health and wellbeing should not be underestimated and are made evident in the life-world of one participant whose connection with her grandmother is central to the embodied whānau values she was
raised with. The participant’s grandmother modeled to her that Māori healing practices are central to whānau life. Her kōrero indicates that aroha, nurturing and bonding were normalized in mirimiri/massage of the children, and administration of rongoā for any ailments. The findings suggest that when inscribed in upbringing, whānau values and Māori healing practices have protective benefits for Māori people. Other research makes evident that Māori live in diverse realities where differences in connection to whānau and cultural efficacy may affect how Māori respond to stress in their daily lives. A high level of cultural efficacy and maintaining strong connections to whānau, hapū and tribal whenua have been shown in research to act as a buffering mechanism against mental ill health, anxiety, depression and stress. Findings in this study make visible that maintaining whānau connections in the urban environment may be challenging. Two participants who are also mothers express concern about their teenage sons becoming isolated from whānau in the urban environment and it is evident that each has a different level of cultural efficacy. It is proposed that level of cultural efficacy may determine how the two respond to stress in relation to their sons. The participant who does not speak fluent te reo and does not maintain strong whānau and hapū connections has also experienced multiple traumas in her past and her strong, embodied reaction to the stress of her son leaving home may indicate hyper-arousal of the hypothalamic pituitary adrenal axis. While it is possible that historical trauma has predisposed the participant to being more vulnerable to subsequent stress, low cultural efficacy may also be a factor and research suggests that both may contribute to her long-term musculoskeletal pain. The other participant who speaks fluent te reo and maintains strong whānau and hapū connections expresses great concern about her son being disconnected from whānau, however, she does not appear to be acutely affected by the additional stress. Repeated exposure to micro-stressors in her day-to-day life, however, may be a maintaining factor for her long-term pain. Travelling “back home” regularly with her children while also maintaining a busy urban lifestyle as a teacher, solo mother and grandmother may affect stress, however, high cultural efficacy may also buffer its effects. Further research is needed to understand how cultural efficacy affects how Māori respond to stress as this may inform understanding of long-term musculoskeletal pain and other disorders that may be associated with dysregulation of the hypothalamic pituitary adrenal axis.
Isolation of rangatahi/Māori youth from whānau and Māori culture may contribute to high rates of distress among Māori youth and commentators suggest that unless programs are implemented that address the spiritual (mental/emotional/psychic) and social distress evident among Māori youth, the burden of disease for Māori, which includes the burden of long-term pain, will rise as the Māori population ages. Wider social support may be a buffer against stressful environments in which peer pressure and the use of drugs and alcohol may have a considerable impact upon the physical and spiritual health of Māori youth and whānau in the urban setting. Māori are a young population and further Kaupapapa Māori research that establishes the prevalence of long-term pain within Māori youth is warranted as depression and anxiety are associated with and may even cause long-term pain. Research suggests that social solutions, better resources and better access to education and health are all required to lift Māori youth up and out of cycles of poverty that are central to maintaining poor health outcomes.

In this study, accessing Māori healing in a group has helped two participants reconnect with collective whānau values and makes evident that Māori healers may be mentors for those who have lost touch with Māori ways of being and knowing. Māori healing in a group offers a unique form of support in the urban environment where Māori may feel safe and are able to connect with like-minded people. Māori healing in this sense serves as an important means of helping to restore cultural continuity and may help to reinforce positive Māori identity and self-esteem. Re-establishing the value of whānau has had positive effects upon both participants’ Māori identity, which it is posited may have unseen benefits for their long-term musculoskeletal pain.

The fact that whānau values are being taught in universities indicates that Māori identity and ways of being and knowing may be under threat. The participant who raises the issue is the most in touch out of all participants with te ao Māori/the Māori world and the collective lived reality of whānau. Despite having raised her children in a Māori way that prioritizes whānau values, the participant is acutely aware of the fact that the authentic whānau values that she was raised with have been surpassed by Western values that prioritize the individual. The participant expresses that Māori do not know how to be Māori anymore, which may explain why whānau values are being reinforced in the academic setting. It is possible that the participant’s perceived loss of culture and the threat to authentic whānau values and identity, may in part contribute to her long-term
pain. Further research is needed to understand how the threat to Māori identity and whānau values may impact upon long-term pain in the Māori population.

Findings indicate that cultural discontinuity affects each participant's life-world differently and for some, acculturation is evident as an additional stressor. The struggle to maintain a positive Māori identity within urban social frameworks that are predominantly Western is evident in the kōrero of two participants, who have tried unsuccessfully to become fluent in te reo Māori language. For one participant, many vain attempts to become fluent in te reo affects her sense of wellbeing. She associates her depressed feelings with her sense of failure, which affects her self-esteem and sense of Māori identity. The other participant expresses regret at not being able to speak fluently and his kōrero reflects an ongoing conflict with whether it is even necessary. While fluency is more important to him now that he has two young children, research makes visible that learning te reo and teaching one's children in a cultural vacuum is extremely difficult. It is argued that for some Māori, the loss of Māori language and culture increases their sense of lost identity. Research suggests that an inability to speak fluent te reo may cause some Māori to feel alienated in both the Pākehā and Māori worlds, where on one hand, there is historical and ongoing marginalization and on the other, there is whakama and loss of mana at not being fluent. Difficult emotions may be triggered in situations where the person is challenged to confirm their Māoriness by speaking fluent te reo, for example on a marae. This may have a greater impact upon men whose speaking roles on the marae may be affected if they are not able to kōrero Māori.

There is very little research examining the effects of loss of te reo upon Māori people’s health and wellbeing; however, emerging research suggests that first and second generations of Māori who were taught to speak English only, may experience great difficulty with trying to learn te reo, a difficulty which may be common for those generations. Further research is needed to understand the spiritual and psychological effects of cultural discontinuity upon Māori health and wellbeing. Findings in this study suggest that for some Māori, a low level of cultural efficacy may reflect a high level of acculturative stress, which may affect happiness, wellbeing and long-term musculoskeletal pain.
Further findings suggest that Māori children may also struggle with Māori identity and maintaining te reo when predominantly exposed to Western mainstream schooling and social environments. Another participant who speaks fluent te reo reveals that when her mokopuna/grandson is with her, he is willing to learn and speak te reo, but when he is with his friends who do not speak Māori, he asks nan to “speak properly”, which suggests he is whakama. Research makes visible that unless the opportunities for speaking te reo in everyday environments is made possible, then te reo Māori language will remain under threat of extinction. This participant’s kōrero also makes visible that incorrect pronunciation of Māori words by her mokopuna’s/grandson’s teacher may also be detrimental to his Māori identity. It is possible that incorrect pronunciation of te reo in mainstream schools may further marginalize the identities of Māori children who may already be unsure of themselves as Māori in the mainstream setting. While we cannot say whether or not this situation impacts upon the participant’s long-term pain, it is possible that her efforts to maintain Māori ways of being and knowing with her grandson are regularly challenged in mainstream social encounters that may be perceived in the unconscious as a threat to Māori identity. Such challenges may also be a constant reminder of Māori people’s marginalized status.

In summary of theme one, it is proposed that the embodied effects of historical trauma are associated with 200 years of struggle against marginalization of the Māori identity and Māori culture. The feeling that Māori identity is under threat may be amplified in Māori who are disconnected from whānau due to reduced buffering mechanisms. Perceived threat to identity and social exclusion may contribute to participants’ experience of long-term pain through similar pathways in the brain that mediate both the sensory-discriminatory and the affective-behavioural dimensions of pain perception. Identity threat may be viewed as an effect of embodied historical trauma related to societal changes to ‘classic whānau’ structures that provided for wide systems of social support, care and nurturing of children and young people. Other research suggests that implementing programs that increase social support, emotional intelligence and wellbeing, especially in children and young people, may reduce the increasing burden of disease on societies, which includes the burden of long-term pain. Further research is needed to understand whether the ability of some Māori to cope with stress may be determined by whānau connection, cultural continuity and positive Māori identity.
construction. A breakdown in level of whānau support may lead to Māori becoming isolated from collective whānau values that are a foundation for Māori health and wellbeing. Research suggests that people who experience both loss of culture and participation in communal life may come to devalue themselves, which may affect long-term pain. Exploring participants’ experience of long-term pain within the context of Māori identity and historical trauma raises many questions about participants’ autonomy. Autonomy reflects participants’ personal and collective agency and represents their freedom and right to pursue authentic Māori ways of being and knowing. Findings in this study suggest that restoring Māori ways of being and knowing are essential for improving outcomes in Māori health, which includes outcomes for long-term pain and suffering that Māori participants may endure as an effect of embodied historical trauma.

In exploring the meaning participants’ make of their long-term pain, it is evident that Māori healing philosophy influences their understanding of what pain means to them. Findings suggest that dissonant thoughts and emotions are considered central to participants’ pain experiences as most participants agree that difficult emotions stored in the body may affect long-term pain. Several participants convey that deep bodywork or romiromi triggers painful memories and emotions, which may explain how they know that the pain in their bodies is related to painful memories and associated emotions. One male participant conveys the understanding that he may be suppressing deep emotions related to both his feminine side and to females in his life, which would normally only be expressed behind closed doors. Another participant expresses coming to understand that she was holding on to grief related to her mother, the whenua and a struggle for autonomous identity. Research makes visible that prior to colonization, Māori ill health was only considered in terms of physical injury or spiritual affliction in which the mind or ‘thoughts and emotions’ were considered to be part of the spiritual side of the person. Hinengaro encompasses both the mind or cognitive processes and emotions or affective processes; however, Māori healing philosophy holds that thinking and feeling are inseparable from the body and that the whatumanawa or ‘eyes of the heart’, which refers to the seat of the emotions, must be in balance for total health.

In this study, it is made evident that the life-circumstances of two female participants when they were growing up were dominated by political and social forces that disrupted
collective cohesion of their hapū. Both of their kōrero suggest that their experiences of long-term pain in part may be an ongoing effect of cataclysmic historical events that their ancestors endured, such as loss of whenua/land and loss of ancient tohunga knowledge, which disrupted Māori cultural and social practices. Historical trauma is thought to affect the collective psyche of a people wherein mental and emotional processes of the group may be disturbed; however, findings in this study suggest that spiritual or psychic effects of historical trauma are inseparable from the body and therefore may be associated with embodiment or physical symptoms such as long-term pain. Research supports the argument that spiritual (mental/emotional/psychic) disturbances at both the collective and individual levels, may also affect physiological function through pathways of the hypothalamic pituitary adrenal axis, confirming that embodied effects of historical trauma are possible. While one participant reports having recurrent nightmares, this was not elaborated upon in this study and further research examining the effect of historical trauma on psychic structures in Māori people may inform understanding of the relationship between historical trauma, the psychological effects of stress, long-term pain and/or other disorders of the neuroendocrine system.

Experimental imaging studies suggest that the emotional pain of social rejection may be the cause of long-term musculoskeletal pain because physical and emotional pain have been found to be mediated by similar regions in the brain. This has implications for long-term musculoskeletal pain in relation to the historical marginalization of Māori and other indigenous people. Studies examining the effects of racism on cardiovascular function suggest that suppressed responses to racism may affect cardiovascular function, whereas confronting racism openly may mitigate the physiological effects. Research makes evident that cardiovascular function is closely related to emotional responses and emotion suppression may affect health in ways that at present are not able to fully explained. The low self-esteem and self-denigration expressed by one participant in this study who is affected by historical trauma is indicative of internalized racism, or in other words, emotion suppression in response to the unconsciously perceived threat to her Māori identity.

A psychogenic theory of pain suggests that the suppression of difficult unconscious emotions related to historical and contemporary trauma may alter the function of the autonomic nervous system, which may result in chemical changes in the brain. This may
lead to tension myositis syndrome (muscle tension) and other symptoms related to disturbance of autonomic function that are initiated at the brain level in response to stress. Tension myositis syndrome is evident in the constriction of blood vessels, muscle ischemia and spasm in different parts of the body, which may affect long-term pain. Psychogenic pain theory may be particularly relevant to Māori men who have long-term pain as findings in this study demonstrate that neither male participants are comfortable with expressing physical or emotional vulnerability. This may be an effect of historical and contemporary social stigmatization of Māori men, which characterizes them as being violent and savage. In this study, it is evident that both historical racialization and Māori cultural constructs may impact upon Māori men in unseen ways.

It is proposed that an inability to openly express emotions such as grief, fear, anger or shame may reflect active avoidance of losing face or avoidance of whakama and/or loss of mana, which may lead to emotion suppression. Research indicates that prolonged exposure to perceived racism may trigger emotion suppression, which may affect long-term pain through hyper-arousal of the hypothalamic pituitary adrenal axis. Māori men have the highest age standardized rates of long-term pain, incarceration and suicide compared with all other groups in New Zealand and further research is needed to investigate historical, cultural and social factors that may inform understanding of why this is the case. Local and international studies show that large differences in health outcomes by ethnicity exist, which include differences in long in-term pain, suggesting that racism may contribute directly to the prevalence of long-term pain. A racial hierarchy underpinned colonization and justified the historical and ongoing mistreatment of indigenous peoples worldwide and such factors are often overlooked when addressing indigenous people’s health. It is argued that this issue needs to be accounted for in the development of strategies for the treatment of Māori and other indigenous people who have long-term musculoskeletal pain.

Participants in this study make clear that Māori healing is not just about dealing with the pain in the body; it is also a means of dealing with stress in the mind that may affect the body if left unaddressed. Further, participants suggest that pain may be an indication that something else is going on in life. A female participant conveys that pain may be the result of stress that comes from interactions with others and the environment. These findings and prior research suggest that social interactions may affect mental and emotional
processes such as rumination and self-esteem, highlighting that emotional stress should be targeted in the treatment of long-term musculoskeletal pain.

Studies investigating hands-on healing methods show that physical touch in healing may cause a reduction in stress and may therefore also lead to a reduction in long-term pain. This informs understanding of how Māori healing methods may be efficacious in the treatment of both stress and pain in the Māori population. Findings in this study make visible that in Māori healing, the connection between the healer and the person being healed may facilitate a process of releasing and letting go of thinking patterns, stress and pain, which highlights the importance of ‘whānaungatanga’/interdependence in the therapeutic setting. Interpersonal healing or ‘whakaora tangata ki te tangata’ is characterized as being about caring for and healing ‘people’ as opposed to treating an illness or its symptoms and is grounded in the principle of aroha. While the positive effects of the healing relationship have been deemed a placebo effect in other research, Māori commentators claim that the relationship established in Māori healing encompasses broader cultural and spiritual principles that go beyond the placebo effect.

The Māori healing approach is considered to be similar to other mind-body-spirit healing philosophies such as reiki and integrated holistic medicine; however, it is also a unique system of healing. Findings make evident that feeling the physical pain during treatment may lead to an understanding of the spiritual (mental/emotional/psychic) aspects of pain, so that a release or letting go of pain occurs on more than just the physical level. Research suggests that Māori healers may integrate historical factors related to the person’s whenua/land in healing because many problems affecting Māori are thought to stem from conflict over whenua/land. Māori healers may also consider the presence of blockages in circulation or energy flow as being related to conflicting emotions that become like obstacles in the physical and spiritual fields of the person. Obstacles need to be cleared from the body so that healing is possible. These findings suggest that a shift in thinking is warranted in approaches to the treatment of long-term musculoskeletal pain because the meaning Māori people make of pain may be related to social, cultural and historical factors that reflect life-circumstances.

All participants express that breathing is important in Māori healing and findings suggest that suboptimal breathing may affect several of the participants’ experiences of long-term
pain. Three participants report feeling as though they are not breathing properly in their lives, and this has symbolic meaning for one participant who conveys that the feeling she has of holding her breath may represent “secrets” that are being held in her whakapapa. One male participant reports experiencing an unusual trembling sensation in his puku/abdomen, that is brought on by deeper breathing. According to Māori healing philosophy, negative emotions or ngangara/wandering spirits may both become held in the puku. Another participant conveys that being guided by Māori healers to breathe deeply made her aware that breathing through her physical pain in romiromi healing was essential to releasing her pain on both a physical and spiritual level. Māori philosophy teaches that breathing deeply into the puku may expel negative emotions. The whakatauki ‘te ha a koro ma a kui ma’, means ‘the breath of life that comes from ancestors’ and reflects the Māori spiritual understanding of being connected to one’s ancestors and whakapapa through the breath. It is posited that optimal breathing may improve connection to one’s ancestors and whakapapa.

Research makes evident that suboptimal breathing may be indicative of changes in autonomic nervous system function where homeostatic feedback regulation of breathing has been altered. Suboptimal breathing may reduce the available oxygen to the body tissues, which may affect muscle ischemia, trigger point formation, numbness and tingling and long-term pain. While we cannot say for certain what is the cause of participants’ suboptimal breathing, the ongoing effects of historical trauma such as perceived threat to Māori identity are indicated in the findings. Māori healing has improved all participants’ breathing function and their long-term pain and further research is warranted that explores the relationship between the breath or ‘hau ora’ and long-term musculoskeletal pain from the Māori perspective.

In this study, the women appear to be more in touch with spiritual healing constructs and two women express that the spiritual aspects of Māori healing are what they enjoy most. Three women discuss their experiences with matakite healers, all of whom also happen to be female. The gift of matakite may be likened to clairvoyance and while it is considered special, it is also accepted as normal in Māori society. Two participants convey that matakite healing is similar to reiki where the hands contact the energy field or aura of the person and not the body. Other research suggests that healing the bio-field through the hands may be beneficial in the treatment of long-term pain. Several participants
convey that matakite healers may be in contact with the spirits of ancestors, which is considered a powerful form of communication between ancestors and the living. Other studies also indicate that Māori women have a strong preference for spiritual healing and it is proposed that this preference is culturally defined as it may reflect the roles that Māori women embody in Māori society. For example, in tangihanga rituals, the open crying and wailing of women is thought to facilitate letting go and healing of both the departed person’s spirit and the living left behind. This demonstrates Māori social norms in which women embody spiritual processes related to death and dying. Birthing rituals in which Māori women endure the pain of birth stoically also suggests that pain is a normal physical and spiritual experience. Further Kaupapa Māori research is needed that records and explores experiences of matakite, as this may be an important avenue of healing for Māori women in particular who have long-term pain.

While the literature makes explicit the Māori cultural belief in kehua and ngangara or wandering spirits, the men in this study appear skeptical of such constructs and may prefer to seek scientific explanations for their pain. For example, while one male participant is amazed by the abilities of a female Māori healer who is matakite, he rationalizes her spiritual explanations for his pain. While the healing helps alleviate his long-term pain, he puts this down to improved breathing function and rejects the notion that an entity that may have been attached to him needed to be released. This reflects the influence of Western cultural norms upon Māori men’s social and spiritual values in which knowledge may only be valued if it can be validated by positivistic scientific methodology and where men are considered as being more physically and intellectually orientated than women. This is an interesting finding as many highly respected tohunga are male. The finding suggests that Western culture impacts upon Māori men in profound ways and that Māori women may retain embodied spiritual cultural norms.

In exploring participants’ health beliefs and behavior, findings suggest that safety may be culturally defined and has relevance for participants’ experiences of long-term pain. A male participant expresses that he feels much safer having Māori healing in a group compared with one-on-one healing with a physiotherapist. Having healing in a group helps him relax, which he feels enhanced the healing effects. It is proposed that collective whānau constructs may be embedded in his psyche. Research suggests that collectivity in earlier times kept whānau safe because witnesses to the behavior and conduct of
others were always present. Māori culture is built on the notion that the collective is more important than the individual and it is proposed that such constructs may not be easily eliminated from the Māori psyche. The participant also refers to the sterile and clinical environment of a hospital and seeing a therapist who is female, which also affects his level of personal comfort and safety wherein he feels he might be under scrutiny from others – being Māori and male – having one-on-one treatment with a female. The inability to relax in physical therapy may be counterproductive to the goals of therapy, which may include benefits in pain reduction. Other research suggests that Māori may prefer a more relaxed treatment setting such as on a marae and that Māori men in particular may prefer treatment with a therapist who is also Māori and male as opposed to Pākeha and female. The conclusion is drawn that for Māori men, gender and culture may be important to the choices they make or do not make for rehabilitation from injury. Māori healing practices may be important in the development of services aimed at the rehabilitation of Māori men as research suggests that while Māori men have the highest injury related health loss of all groups in New Zealand, they also do not access mainstream services as readily compared with other groups. Further research is needed that investigates the comfort and safety of Māori men in the physical therapy setting as this may affect outcomes for recovery from injury, which may affect onset of long-term pain.

Findings in this study highlight the importance of understanding the construct of tapu for Māori people’s safety and it is proposed that tapu may be embedded in the collective Māori psyche. Tapu may influence how Māori people think about their safety and their health because transgression of tapu can lead to unwellness. Two female participants convey that tapu is about what keeps you safe and knowing what keeps you safe is embedded in childhood. The embodied reaction of one participant to having food on the table while discussing her tupuna suggests that tapu remains a powerful force that may affect spiritual (mental/emotional/psychic) wellbeing. Her action of immediately clearing the table of food was prompted by a feeling of guilt and makes visible that tapu may trigger conflict in the spiritual (mental/emotional/psychic) dimension. It is proposed that reconnecting with embedded cultural values may reduce her long-term pain as this may reduce emotional conflict related to guilt, fear of retribution and anxiety, which may be associated with both transgression of tapu and onset of long-term pain. Recent guidelines prepared for the Medical Council of New Zealand aim to increase health
practitioners' understanding of tapu, wherein it is made clear that food and items related to food such as tea towels are kept separate from bodily items such as clothes. This is especially important where the deceased body is concerned. Tapu may affect long-term pain through affective-behavioural and cognitive-evaluative pathways that may influence the meaning Māori make of pain and suffering because pain may be an expected consequence where transgression of tapu has occurred.

All but one participant refer to the use of karakia and four acknowledge karakia as being part of their daily lives. Several participants comment that it keeps them safe, calm and ready to learn. While karakia may be likened to praying, research suggests there is more to karakia than just this. Karakia is the most fundamental and commonly used form of Māori healing practice and is related to the oratorical nature of Māori knowledge systems such as whakapapa, in which it is believed the correctly spoken word may literally draw down the energy of the divine for healing purposes. Research suggests that karakia and other Māori spiritual practices may have a positive impact upon cardiovascular health, immune function and vulnerability to stress in times of trauma and in this way may also be helpful for alleviating long-term pain associated with historical trauma. Findings make evident that karakia aids in healing the Māori body and spirit in pain, and further research may inform understanding of the use of karakia in the transformation of illness and pain.

An exploration of participants’ health beliefs and practices suggest that alternative therapies such as homeopathy, herbal medicine and spiritual healing are popular among Māori people and may reduce the need for pain medication. This is aligned with other research, which overwhelmingly shows that many Māori use rongoā and spiritual healing either on their own or in conjunction with mainstream medication. For two participants in this study, the use of Māori healing such as mirimiri, rongoā and ancient ritual was inscribed in their upbringing, and findings make evident that participants continue Māori healing practices with their own children. Two participants have experimented successfully with rongoā and herbal medicine for alleviating their pain and participants’ kōrero in general, suggest they prefer natural approaches to pain relief that do no harm, which is similar to findings in other research. The combination of hands-on Māori healing, spiritual practices such as karakia, matakite and taking rongoā seem most effective in aiding the recovery of long-term pain for participants in this study. Research makes evident that mainstream practitioners have a limited understanding of rongoā and Māori
healing practices and a greater understanding is needed so that culturally appropriate alternatives may be used in place of pain medication, which may create medication dependency. While doctors’ lack of knowledge regarding taking rongoā may be considered a risk due to possible adverse interactions with Western medications, acknowledging that Māori people are concerned about the harm of Western medications may at times be overlooked. A lack of doctors’ understanding regarding the tangible physical and intangible spiritual benefits of rongoā and Māori spiritual/hands-on healing suggests the existence of mono-cultural thinking in which colonization is ongoing. The Medical Council of New Zealand’s recommendation that doctors be mindful of their patients’ cultural beliefs, mores and behaviours suggests that a lack of knowledge regarding the Māori worldview of health and wellbeing – which is founded on spiritual principles – may hamper progress toward achieving Māori health equity. Further Kaupapa Māori research is needed that investigates the benefits of Māori healing methods for Māori people from Māori perspectives.

All participants in this study are reluctant to take pain medication and instead actively seek other ways of managing their pain. One participant expresses the preference of knowing what is happening in the body rather than dulling the pain, while another regarded taking strong pain medication following surgery as necessary, but only in the short term. The participant later replaced her pain medication with rongoā and Māori spiritual and hands-on healing. Other research suggests that Māori views on taking medication may be affected by historical factors in which Māori believed hospitals were places that one went to die. Findings of the current study and prior research, suggests that Māori do no trust that taking medication is the best solution. Research clearly documents the problems associated with pain medication such as adverse side effects, dependency and lack of effectiveness, which may cause many people with long-term pain to stop taking it. Clearly, alternatives to taking pain medication for managing long-term pain are needed.

Research makes evident that wider whānau and hapū influences may impact upon Māori people’s attitudes toward accessing health-care and it is argued that long-standing conflicts between the Crown/State and various iwi may influence some Māori people’s attitudes toward using State services, which includes State health-care. One participant’s kōrero suggests he has an anti-establishment stance in which the State may represent
corruption, injustice, oppression and dominance. While he says his attitude relates to bad experiences his relatives have had with medication, he is also anti-State education and anti-technology and it is proposed that his attitude may be influenced by wider iwi affiliations in which protests against Crown injustices have been a common feature. A second participant is resistant to Western research methods that once dehumanized Māori people. This is made visible in her belief that in mainstream health-care, Māori are treated like guinea pigs. This influenced her decision to decline smear testing and to advise her husband not to try new medication offered to him in hospital. It is proposed that participants’ embedded beliefs reflect the ongoing effects of embodied historical trauma in which resistance against perceived racism within State services affects thinking and action in the choices participants make for health-care. Other research suggests that structural racism, victim blaming and deficit thinking continue to impact upon Māori access to health-care, which may include health-care for the treatment of long-term pain.

In this study, a female participant expresses frustration at the clinical style of communication used in the hospital setting, where her husband was asked the same questions over and over again by 10 different people without explanation. Other research suggests that poor communication may be a barrier to Māori accessing health-care and that good communication is extremely important to Māori people. Valuing good communication may be reflective of embedded cultural values regarding the importance of oratorical traditions. Building rapport and putting the person at ease before discussing their health issues is considered respectful and studies suggest that a disregard for this may be viewed by some Māori people as being disrespectful, which may further lead to misunderstandings, misinformation, reluctance to take medication and avoidance of services.

Findings in this study suggest that Māori hands-on healing is a potent alternative form of pain relief. Several participants report immediate pain relief and two convey that pain relief after treatment lasts for about a week. Another female participant says she has Māori healing for her pain because it addresses other things that may manifest as pain. There is very little research investigating Māori healing for the relief of pain from the viewpoint of those being healed and further research is needed. However, research with Māori healers makes visible that Māori healing methods consider the interplay between
embodied memory and the mind in which the memory of painful events and associated negative emotions may be stored in the body's cells affecting a person's thoughts, actions and physical health. Stored cellular memory may be passed on through whakapapa. Such thinking aligns closely with current thinking in psychogenic pain theory, trauma theory and epigenetic research, wherein memory of traumatic events stored in the unconscious mind may affect hyper-arousal, which when prolonged, may lead to lasting changes in the hypothalamic pituitary axis and affect the way genes are expressed. Changes in gene expression may be passed on to future generations.

Exploring participants' views on other therapies reveals the opinion that physiotherapists may focus more on the problem than they do on the person. The participant who expresses this opinion prefers the Māori healing approach because it is holistic and takes into consideration the mind, body, spirit and her life circumstances. While cost is not a barrier to participants accessing physiotherapy in this study, it is seen as being a barrier to chiropractic care. Two participants convey that if they had followed through with physiotherapy when they were younger, they may not be in pain now. The reason why younger Māori may not engage with physical therapies for rehabilitation seems important as findings suggest that Māori suffer greater injury-related health loss compared with other groups and are currently a young population. It is possible that the clinical biomedical approach may not account for how history, culture, socioeconomic circumstance, age and/or gender may impact upon other factors such as body image, self-esteem and comfort with physical touch that for Māori may be culturally defined. Other research makes evident that New Zealand rehabilitation services do not currently meet population needs. While emerging research exploring culturally appropriate approaches to sports therapy are evident, Kauapapa Māori research exploring rehabilitation services for Māori who experience injury and disability is limited and findings makes evident that the development of rehabilitation services that encompass Māori perspectives of health, wellbeing and long-term pain management across ages and genders is needed. As the Māori population ages the need for Māori rehabilitation services is expected to rise, exponentially. Other research suggests that greater recognition of indigenous solutions for health and wellbeing that are culturally appropriate to the populations targeted is needed if improving indigenous health is to be achieved.
Participants in this study report having specific reasons for seeing their doctor such as needing medical certificates and diagnostic tests; however, they do not report going to see their doctor for pain management. This may be an oversight of participants or may reflect their preference for using alternatives to pain medication. Studies suggest that perceptions of bias may be a barrier to Māori accessing care; however, it is also evident that Māori may prefer services that are Māori friendly. Participants in this study appear to be exercising autonomy in their health-care choices as while they are accessing seeing their doctor when necessary, they are also actively using Māori healing methods to address their pain.

Further findings in this study reveal that stoicism is relevant to all participants; however, this has different meaning for men and women in this study. Male participants express that appearing weak is unacceptable and it is evident that weakness may reflect loss of mana, which may cause whakama. Handling the pain and getting on with life is considered normal for the men in this study, which is similar to findings in other qualitative studies. Stoicism has implications for preventative care, as pain may be indicative of something more sinister. Therefore, delay in seeking health-care advice may be detrimental, whereas an early diagnosis may result in a better health outcome. Research suggests that Māori men may have higher rates of poorly managed long-term pain that may go unnoticed because they may not present for care after injury. Further research is needed to understand whether stoicism for Māori men is related to social stigmatization, historical discrimination in health-care or whether it is defined by other sociocultural factors. Findings reveal that all female participants convey a level of stoicism in their belief that “the healing is in the pain”. It is evident that handling pain may be a natural part of the Māori healing process for female participants who express the necessity of feeling their pain, understanding it and releasing it on different levels throughout the healing process. Female participants explain that while romiromi and mirimiri can be painful, it becomes less so with regular treatment and such views suggest that accepting that the healing is in the pain may allow for its transformation in the present.

In conclusion, the findings in this research support the notion that Māori participants’ experiences of long-term musculoskeletal pain may in part be an effect of embodied historical trauma impacting upon the spiritual (mental/emotional/psychic) and social
domains, which may have consequences for the health of their offspring if left unaddressed. The importance of understanding the impact of historical factors upon the present health of Māori people is highlighted in this study and the findings suggest that widespread long-term musculoskeletal pain as well as other health conditions may in part be related to acculturative stress. Overall, the findings suggest that for Māori people, social inclusion, cultural autonomy and spiritual (mental/emotional/psychic) health are as important as physiological factors in the treatment of long-term musculoskeletal pain, which may be important to consider when developing Māori programs for reducing the incidence of long-term pain and suffering within the Māori population.
### Glossary of Māori Terms

<table>
<thead>
<tr>
<th>Māori Term</th>
<th>English Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ahi kaaroa</td>
<td>fires burning status</td>
</tr>
<tr>
<td>ahua</td>
<td>aura</td>
</tr>
<tr>
<td>Aroha ki tangata</td>
<td>having respect for the people working with you</td>
</tr>
<tr>
<td>aroha</td>
<td>love/caring/friendship/kindness</td>
</tr>
<tr>
<td>ha</td>
<td>breath/breathe/taste</td>
</tr>
<tr>
<td>hapū</td>
<td>subtribe/wider family group</td>
</tr>
<tr>
<td>hau</td>
<td>vital essence</td>
</tr>
<tr>
<td>hauora</td>
<td>wellbeing</td>
</tr>
<tr>
<td>He Korowai Oranga</td>
<td>Māori Health Strategy</td>
</tr>
<tr>
<td>hinengaro</td>
<td>mind and emotions</td>
</tr>
<tr>
<td>hongi</td>
<td>a Māori greeting in which two people press noses</td>
</tr>
<tr>
<td>iwi</td>
<td>tribe</td>
</tr>
<tr>
<td>iwitanga</td>
<td>establishing knowledge of other tribes/making intertribal connections</td>
</tr>
<tr>
<td>kai</td>
<td>food</td>
</tr>
<tr>
<td>kaitiakitanga</td>
<td>guardianship</td>
</tr>
<tr>
<td>kanohi te kanohi</td>
<td>face to face</td>
</tr>
<tr>
<td>karakia</td>
<td>prayer</td>
</tr>
<tr>
<td>kaua e takahia te mana o te tangata</td>
<td>‘do not trample on the mana of people’</td>
</tr>
<tr>
<td>kaumātua</td>
<td>elder</td>
</tr>
<tr>
<td>kaupapa</td>
<td>purpose</td>
</tr>
<tr>
<td>kawa</td>
<td>marae protocol</td>
</tr>
</tbody>
</table>
kia tupato be careful

kia whakomuri te haere ‘walking with your back to the future while facing
whakamua the past’

kohanga kohe early childhood language nests
korero talk/converse/conversation
kotahitanga unity/as one people
Kura Kaupapa total immersion Māori language primary school

mana prestige/god given power/strength/esteem
manaakitanga hosting/caring for others
māori indigenous people of NZ/normal

matakite visionary/person who has visions or sees the
future

mauri ora life essence or principle in action/vitality
mirimiri massage
mokopuna grandchild
muru plunder
ngakau trees
ngangara spiritual entities
Ngātihine Northern hapū/iwi?
Ngaiotaonga name of Mountain
 ora well/safe
rangatahi teenager
rangatira chief
rātu problem/difficulty/trouble
rongoā Māori medicine
ropu group
tāne
people of this land

man

tangantawhenua
people of this land

people of this land

taonga tuku iho
treasures from the ancestors

treasures from the ancestors

Taranakitanga
protocols/ethos/ethics of Taranaki Māori people

protocols/ethos/ethics of Taranaki Māori people

te ao Māori
the Māori world

the Māori world

Te Arawa
central North Island tribe

central North Island tribe

Te ha a koro ma a kui ma
'The breath of life that comes from ancestors'

'The breath of life that comes from ancestors'

Te Puni Kokiri
Government organization overseeing Māori health programs

Government organization overseeing Māori health programs

te reo
Māori language

Māori language

Te Tama Wahine O Taranaki to Whānau Ora
Māori health program

Māori health program

te tapu o te tangata
the sacredness of people

the sacredness of people

Te Whakaruruhau
Womens Refuge

Womens Refuge

Te Whiti Rongomai
reknown Taranaki chief/leader

reknown Taranaki chief/leader

tikanga
protocol/right way

protocol/right way

tinana
body

body

tino rangatiratanga
self determination/chiefly authority

self determination/chiefly authority

tipuna
ancestor

ancestor

Tohu Kakahi
reknown Taranaki chief/leader

reknown Taranaki chief/leader

tohunga
expert/holder of knowledge or knowledgeable

expert/holder of knowledge or knowledgeable

person/spiritual healer

person/spiritual healer

tohungatanga
ways of the expert or knowledge holder

ways of the expert or knowledge holder

Tuhoe
Central North Island iwi/tribe

Central North Island iwi/tribe

tupuna
ancestors

ancestors

turangawaewae
place to stand

place to stand

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<table>
<thead>
<tr>
<th>English</th>
<th>Māori</th>
</tr>
</thead>
<tbody>
<tr>
<td>revenge</td>
<td>utu</td>
</tr>
<tr>
<td>woman</td>
<td>wāhine</td>
</tr>
<tr>
<td>spirit</td>
<td>wairua</td>
</tr>
<tr>
<td>spirituality</td>
<td>wairuatanga</td>
</tr>
<tr>
<td>learning environment/school</td>
<td>wananga</td>
</tr>
<tr>
<td>shame</td>
<td>whakama</td>
</tr>
<tr>
<td>in front</td>
<td>whakamua</td>
</tr>
<tr>
<td>interpersonal healing/caring about people</td>
<td>whakaora tangata ki te tangata</td>
</tr>
<tr>
<td>genealogy</td>
<td>whakapapa</td>
</tr>
<tr>
<td>proverb</td>
<td>whakatauki</td>
</tr>
<tr>
<td>the act of establishing relationships</td>
<td>whakawhānaungatanga</td>
</tr>
<tr>
<td>family wellbeing</td>
<td>whānau ora</td>
</tr>
<tr>
<td>family</td>
<td>whānau</td>
</tr>
<tr>
<td>relative</td>
<td>whānaunga</td>
</tr>
<tr>
<td>establishing relationships</td>
<td>whanaungatanga</td>
</tr>
<tr>
<td>Māori secondary school</td>
<td>Whare Kura</td>
</tr>
<tr>
<td>Māori tertiary education institute</td>
<td>Whare Wananga</td>
</tr>
<tr>
<td>land</td>
<td>whenua</td>
</tr>
</tbody>
</table>


Harris, R. B., Cormack, D. M., & Stanley, J. (2013). The relationship between socially-assigned ethnicity, health and experience of racial discrimination for Māori:


Heshusius, L. (1994). Freeing ourselves from objectivity; managing subjectivity or turning toward a participatory mode of consciousness? Educational Researcher, 23(3).


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Appendices:

A) Kaupapa Māori Research Ethics

The following ethics have been referenced by many authors as essential for understanding when conducting Kaupapa Māori research (Moyle, 2014; Tipene-Matua et al., 2009).

- **Aroha ki te tangata** (a respect for people) guides Kaupapa Māori research and tikanga processes. Tikanga processes of first encounter are a way of reducing any perceived status hierarchy based on academic training between researchers and research participants.

- **Kanohi kitea** (the face seen) advocates interviewing face to face, as a means of building trust between the researcher and participants.

- **Titiro, whakarongo, kōrero** (look and listen first: speak later) implies patience, humility and keen observation as essential to allowing a story to unfold. Looking until one sees, listening until one hears so that nothing is missed.

- **Manaaki ki te tangata** (be generous in sharing with and hosting people) encompasses making sure participants are comfortable and looked after, for example, interviewing them in their home or elsewhere according to their preference. It also implies being generous in the sharing of research information with participants.

- **Kaua ē takahia te mana o te tangata** (be careful not to trample on the mana of another person) highlights the importance of keeping participants fully informed throughout the research process. Making agreements at the outset (consent and/or contract) about the nature of the research, how the research goal will be met and what happens (ownership) to the research information once completed, are all required for ethical reasons, due to the lasting effects research can have on individuals and communities.

- **Kia tupato** (be cautious) advises that the greatest care be taken to protect participant identity through confidentiality and anonymity. It equally refers to the researcher following all legal, moral, professional and ethical guidelines that govern the undertaking of research and includes Kaupapa Māori principles.
B) Participant Consent Form

Participant Consent Form

Research Project Title:

‘An exploration of musculoskeletal problems and pain in a small Group of Māori using traditional Māori healing methods such as: rongoā, romiromi, and mirimiri’.

I have had the research project explained to me and I have read and understand the information sheet given to me.

- I understand that everything I say is confidential and none of the information I give will identify me and that the only persons who will know what I have said will be the researcher and their supervisor. I also understand that all the information that I give (whether noted on paper, or on a recording device) will be stored securely in a locked cupboard. Information held on the researcher’s computer will be password protected. The information will be stored for no less than 5 years.
- I understand that I may withdraw from the study at any time up until 1 week after the 2nd follow up meeting, in which the interview transcripts are discussed.
- I understand that my conversational interview with the researcher will be audio-recorded and transcribed.
- I understand that I can see the finished research document.
- I have had time to consider everything and I give my consent to be a part of this project.

Participant Name: ……………………………………………………………………..

Participant’s Signature: …………………………. Date: ………………………………..

Project Researcher: ……………………………….  Date: ………………………………..

Project Supervisor: …………………………......... Date: ………………………………..
UREC REGISTRATION NUMBER: (2014:1105)

This study has been approved by the UNITEC Research Ethics Committee from 26/08/2015 to 31/12/2016. If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 8551). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
C) Participant Information Form

PARTICIPANT INFORMATION FORM

My name is Nerissa Baker and I am currently enrolled in the Master of Osteopathy degree in the School of Education at Unitec New Zealand. I need your help in meeting the requirements of research for a Thesis course, which forms a substantial part of this degree.

Research Project Title: ‘An exploration of the lived experience of musculoskeletal problems and/or pain in a small group of Māori using traditional hands-on healing practices such as: rongoā, mirimiri and romiromi’

The aim of the project is:

To increase understanding of the unique experiences Māori have of musculoskeletal (bone joint and muscle) problems and pain, related to traditional Māori healing practices.

What the project involves:

The project involves conducting interviews with Māori adults who have experienced traditional healing for the purpose of alleviating the symptoms of musculoskeletal problems and/or pain. The conversational style interviews will be audio recorded on a small digital device and transcripts of the interviews will be made. The transcripts will then be analyzed for the purpose of the research.

What it will mean for you:

Participating in the research means that you agree to a conversational style interview with the researcher that will be audio recorded onto a small digital device. The interview will take approximately 1 hour. A transcript of your interview will be made and analyzed. If time allows, a follow-up meeting may be arranged to discuss the transcript with you so that you can check that the information you gave was interpreted correctly (as you meant it).

In the interview, you will be asked questions about your musculoskeletal problems and pain in relation to traditional healing such as rongoā, mirimiri or romiromi that you have experienced. Questions about your musculoskeletal health, pain and other treatment you may have had in the past may be included.

You will be asked to sign a consent form confirming that you agree to take part in the research.
When the research is completed, you will be invited to a poroporoaki/celebration of the research where a summary of the research will be available for you view.

You will be informed if the research is to be published in any way, such as in a journal.

You will be offered a koha as a way of saying thank you for taking part in the research project.

You may withdraw from the study at any time up until 1 week after the 2nd follow-up meeting in which the interview transcripts are discussed.

Why is it important?

Little is known about the Māori experience of traditional healing for musculoskeletal problems and pain. The research may provide new insights for the delivery of musculoskeletal health services to the Māori population. New insights are needed because Māori have statistically poorer health outcomes across a wide spectrum of disease, including in the area of musculoskeletal health and pain, compared with other ethnicities.

Risks and benefits:

There are no risks associated with taking part in the research. The research will benefit Māori people because it may inform strategies for improving health services for Māori.

I request your participation in the following ways:

A few hours of your time is required to take part in this research.

Signing the consent form means you agree to an interview that will be audio-recorded.

A brief meeting with the researcher at a later date (following the interview) provides you with the opportunity to comment on the interview transcript.

The research will be conducted over a period of 1 year, beginning in October 2015 and ending in December 2016.

Confidentiality:

You will not be identified in the Thesis. Your identity will remain anonymous throughout the study and any personal information you have given will be kept confidential. I will be the only person who knows your identity. My supervisor and I will be the only people who have access to the recordings and transcripts. Consent forms and transcripts will be stored securely in a locked cupboard at my home. Recordings will be stored on my work laptop computer using password protect. The consent forms, transcripts and recordings will be destroyed no less than 5 years following the research. The transcriber will also sign a confidentiality agreement regarding the information you have given. You are free to ask me not to use any of the information you have given, and you can, if you wish, ask to see the Thesis before it is submitted for examination.

I hope that you will agree to take part and that you will find your involvement interesting. If you have any queries about the research, you may contact my principal supervisor at Unitec New Zealand. My supervisor is: Elizabeth Niven. Phone: 021 654 935 or email: eniven34a@gmail.com

UREC REGISTRATION NUMBER: (2014:1105)
This study has been approved by The UNITEC Research Ethics Committee from the 26/08/2015 to 31/12/2016. If you have any complaints or reservations about the ethical conduct of this research you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 6162). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
D) Korero/Interview guide

Interview Schedule

The interview method is ‘open in depth’ and therefore should begin with an open-ended question such as:
Could you tell me about your most recent encounter with traditional Māori healing, rongoā, mirimiri and romiromi?
If the participant is unsure, I might add:
For example, what was the main reason that made you want to be healed?
Other questions:
What was the experience of being healed like?
How did the healing affect your musculoskeletal problem/pain (days/weeks/months) following treatment?

Exploratory questions may include:
What would you tell someone who has never experienced traditional healing to expect from having a traditional healing treatment? For example, is it painful? Is there an emotional aspect?
Did mirimiri/romiromi change your view/experience of pain?
Did it improve your musculoskeletal problem/arthritis etc?
What does traditional healing offer that other healing modalities do not?
Was your treatment painful?

Another opening may be:
Could you tell me about any physical aches and pains that you have experienced recently or that you have now?
Probing questions may look like:
What things have you done about your aches and pain in the past? OR – What would you normally do about them?
Does your musculoskeletal problem or pain stop you from doing daily activities?
What do you do at home when you have pain?
How do you feel about taking medication to alleviate pain?
What’s your view of pain? For example, is it a warning signal that something might be wrong?
What sort of help have you sought to address musculoskeletal problems (such as arthritis/injury related) in the past? Did it help?
Is traditional healing your preferred treatment?
What other treatment are you aware of that may be helpful for musculoskeletal problems or pain?

**Guiding Topics**

- Investigate experiences and response behaviours related to musculoskeletal problems and pain.
- Explore health choices made in response to pain.
- Investigate perceptions of barriers to access and entitlement to mainstream primary health-care (PHC) services.
- Explore experiences of traditional Māori healing or other therapies.
- Investigate experiences of mainstream PHC physical therapies such as physiotherapy, osteopathy and medication use.
E) Transcriber Confidentiality Agreement

Research Title:

An exploration of musculoskeletal problems and pain in a small group of Māori adults using traditional Māori healing methods such as: rongoā, romiromi, and mirimiri’

iResearcher Name: Nerissa Baker

Address: 2/32 Mountain View Rd, Western Springs, Auckland 1022.

Phone number: 0211843083 or 098497822

Email: nabaker8@gmail.com

I ___________________________________________________ (full name - please print)

Agree to treat in absolute confidence all information that I become aware of in the course of transcribing the interviews or other material connected with the above research topic. I agree to respect the privacy of the individuals mentioned in the interviews that I am transcribing. I will not pass on in any form information regarding those interviews to any person or institution. On completion of transcription I will not retain or copy any information involving the above project.

I am aware that I can be held legally liable for any breach of this confidentiality agreement, and for any harm incurred by individuals if we disclose identifiable information contained in the audiotapes and/or files to which we will have access.

Signature: ………………………………………………………. Date: …………………………………………

UREC REGISTRATION NUMBER: (2014:1105)

This study has been approved by the UNITEC Research Ethics Committee from (26:08;15) to (31:12;16). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 8551). Any
issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

**F) Sample of Data Analaysis Method**
Declaration

Name of candidate: Nerissa Baker

This Thesis Project entitled: The Effect of Embodied Historical Trauma on Long-term Musculoskeletal Pain in a Group of Urban Māori Adults is submitted in partial fulfillment for the requirements for the Unitec degree of Master of Osteopathy.

Principal Supervisor: Elizabeth Niven

Associate Supervisor/s: Josie Keelan

CANDIDATE'S DECLARATION

I confirm that:

• This Thesis/Dissertation/Research Project represents my own work;
• The contribution of supervisors and others to this work was consistent with the Unitec Regulations and Policies.
• Research for this work has been conducted in accordance with the Unitec Research Ethics Committee Policy and Procedures, and has fulfilled any requirements set for this project by the Unitec Research Ethics Committee.

Research Ethics Committee Approval Number: 2014-1105

Candidate Signature: [Signature] Date: 28/02/2018

Student number: 1005695
Full name of author: Nerissa Baker

ORCID number (Optional): ..................................................

Full title of thesis/dissertation/research project (‘the work’):
The Embodied Effect of Historical Trauma on Long-term Musculoskeletal Pain in a Group of Urban Māori Adults

Practice Pathway: ..............................................................

Degree: Master of Osteopathy

Year of presentation: 2018

Principal Supervisor: Elizabeth Niven

Associate Supervisor: Josie Keelan

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AND

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Signature of author: ..........................................................

Date: 28/02/2018