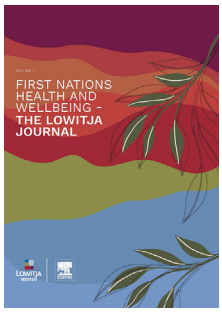

Original Article

Kaumātua (Elders) insights into Indigenous Māori approaches to understanding and managing pain: A qualitative Māori-centred study

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Abstract

Purpose Chronic pain/mamae is a major public health problem worldwide, and disproportionately affects Indigenous populations impacted by colonisation. In Aotearoa New Zealand, Indigenous Māori experience a greater burden of chronic pain than non-Māori. However, pain services based on Western models are unlikely to adequately meet the needs of Indigenous peoples. Little is published about traditional Māori views of, or approaches to, managing mamae/pain, knowledge that is traditionally held by Kaumātua/Elders. Therefore, this study aimed to understand Kaumātua (Māori Elder) views on the effects of pain, traditional pain management practices and mātauranga Māori (Māori knowledge) relating to managing pain.

Methods Fourteen Kaumātua participated in individual interviews or a hui/focus group. Methods honoured tikanga (Māori protocol) and centralised whanaungatanga (relationships). Interviews and the hui/focus group were transcribed, and reflexive thematic analysis was conducted.

Main findings Three themes were developed: 1. *The multidimensional aspects of pain*. Pain stretched beyond the physical and encompassed emotional and mental trauma, wairua/spiritual pain, grief from the loss of loved ones,

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contamination of the environment or breaches of tikanga/protocol. Some mamae/pain was described as everlasting, passing between people or generations. 2.*Whakawhanaungatanga/relationships: Healing through connection.* Healing of pain was seen to occur through strengthening connections with people, the spiritual realm, the natural world and with papakāinga (one's ancestral homeland). 3.*Tino Rangatiratanga/self-determination: Strength to self-manage pain.* Self-reliance to manage pain and self-determination to make health decisions were critical, and a stoical approach to pain was described. Stoicism was noted to avoid perceptions of weakness and burdening whānau/family, but may inhibit emotional expression, connection and healing.

Principal conclusions Mātauranga Māori/Māori knowledge emphasises that pain and its healing should be considered multidimensional, incorporating physical, mental and relational components, existing in the spiritual realm and incorporating links between people, places, the past and future. Individuals may approach pain with a stoical approach, which has both positive and negative features. Pain services may wish to incorporate this knowledge of the spiritual, social and psychological aspects of pain and pain management to provide more meaningful care for people with pain.

Keywords: Indigenous health; Māori; New Zealand; Pain; Thematic analysis; Cultural knowledge

Highlights

- Kaumātua/Elders demonstrated the strength of Indigenous knowledge to manage pain.
- They shared knowledge that mamae/pain is a complex holistic experience.
- Relationships, spiritual wellbeing, connection to nature and belonging are central to pain management.
- This rich Indigenous knowledge can inform pain services and treatments in Aotearoa.

Introduction

Chronic pain is a major public health concern, being the leading cause of disability in Aotearoa New Zealand, Australia and worldwide (GBD Collaborators 2016). There are cultural differences and inequities in the experiences and prevalence of pain (Fillingim 2017). Previous work suggests that the experience of chronic pain may be affected by intergenerational trauma and colonisation (Baker 2018). The term intergenerational trauma describes how trauma experienced by previous generations may have altered their stress responses, parenting, gene expression and other factors, which affect the mental and physical wellbeing of future generations. Colonisation and historical trauma for Indigenous peoples has included the loss of land, experiences of violence, and suppression of language and culture, which have wide-reaching and longstanding effects. Thus, it should not be surprising that Indigenous peoples experience a greater risk of chronic pain than others (Jimenez et al. 2011). Māori are the Indigenous people of New Zealand and make up 17% of the population of Aotearoa (Statistics NZ 2023). Māori experience a greater burden of chronic pain than other New Zealanders, with 23% of Māori adults reporting chronic pain (a relative risk of 1.41 compared with non-Māori New Zealanders) (Ministry of Health 2021), and Māori also report greater pain intensity, pain-related disability and distress than non-Māori (Burri et al. 2018; Lewis & Upsdell 2018). Chronic pain frequently leads to negative mental,

physical, spiritual and economic consequences and affects family relationships and systems (Dueñas et al. 2016). Given the unequal burden of chronic pain, pain management strategies that specifically assist Māori should be a priority in Aotearoa.

The design of health services contributes to significant inequities in healthcare and health outcomes for Māori (Came et al. 2020; D. Wilson & Barton 2012). Gold standard care for chronic pain usually involves an interdisciplinary team, providing biopsychosocial rehabilitation based on Western models. Generally, these programs do not incorporate Indigenous views of pain or traditional approaches to pain management. Aotearoa data indicate that Māori do not benefit to the same degree as others from pain management programs (Lewis et al. 2021), which is consistent with international findings from other culturally diverse groups (Brady et al. 2016).

If pain services are to better serve Māori, they should be underpinned by a Māori worldview and emphasise cultural strengths that can assist people to manage pain. However, few studies have described Māori cultural views of pain or pain management practices. Those studies that have emphasise that pain is viewed through a holistic viewpoint (Magnusson & Fennell 2011) and pain may affect mental, spiritual and whānau wellbeing (McGruer et al. 2019). Importantly, the term mamae, used to describe pain in te Reo Māori (Māori language), has a broad meaning incorporating suffering, trauma, spiritual pain, hurtful or painful experiences, and therefore the language does not differentiate between physical, social, emotional or spiritual pain. Pain is by definition a biopsychosocial phenomenon that incorporates unpleasant sensory and emotional components (Rajappa & Hayes 2020). However, this definition/understanding may not encapsulate more holistic views, interpretations and experiences of pain by people of Indigenous cultures (such as hurtful social experiences or spiritual pain and suffering). Māori may approach pain with stoicism, which likely affects help-seeking (Baker 2018), and Māori have negative experiences of pain treatment in Western healthcare settings, including racism, difficulty accessing treatment and treatment not meeting cultural needs (Devan et al. 2021; McGruer et al. 2019). Whilst these findings indicate the need for incorporating cultural aspects into service design, they do not necessarily provide information about *how* this might be done. In Māori society, Kaumātua are Māori Elders recognised by their whānau, hapū and iwi (family, kinship and tribal groups) as leaders who will lead the whānau, nurture the young and guide future generations. Colonisation and suppression have led to the loss of traditional knowledge, so there may currently be varied knowledge between Kaumātua. However, many do possess mātauranga related to pain and pain management that can inform the design of pain management services.

This study aimed to understand Kaumātua views on the effects of pain, traditional pain management practices and mātauranga Māori/traditional knowledge relating to managing pain. For the purposes of this study, a broad definition of pain/mamae was adopted as a holistic experience incorporating physical, psychological, social and spiritual elements.

Methods

The study was a Māori-centred project with both Māori (EM, DR, KT and KH) and non-Māori (DB, GL and GT) working in collaboration. It was conducted in accordance with Te Ara Tika research guidelines (Hudson et al. 2010). Māori-centred research (as defined by Te Ara Tika guidelines) typically involves Māori as participants and senior members of the research team, but may also include non-Māori taking

major roles in the project, as was the case in this study (Hudson et al. 2010). This study was first proposed by a Māori team member (EM). The research team was guided by one experienced Māori researcher (EM), two highly experienced cultural advisors (EM and DR), one fluent te Reo/Māori language speaker (DR), and supported capacity building for two Māori researchers: KH, a postgraduate psychology student who was supported to complete a summer studentship on the project, and KT, a skilled qualitative research transcriptionist who was supported to engage in qualitative analysis for the first time. Non-Māori team members brought expertise with pain management (DB and GL) and qualitative methodologies (GT). During regular research team meetings to discuss methodology, results, interpretation and all aspects of the study, Māori team members' voices and opinions were elevated, to ensure that power remained with Māori. All interviews and analyses were conducted together with at least one Māori and one non-Māori team member, with discussion generally led by the Māori team member. The project was reviewed by the AUT Mātauranga Māori Committee and ethical approval was received by the Auckland University of Technology Ethics Committee (20/254). Formal consultation with Kaumātua groups about the nature and conduct of the project was not conducted prior to commencement, noting that the project itself was consultative in nature.

Participants and sampling

Kaumātua who were known to Māori members of the research team were invited to participate. Kaumātua is not a title given to oneself but one acknowledged by whānau/family, hapū/kinship group and/or iwi/tribe as a recognition of that person's possible age, life experiences and/or abilities, for example leadership. There was an acknowledgement of these qualities by the Māori members of the research to personally known Kaumātua; hence, the invitation to contribute as a participant. Most of these participants were active in supporting their hapori/community, whānau, hapū and iwi. Kaumātua did not need to have experience of chronic pain to participate. Participant details and demographics are presented below in the Results section.

Procedure

Kaumātua were contacted either face to face or by phone. They were informed about the study verbally and in writing, and invited to take part in an individual interview or group hui/meeting (the hui was used for an established Kaumātua group). For the established Kaumātua group, the two interviewers (EM and DB) were unknown to most Kaumātua group members (who were familiar with another member of the research team). Therefore, several meetings occurred to establish connections. First, the researchers met the leader/facilitator of the group, then had an introductory meeting with the whole Kaumātua group before the hui, where data collection occurred. Two members of the research team (EM and DB, and for one interview KH and DB) conducted all interviews and the group hui. Tikanga/protocol was central to all research processes (described below). Each interview or hui took 60 to 120 minutes. All participants provided written informed consent to participate in the study. An interview guide was used; however, Kaumātua were given the flexibility to discuss what they saw as important.

Tikanga Māori

'Tikanga' refers to Māori cultural practices, customs and values that guide behaviour to ensure activities are conducted appropriately, and several tikanga practices were incorporated into the research process. *Whakawhanaungatanga* was used to establish relationships. Researchers and participants described their own whakapapa/genealogy and formed connections. The authors also described the purpose of the research project and their

commitment to using the information for advancement of Māori health. Each interview or hui was opened and closed with karakia/prayer. Individual Kaumātua were invited to provide the karakia, or one of the Māori researchers (EM, DR or KH) offered the karakia, with the Kaumātua selecting what was most appropriate. For the group hui, karakia was conducted by a leader of the Kaumātua group. The authors sought to meet Kaumātua face to face at a location of their choosing, although phone and Zoom interviews were offered when this was not practical. Kaumātua were invited to include whānau in their interview or hui. *Manaakitanga*/hospitality was another key tikanga that aided the research approach. Kai/food was provided and shared with participants following the kōrero/discussion, and a koha/gift ($40 voucher) was given to each participant. *Respect, acknowledging mana:* Kaumātua knew their views were being heard and respected by acknowledging their mana with a tuakana-teina/Elder-youth approach. For example, during the kōrero and asking the interview questions, clarity was ensured by the authors reflecting what they had heard, to ensure that it was tika/correct, right by them. Following the initial data analysis, Kaumātua were invited to a hui to provide feedback on data interpretation. Due to a COVID-19 lockdown, this had to be conducted over Zoom. Noting that the mātauranga shared may be considered a taonga/treasure, a written summary of each interview was provided to each Kaumātua for their retention, along with a summary of the overall research findings with invitation for clarification, correction or additions.

Data analysis

All individual interviews and the group hui were transcribed in full (by KH and KT) and reflexive thematic analysis (TA) (Terry & Hayfield 2021) was used to support analysis of the data through the six phases of analysis, with a whole team discussion during each phase.

1. Data familiarisation: KT and DB familiarised themselves with the data through multiple readings and casual note taking.
2. Generating codes: KT and DB then independently engaged in systematic coding of the data at semantic and latent levels, and transferred both sets of codes together to two online Miro boards (one board each, but including each other's codes).
3. Generating themes: The boards were used to cluster the codes and visually map potential themes. The two separate Miro boards were presented to the whole team, and they were notably similar in terms of potential themes.
4. Reviewing potential themes: Taking on board feedback from the whole team, these potential themes were further developed by DB and KT in consensus, into final themes.
5. Defining and naming themes: Themes were then named and defined and presented to the Kaumātua at the Zoom hui for further feedback, which was incorporated.
6. Producing the report: Finally, the report was developed in line with Braun and Clark's (2021) guidelines for quality TA.

The research team practised tikanga throughout all hui to discuss analysis. Whanaungatanga underpinned connection and relationship between team members. Manaakitanga meant that members of the team were respectful and collaborative of each other. Karakia was used to open and close all hui and senior Māori members of the team supported others to interpret the data in line with te ao Māori (the Māori world) views. In keeping with the principles of Māori data sovereignty, data are in the possession of EM, a senior Māori member of the research team, and interview or

group hui summaries have been provided to participants. The research team are a collaborative group with a shared vision of seeing te ao Māori values brought into the mainstream of healthcare in Aotearoa.

Results and Discussion

Fourteen Kaumātua participated in the research project; their demographic details and pseudonyms are displayed in Table 1. The TA generated three themes that captured the shared meanings of mamae. These themes all worked to tell a story of mamae that countered reductionist, biomedical understandings of pain, and offered solutions that extended beyond individual bodies and which make sense within te ao Māori. These themes were: 1) The multidimensional aspects of pain, 2) Whakawhanaungatanga: healing through connection, and 3) Tino Rangatiratanga: strength to self-manage pain.

Theme One: The multidimensional aspects of pain

Very quickly, Kaumātua led the team to understand that mamae is not limited to negative sensations in the body. They gave examples of pain stretching beyond the physical and into a person's hinengaro/mind, whānau and wairua/spirit; each of these aspects will be discussed in turn. In terms of physical pain, Kaumātua gave examples of experiencing mamae tinana/physical pain daily. They spoke of aching limbs and joint pain, arthritis and old sports injuries. Christine spoke of living with a 'frozen' shoulder: 'I'd had this major pain and, you know, you lift your arm a certain way and it just pain, you couldn't get it any further, so getting dressed was difficult.' Peter added, 'I've had both my knees replaced, elbows operated on, my back's all worn.' Hone added, 'Try having psoriasis and having a backache and having a headache.'

However, there was little distinction between physical and other kinds of pain. Mamae tinana was sometimes seen as a manifestation of emotional or mental trauma. Whina discussed pain as a tohu/sign of something deeper when she shared a story of a young woman who sought rongoā Māori/traditional treatment when her broken foot was not healing:

> *This young woman is going to come and stay with us because she needs awhi [support] for her, not just this foot, but her depression, her mental well-being, the grief of her mother dying and not being able to go home – all in this foot.*

Pseudonym	Age and gender	Iwi	Participation
Ana	69, female	Ngāti Maru	Hui
Christine	62, female	Te Aupouri, Te Rarawa, Ngāpuhi	Hui
Harriet	80, female	Ngāpuhi, Ngā Tiwai	Hui
Hone	74, male	Ngāti Hine, Ngāpuhi	Individual interview
Katarina	73, female	Tainui	Individual interview & Hui
Marama	64, female	Ngāti kahu, Te Rarawa	Hui
Margaret	60, female	Tuhoe, Ngāpuhi	Hui
Mere	72, female	Ngāpuhi	Individual interview (phone)
Ngaire	63, female	Ngā Ruahinerangi	Hui
Peter	71, male	Te Roroa	Hui
Rawiri	71, male	Te Rarawa	Couple interview
Sue	83, female	Pakeha*	Hui
Wendy	76, female	Ngāpuhi, Te Rarawa	Individual interview (video call)
Whina	72, female	Ngāpuhi	Couple interview

*Sue is a Pakeha, she was included as she is recognised by the kaumātua group as a kaumātua and group member.

Table: Participant characteristics

This resonates with the findings of Baker (2018), where Māori with chronic pain acknowledged that emotions 'held' in the body contribute to their pain. For some Kaumātua, mamae tinana was overshadowed by mamae hinengaro/psychological pain. Hone expressed, 'Physical pain is nothing to think about, really that isn't my worry.' Recounting a loved one's psychological distress after an amputation, Hone added, 'He just didn't want to live life with half a leg.' Hone's emphasis on the wider implications of the injury rather than the physical symptoms is evident in other research (Lambert et al. 2021).

The mamae hinengaro caused by fractures in whānau-kinship relationships was particularly relevant for Wendy, who shared her experience of growing up as whāngai.[1] For Wendy, the mamae was not associated with being whāngai but with the deception she experienced from her adoptive parents:

> *'Your parents didn't want you, that's why you're with us, but we love you,' and I knew that love was unconditional, but when you found out that your parents did want you that's when the pain hit. I had these mixed emotions, I was angry, but I didn't hate my parents I just felt as though they shouldn't've bullshitted about my parent, my biological parents – that hurt.*

It is clear from Wendy's description that mamae refers to something much broader than physical hurt, as her mamae was related to experiences of hurtful relationships. This contribution of whānau or social disconnection to pain is consistent with prior work on Māori health, which shows near universal agreement that healthy whānau relationships are a key determinant of Māori health (D. Wilson et al. 2021).

Kaumātua also gave a broader picture of mamae stretching into a person's wairua. Whina explained how spiritual contamination occurs in everyday life:

> *Something has contaminated their spiritual wairua, and that could've been abuse, sexual abuse, all kind of abuses, but in the time when it happened to them they might've been too young to understand.*

These descriptions align with previous sentiments from respected leaders regarding Māori health (Durie 2014). Kaumātua gave further examples of mamae wairua/spiritual pain. They described people suffering from terminal illness, mental health issues from violence and childhood trauma, and whānau disaffected by betrayals and rivalries and how these could affect a person's wairua/spiritual wellbeing. Several Kaumātua also discussed intergenerational mamae, where pain from traumatic events may be passed from generation to generation. Whina explained:

> *Some of these mamae [hurtful events] in the whakapapa [family history] haven't been addressed, and it's usually maybe four, five generations down that have the courage to go back and look into the whakapapa [genealogy] and say 'this is where the mamae [pain] started, now we have to do something about it.' So, there are many ways to address past trauma, to go there and address it with other members, which is not easy, and all do it through the power of the mind and karakia [prayer].*

When it came to mourning a lost loved one, Kaumātua talked of remembering the pain that person was suffering and within te ao Māori, a whānau may

[1] Whāngai means to nourish, to care for (Reed 1995). In the context of being a Māori, customary practice of adoption, whāngai, is that of a child being raised by someone other than their biological parents and is usually by extended whānau members. This practice can be considered as adoption or fostering as it may either be permanent or temporary.

envelop that spiritual pain, carry it with them and pass it from generation to generation. Hone described how he was still 'carrying' the pain for his son who had died:

> *When the body dies, we always say... now that your life has ended you will not feel the pain. But you know it's only for the body we're referring to - but the wairua pain that that person has endured will be our pain. That's the wairua pain I'm talking about.*

These findings are consistent with broader views of wairua, that it extends beyond spirituality, but also has connections to past, present and future, to whenua/land and tipuna/ancestors, and is fundamental to Māori (Valentine et al. 2017).

Kaumātua are traditionally the conduits of knowledge given to them by tipuna to pass on to their tamariki/children, and those who hold this knowledge still fulfil this role today. Although their opinions are respected and their advice is followed in te ao Māori, several Kaumātua described mamae from having their voices drowned out when mātauranga Māori was not respected in society, such as commercialism of the taiao/environment, pollution of modern-day living practices, and breaches of tikanga. Whina gave an example when describing spiritual contamination of the environment:

> *For Māori that's a mamae [pain], a deep deep mamae [pain] because we have a whakapapa [genealogy] that connects us to the earth and to the spirit and to the universe, and we have all our atua [gods] and kaitiaki [guardianship] in there that we're related to that we're meant to karakia [pray] to, we don't cut trees until we have a karakia [prayer], but some of those practices are all lost, so that honouring of all of those levels have diminished.*

Some of the Kaumātua also recognised their duty of care as kaitiaki/guardians of knowledge. Whina explained:

> *You've got this little treasure box outside of the system and that's really painful, also, to not have that accepted by the rest of the world, when for Māori this is a beautiful rongoā [medicine] for everyone really, you know, but we had systems that protected it against abuse.*

Kaumātua also discussed end of life and the importance for many Māori to return home and be buried on their papakāinga/ancestral homeland. DR (a senior Māori member of the research team) explained at the hui to discuss findings, 'Being back in the cemetery with all the people they grew up with, they know, that's what puts them at rest.' However, Wendy explained the mamae for Kaumātua, 'Our Kaumātua tell us to take them home. The children say, 'No. Why? Too far away. We can't afford.'" DR added, 'And sometimes it can impact the parents if they know that the tamariki [children] aren't going to take them home.' Kaumātua also acknowledged that it is a changing world and some may wish to be buried elsewhere, such as with their spouse or close to whānau, or cremated, but the thought that they might not be laid to rest in the correct place was a deep source of pain for some of the Kaumātua.

Overall, theme one demonstrates that Kaumātua viewed pain as multidimensional; physical symptoms were mentioned but not emphasised. More importantly, pain was also seen as a product of negative emotional or social experiences, trauma from life events, breaches of tikanga and spiritual and environmental contamination. This highlighted the broad meaning of the Māori kupu (term) mamae, which can refer to physical pain but equally to hardship and suffering.

Theme Two: Whakawhanaungatanga: Healing through connection

Kaumātua articulated an equally multidimensional process for healing pain. Many Kaumātua viewed pain medication as a 'short cut', and explained that in order to heal mamae, a deeper level of wānanga/learning was required. This healing involved forming or strengthening connections with people, the spiritual realm, the natural environment and their papakāinga.

First, Kaumātua described how connections between people were a source of healing, both within whānau and within healthcare relationships. Whina described the importance of deeply connected whānau relationships where whakapapa ties people together and experiences of pain, sadness, suffering and aroha/compassion are entwined between whānau:

> *It's really important to have whānau [family]. With each other some, ahh, get hōhā [frustrated], but the strongest bond that keeps Māori going through that pain is the aroha [love] that they feel... That comes through and permeates this pain, this hōhā [frustration].*

Whina's comments resonate with Rameka's (2018) argument that deeply interwoven links between people form the basis for health. For some, the connections are to wider whānau, for others, it was specific individuals. Wendy described how, after growing up in a world of dishonesty, her respectful relationship with her husband healed her mamae:

> *Holding that mamae [pain], um, it sometimes used to make me vomit. But when I got married to Tom, um, I sorta left that, that didn't occur around me for quite some time. So, I think I healed, if that's a word I can use. Tom, Tom healed me.*

Within therapeutic relationships, aroha, listening and connecting were key to healing. Participants emphasised the importance of aroha when using rongoā. Whina explained when providing rongoā to a woman who stayed in her home:

> *The people around her at the time have to be in the spirit of aroha [compassion]. Ya know, there were times there where I could have lost it (laughing). But I had to be really true to what I've learnt about the power of aroha [compassion] and so I was able to hang on.*

Kaumātua noted that human connection was often lacking in medical environments, but was highly valued when present. Previous pain research has identified racism and lack of cultural safety for Māori in pain management settings (Baker 2018; McGavock 2011), but has not necessarily focused on the subtle interactions that support better care. Mere, when asked about interactions with health professionals, explained:

> *I asked the next doctor that looked at me when my older one retired* [about my pain]. *He was like, I don't think he wanted me. So, um, there are different doctors with different attitudes...* [My new doctor] *listens to me and it's, so I'm grateful that I've found other people that can hear what you're saying and not just writing it down on a piece of paper and giving you a pill every time, you know what I mean?*

The importance of meaningful healthcare relationships has also been emphasised in previous Māori health research (B. J. Wilson et al, 2021). These insights resonate with broader research on person-centred care, which highlights the need for a reorientation to *cultures* of care; moving beyond the efforts of individual healthcare practitioners (Terry & Kayes 2020).

In addition to being connected to people, Kaumātua emphasised how being connected to the spiritual realm was a source of healing. Most participants spoke about using karakia to effectively manage pain. Ngaire commented:

> *If I'm in, um, really acute severe pain I'll just have to yell out to the Lord above and karakia [pray] to him and just ask for that relief and nine times out of ten he's listening.*

Participants articulated how karakia strengthened their wairua, allowing them to cope with pain. Whina explained how her parents' faith influenced their pain:

> *Some moan, some don't, so I'm talking about my father and my mother, ya know. My mother had, she had long ailments, but she put up with it through pregnancies through whatever because she had a faith. And so it was in that faith that kept her spirit strong. My dad was the opposite, he moaned every day, 'I gotta sore back, I gotta sore head', but his faith, he had a faith but it wasn't quite as strong as Mum's.*

Overall, this connection to the spiritual realm provided healing and pain relief. This is consistent with previous studies reporting that karakia is key to maintaining safety and centredness for Māori experiencing chronic pain (Baker 2018), and that karakia is the most common and fundamental form of Māori healing (Reinfeld & Pihama 2007).

Kaumātua also explained how connections to the natural environment heal mamae. Collecting and using native plants such as harakeke, kawakawa and tūpākihi were described as effective for relieving pain. Mere commented 'as I became an adult and I found out what I felt was good for me and it [rongoā] works, it really works for me'. When asked if it reduces her pain or takes it away, she did not hesitate in explaining 'definitely take the pain away, that's for sure.'

Kaumātua emphasised the benefits of heat and wai/water, particularly puna/spring water or bathing in waiariki/thermal water. Drinking pure water was valued for cleansing and healing. Kaumātua also described the therapeutic process of growing or collecting plants for rongoā, or going into nature to access thermal pools, which connected them to the whenua/land and provided exercise. Christine described:

> *I mean the puna [springs], you know especially at the Ngawha [thermal springs], those are the best of course, because it's got all those other things that are good for skin and everything else, so it was about heat and sometimes cold... but it was also the act of going there so it was the exercise, um, it was the fresh air and it was all those things.*

Katarina told a powerful story of allowing nature's elements to cure her cancer and pain:

> *I went to stay with my daughter... and she said to me, 'Mum what are you doing outside?' I said 'I'm letting the elements heal me'. I put a mat, something on the ground. I sat there, and you know, I was cleaning up her garden with my hands, sun shining, wind blowing, and I was out there. Well thank you Lord, after a while I went back to the doctor (pause) it's gone.*

Overall, connecting to the natural environment formed a powerful point of healing for Kaumātua. This is not surprising given the whakapapa expressed by Whina 'we have a whakapapa that connects us to the earth,' referring to genealogy reaching back to Papatuanuku/Earth Mother. She explained that people are viewed as part of the fabric of the universe, a part of the natural world (Marsden & Royal 2003). Similarly, Durie (2000) argued that people have a spiritual connection to the environment, and the nature and quality of people's interaction with the natural world influences their health.

Finally, Kaumātua agreed on the importance of being connected to their papakāinga. Particularly when unwell or at the end of life, returning to one's papakāinga and being buried with whānau and tipuna was seen as essential to several Kaumātua who discussed this point. Knowing that one would be buried in one's ancestral home (or in the right place) was described as giving peace. This finding echoes the work of Tomlins Jahnke (2002), who found that connections to one's home place links a person to the whenua, their whakapapa, whānau, marae, te reo, and ultimately helps to maintain their cultural identity.

Overall, the importance of being connected to people, place the spiritual realm and the natural world is consistent with prior research on Māori health in general. Little previous research has identified the centrality of whanaungatanga/connections for pain specifically, but it was clear from Kaumātua that these connections were key to managing or (more importantly) healing mamae. This challenges public healthcare provision for chronic pain, which usually has a biomedical or individual biopsychosocial focus but leaves out the natural and spiritual components of care. The Kapakapa Manawa Framework (Robinson et al. 2020) describes applying aroha, nurturing connections, knowing the patient, and using manaakitanga within healthcare settings. This framework and others used for mental health (Niania et al. 2016) appear relevant to pain services. In inpatient settings, a limited number of Kaumātua and chaplains usually attend to patients' spiritual needs, but it is currently unlikely that this is incorporated into (generally outpatient) chronic pain management. Providing spiritual care remains a challenge for Western healthcare.

Theme Three: Tino Rangatiratanga: Strength to self-manage pain

Kaumātua spoke of people facing pain with personal strength and individual resourcefulness. In contrast to Theme 2, which describes healing through connection, this theme focuses on what people must do as individuals – especially when ongoing disconnection still exists. Three aspects of using strength to cope with pain were discussed: self-reliance, self-determination and stoicism.

Kaumātua described using positive strategies and activities to maintain self-reliance and live a meaningful life despite mamae. For example, using exercise, maintaining a positive attitude, accepting pain, and enjoying dance, music and laughter were all mentioned as antidotes to pain. Several participants discussed the importance of exercise, for example: 'I have to walk for exercise. I used to walk up and down the deck, up and down, just for exercise... Because being idle is not good for no tinana [body]' (Katarina). Accepting pain as a part of life, especially with ageing, was viewed as positive. Mere explained 'as I've gotten older it's like a gradual declining in health... And with it comes this slow peaceful acceptance. That's the only way I can explain it, you are accepting what's coming along really gradually.' This acceptance was accompanied by an acknowledgement of the benefits of maintaining enjoyment in life. This was clear from the group discussion at the hui; Margaret: 'when you wake up have a big fat feed (laughing) you know, and then'; Katarina: 'a cuppa tea'; Margaret: 'a good laugh yeah'; Harriet: 'a good laugh keeps you young'; Margaret: 'and I love dancing so I put the music on and just dance (laughing), I just dance even though sometimes I can't move my bones'; Ngaire: 'and you get up and kanikani [dance]'; Margaret: 'my bones

clicking and I'm going 'ohh this is hard"; Harriet: 'I just sit there I dance on my chair sitting...'; Margaret: 'I know we need medication but dancing, being happy'; Harriet: 'singing'; Margaret: 'it cleanses your soul you know, your soul feels free'; Marama: 'what lovely medicine'. This positive self-reliance and active coping are consistent with the skills taught in Western pain services; however, Kaumātua had developed their own personal strategies based on their rich lived experiences. Such experiences may have included many cultural experiences of waiata/singing and kanikani/dancing at marae, cultural events or tangihanga/funerals, where music and dance may be intentionally used to set the tone for the whole group and facilitate expression of emotion (Maniapoto 2015).

Kaumātua also articulated the importance of exercising tino rangatiratanga/self-determination to take control over their health. They did this by developing physical awareness, making their own health decisions and even identifying their own health problems. Mere gave an example:

> *I had a blood clot on that same leg and it was like all the doctors and nurses running around, and I went straight to the doctors and I said 'I think I have a blood clot' and, oh, they started panicking. And that's what I mean, I was able to do that because I knew my body, but other people don't have a clue.*

Similarly, Katarina argued for the superiority of her own knowledge of her body over that of health professionals:

> *I think I wanna be my own doctor. I don't mean to be rude to the doctors here, but, you don't know my body, only me, and I'll tell anyone that, you don't know my body.*

Several Kaumātua described rejecting Western medicines due to side effects and ineffectiveness, and utilising rongoā or other strategies. Many participants described being judicious in their healthcare decisions, and emphasised the importance of making health decisions themselves.

The value of tino rangatiratanga for coping with pain is unsurprising, given the sociopolitical context and importance of self-determination for Māori across life domains. Colonisation, racism and marginalisation are all powerful determinants of Māori health (D. Wilson et al. 2021); there is still ongoing racism and inequities. Therefore, being able to make one's own health decisions or find personalised strategies may be empowering and contribute to wellbeing.

Finally, valuing a stoical, uncomplaining approach to pain meant participants often did not discuss pain with others, which had both positive and negative aspects. Positively, Kaumātua described feeling strong and not needing help with pain. Accordingly, they did not want to burden whānau. When asked why she does not tell family about her pain, Mere explained:

> *Because I'm handling it. Uh, they'll all come running if I talk like that eh, and that is not helping me to see them running like that. My son lives* [nearby]*, he'll prop me up if he needs to, I know that. But, I have this thing about trying to be strong within myself as I'm getting older, because to me it's so important that I stay as strong as I can be right now.*

This sentiment echoes McGavock's (2011) study of Māori experiences of chronic pain, who preferred to keep pain to themselves rather than burden whānau. Kaumātua in the present study explained that disclosing pain outside the whānau may be associated with feelings of whakamā/shyness. Rawiri described his work supporting families in a healthcare setting:

> *One of the biggest pains for them... is talking about it... their pain... I just listen and let the nurses talk and you*

can see some of the body language and they don't want to talk or they dunno what to talk about or they too shy or... they'd rather not, they'd rather suffer in silence.

This resonates with Magnusson and Fennell's (2011) finding that Māori view pain as a private experience and prefer not to discuss It. Kaumātua indicated that another reason to keep pain to themselves was a general negativity towards pain in society; those who complained of pain may be seen as weak. Some described examples of being 'hardened up' to pain in a time when physical punishment was the norm in both Māori and Pākehā cultures (noting that it was not a feature of traditional Māori society) (Jenkins & Harte 2011). Peter described such punishment, saying:

Oh, I can only remember, you know, Māori Pākehā rānei [either/or] about 'if you don't shut up I'll give you something to cry about'. So, you know, we're taught at an early age, hey, to toughen up... so you build up that you know, you gotta, I've gotta high pain threshold.

Hone described violence from teachers, caregivers and siblings, and explained the macho rugby culture he had experienced:

My knees were like this since I was 35... playing rugby in those days they didn't have those people running onto the field and [saying] *'are you alright?' – and they'd bring out the ambulance with a stretcher and all that. I hurt myself up at Riverhead. Bloody hell – all the players finished and I was 'Hey where's my ride?'. 'Oh bugger you, we're going to the pub'.. I mean, what I'm saying, the difference between generations of looking after one another's pain is far, far away.*

This kind of story fits with the kinds of masculinities expected in Aotearoa, especially in the days before rugby's professionalisation. Similar accounts have been found in previous studies involving Māori men and pain (Baker 2018; Dixon et al. 2021). Hone's quote also demonstrates how change has occurred over the generations in their manaakitanga towards another in pain. The older generations may have endured more pain; expectations of stoicism towards pain may now be changing.

Several Kaumātua described how this stoicism could have negative effects, as it left them unable to express emotions and receive support. This was particularly relevant when pain was too challenging to manage independently. Wendy described growing up in a time where it was unacceptable to talk about mamae, explaining 'the people that I spoke to never, never talked about it'. Instead, despite painful life events, she would present a view of having a happy life. However, Wendy acknowledged that this meant she and others were 'bottling up' their mamae, leading to an emotional burden and lack of support. There was also no professional support available.

But the thing with Māori and I think some of the Kaumātua... even Pākehā [NZ European], a lot of them never got counselling. So they just carried that mamae [pain] inside... When you've got no counselling you don't get any help so you're, you're carrying that day in and day out.

The concept of carrying the ongoing burden of unexpressed pain is consistent with the concept of whatumanawa, the need for healthy open expression of emotions like grief, anger, joy or jealousy (Pere 1997). Such emotions may be expressed through means other than talking, such as haka, waiata or tears (Love 2004). Overall, Kaumātua described enduring pain with considerable strength, but recognised the risks of people not sharing their pain.

Interpretation

The findings from this study demonstrate that for Māori, mamae may be viewed through a te ao Māori lens, highlighting the deeply interwoven factors that may contribute to mamae, and the interconnected domains that contribute to healing mamae. Māori whakapapa (genealogy) links people and their bodies not only to whānau and tipuna, but through creation stories to the auta/gods and the natural world, with all as descendants from Papatūānuku (Earth Mother) and Ranginui (Sky Father). Durie (2000) has described how the connections people have with their whakapapa, whānau, the spiritual world and the natural world are essential for health and wellbeing. Therefore, it is unsurprising that the Kaumātua in this study identified that mamae is related to all aspects of wellbeing, including the state of their physical body, a person's psychological wellbeing, their relationships and spiritual connections. Fittingly, the term mamae does not differentiate between suffering in these different dimensions, as all are intertwined (Reed 1995). Equally, healing of mamae was associated with these same interconnected dimensions, and Kaumātua explained how aroha in relationships, karakia and strengthening the wairua, as well as connecting to taiao/nature, were all contributors to healing mamae. This is consistent with traditional Māori systems of healing include the use of ritenga/rituals, karakia, rongoā, mirimiri/massage and wai, which may be combined to provide healing that addresses all of the dimensions of health (Durie 1998). These practices may further enhance wellbeing by strengthening Māori cultural identity (Baker 2018). The findings also highlight that the importance of Tino Rangatiratanga (self-determination) for Māori extends to management of mamae. Kaumātua described being self-reliant and engaging with cultural practices for pain management, and emphasised their preference to make their own health decisions. Kaumātua also clearly described a reserved approach to expressing mamae. This stoicism has been frequently described in research of Māori experiences of pain (McGavock 2011; McGruer et al. 2019), and this has important implications for healthcare. The authors encourage the reader to further explore the depth of the whakaaro being expressed by the Kaumātua.

Strengths and limitations of the research

The main strength of this study was the Māori-centred approach, with tikanga honoured throughout the research process. Four members of the research team are Māori and two senior Māori members of the research team are experienced cultural advisors with deep expertise in tikanga, te reo Māori and knowledge of te ao Māori. The team brought together skills and Pākehā team members provided time and support that aimed to reduce the cultural labour that Māori team members frequently carry. Pākehā contributed together with Māori team members to the administrative tasks, analysis and writing, which may have limited the depth of analysis and interpretation. A further strength was the depth and quality of the reflexive thematic analysis, conducted in parallel by two members of the team with oversight from an expert methodologist. The sample was mainly made up of women, predominantly those living in the city, and with whakapapa to Northern and Central New Zealand iwi. Given the limited research in this field, future studies may wish to explore the topic in a wider group of Kaumātua.

Clinical implications

Based within the mana of the Kaumātua who participated, this study provides firm guidance that for Māori, optimal pain management should be based on a broad holistic understanding of wellbeing. Although current multidisciplinary pain management typically includes biomedical and psychological treatments,

spiritual, social and natural components are rarely incorporated and this needs to be prioritised. This study highlights that despite complex realities, traditional Māori ways of managing pain can be successful, and indicates that promoting rongoā, spiritual support and self-management within community or Māori healthcare settings is important. Māori-led services for pain management need to be developed, and mainstream services may need to embrace a significant cultural shift and incorporate mātauranga and values from te ao Māori into their practice. Racism and discriminatory attitudes have been shown to exist within the health profession (Paradies et al. 2014), and experiences of racism adversely affect health outcomes (Cormack et al. 2018). Therefore, a significant shift is required for individual health professionals to meet their obligations and provide quality healthcare for Māori. The He Awa Whiria (Braided Rivers) approach provides a framework for integrating Māori and Western knowledge in research and practice, and this could guide such a process. The model uses the metaphor of two braided rivers, representing Western and Māori knowledge, with each spending time apart but converging at times. The model identifies that when the two streams converge, a more powerful flow is created than either stream alone. The model gives equal value and legitimacy to both streams of knowledge and could provide a framework for integrating mātauranga Māori and Western science to create pain services appropriate for Aotearoa.

Conclusions

Kaumātua insights into the nature of pain and traditional approaches to pain management indicate that first, pain should be considered a multidimensional phenomenon influenced by the interconnected nature of an individual's physical body, social relationships, history of trauma or psychological distress, the natural environment and their (related) wairua/spiritual wellbeing. Second, the healing of pain involves forming or developing connections between people, with the spiritual realm, the natural world and one's ancestral home. Third, pain may be approached by individuals with significant strength, whereby people utilise positive self-management strategies, exert self-determination over their bodies to make their own health decisions relating to pain and approach pain with significant stoicism, keeping pain to themselves rather than risking loss of mana or burdening whānau. These findings highlight discrepancies between broad holistic Indigenous approaches to pain and the individually focused biological and psychological approach in Western healthcare, and provide impetus for developing better services for pain management in Aotearoa.

Declaration of interest

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Credit author statement

EM, DB, GL, GT: Conceptualisation; EM, DB, GL, DR, GT: Methodology; EM, DB, KT, GL, DR, GT: Formal analyses; EM, DB, KT, KH, DR: Investigation; EM, DB, KH, DR, GT: Resources; EM, KH, GL, GT: Writing – review & editing; EM, GL, DR, GT: Supervision; DB, KT: Writing – original draft; DB: Project administration; DB, KH: Funding acquisition.

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Debbie Bean (Pākehā/New Zealand European) is a Kairangahau/senior lecturer at Auckland University of Technology. Her research interests focus on understanding and managing chronic pain and its impact. Debbie is interested in developing treatments and services that meet the needs of people with chronic pain in Aotearoa New Zealand, particularly Māori. Debbie is also a Kaimatai Hauora Hinengaro (registered health psychologist). Debbie has a clinical background providing psychological care to people with chronic pain as part of an interdisciplinary team.

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Te Reo Māori term	English meaning Nb. Many of the Māori words have multiple meanings, the definitions given here relate to the usage of the word in this paper.
Aroha	Love, compassion, caring
Atua	God
Awhi	Support, surround, embrace
Hapori	Community
Hapū	Kinship group, subtribe
Hinengaro	Psychological
Hōhā	Be boring, tiresome, fed up with, exasperating, annoying
Hui	Meeting
Iwi	Tribe, extended kinship group
Kai	Food
Kaitiaki	Guardian
Kanikani	Dance
Kanohi ki te kanohi	Face to face, in person, in the flesh
Karakia	Prayer, blessing
Karanga	Formal or ceremonial calling
Kaumātua	Elder, a person of status within the whānau
Kaupapa	Topic, purpose, proposal
Koha	Gift, offering, donation, contribution
Kōrero	Discussion, conversation
Mamae	Ache, pain, injury, wound
Manaakitanga	Hospitality
Mana	Status, spiritual power, prestige
Mātauranga	Knowledge, wisdom, understanding, skill
Mirimiri	Massage
Pākehā	New Zealander of European descent
Papakāinga	Original home, home base, village, communal Māori land
Puna	Spring water
Rānei	Whether, or - a word used to emphasise that a range of alternatives exist
Rongoā Māori	Natural remedy, traditional treatment, Māori medicine
Ritenga	Rituals
Taiao	World, natural world, environment
Tamariki	Children
Tāne	Man
Tangi/Tangihanga	Funeral
Taonga	Treasure
Tautoko	To support
Te ao Māori	Māori world
Te Reo Māori	Māori language
Tika	Correct, right, proper
Tikanga	Correct procedure, custom, practice, protocol
Tinana	Body
Tipuna	Ancestors

(continues on next column)

Te Reo Māori term	English meaning Nb. Many of the Māori words have multiple meanings, the definitions given here relate to the usage of the word in this paper.
(Continued from previous column)	
Tino rangatiratanga	Self-determination, sovereignty, autonomy
Tohu	Sign, symbol, cue
Tuakana-Teina	Relationship between an older person (tuakana) and younger person (teina)
Wahine	Women
Wai / Waiariki	Water / Thermal water
Waiata	Song
Wairua	Spirit, soul
Wānanga	Learning, consideration
Whakamā	Shame, embarrassment
Whakapapa	Genealogy, ancestry
Whakawhanaungatanga	Process of establishing relationships, relating well to others
Whānau	Extended family, family group
Whanaungatanga	Relationship, kinship, sense of family connection
Whāngai	To feed/nurture, customary adoption
Whatumanawa	Seat of emotions, heart, mind
Whenua	Land

Glossary