

# The lived experience of chronic pain for Māori: how can this inform service delivery and clinical practice? A systematic review and qualitative synthesis

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## TUHINGA WHAKARĀPOPOTO, ABSTRACT

**AIM:** To synthesise the literature describing experiences of chronic pain and pain management for Māori, and to understand how this experience could inform service delivery and clinical practice.

**METHOD:** We systematically searched for qualitative research on Māori chronic pain experiences (Scopus, Medline, APA PsycINFO, NZ Research, Research Square). Data extracted were coded and synthesised using thematic analysis.

**RESULTS:** Seven studies were included. Three themes encapsulated the data: 1) *a multidimensional view of pain and pain management:* Māori expressed a holistic and integrated understanding of the multiple factors that influence pain and its management, 2) *a responsibility: respectful tikanga-informed care:* the experiences of Māori participants with healthcare highlight a need for anti-racist approaches, and a clinical responsibility to practice manaakitanga and tikanga, and 3) *tino rangatiratanga: a desire for knowledge, choice and autonomy in pain management:* Māori valued the empowering nature of knowledge about pain, and information and support to make decisions about treatment, including considerations regarding Western and traditional Māori medicine.

**CONCLUSION:** Health services need to understand and respect the multidimensional aspects of pain, minimise racism and discrimination, use whakawhanaungatanga, manaakitanga, and tikanga-informed practices, and provide appropriate information to support tino rangatiratanga for pain management.

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In Aotearoa New Zealand, 22.6% of the adult population live with chronic pain, and Māori are 1.4 times more likely to experience chronic pain than non-Māori.<sup>1</sup> Te Tiriti o Waitangi sets out the basis of Māori rights to health equity in Aotearoa New Zealand. The Pae Tū: Hauora Māori Strategy (Pae Tū)<sup>2</sup> guides health entities in how to uphold Te Tiriti o Waitangi and is a part of a wider health strategy for improved health outcomes (Pae Ora | Healthy Futures Strategy). Pae Tū outlines several requirements for services, including empowering Māori to exercise authority over their health and wellbeing, equitable access to health services and enabling Māori to live, thrive and flourish as Māori.<sup>2</sup> Therefore, all services providing pain management are required to acknowledge and update current practices in line with Pae Tū recommendations.

Despite a higher prevalence of chronic pain and greater impact on quality of life for Māori,<sup>3</sup> only a small body of research has investigated how Māori experience pain and whether services

currently provide culturally responsive treatment that addresses the pain experience for Māori. One previous attempt to review this literature was limited to the inclusion of two studies and was unable to develop clinical recommendations.<sup>4</sup> A recent review of strategies informed by Māori to support adjustment to chronic health conditions more broadly made several recommendations, including culturally safe practices, active participation in treatment, whānau involvement, building trusting therapeutic relationships and commitment from clinicians to develop skills for supporting Māori.<sup>5</sup> Established treatments that exemplify these factors have demonstrated meaningful engagement in treatment for Māori.<sup>6</sup> The aim of the current review is to provide a more inclusive summary of the existing literature describing Māori experiences of chronic pain in order to understand how this experience could inform culturally responsive service delivery and clinical practice in services providing pain management.

## Ngā Tapuwae, Method

This review recognises Te Tiriti o Waitangi as it sets out the basis of respect between Māori and non-Māori in this country. The principles of Te Tiriti guided the work, which utilised research completed by and with Māori to tell the story in this review. In doing so, it ensured Māori voices were at the centre of the research. The authors of the paper are Māori (JR, EM) and non-Māori (DA, GL, DB) and have worked collaboratively throughout the review, with a focus on the Māori researchers' voices at all stages of the project. Additionally, four of the researchers (DA, JR, EM, DB) are health psychologists who have worked with people who have chronic pain. The research team are a collaborative group who strongly advocate for Te Ao Māori values being

incorporated into mainstream clinical practice.

This systematic review was conducted and reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.<sup>7</sup> Additionally, the Enhancing Transparency in Reporting the Synthesis of Qualitative Research (ENTREQ) checklist was completed.<sup>8</sup> Ethical approval was not required.

### Search strategy

A computer-based search was completed on the following databases: SCOPUS, Medline, APA PsycINFO, NZ Research (the Universities of New Zealand theses databases) and Research Square (preprints database) using the search terms "Māori" or "Maori" and "pain". A hand search of the reference lists of included articles was also conducted. To be included in the review, studies

**Table 1:** Inclusion criteria for studies in the systematic review.

|                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Empirical qualitative research design                                                                                                                |
| 2. Written in English                                                                                                                                   |
| 3. Participants need to be adult Māori                                                                                                                  |
| 4. The study addressed the lived experience or interpretation of pain for Māori, experiences of healthcare for pain, or preferences for pain management |

**Table 2:** Characteristics of the included studies.

| Study                                    | Participants                                           | Methodology             | Participant demographics |                     |                   |
|------------------------------------------|--------------------------------------------------------|-------------------------|--------------------------|---------------------|-------------------|
|                                          |                                                        |                         | N Total                  | Age (mean or range) | Gender (% female) |
| Awatere 2018 <sup>9</sup>                | Kaumātua with osteoarthritis                           | Kaupapa Māori           | 20                       | 55+                 | not stated        |
| Baker 2018 <sup>10</sup>                 | Urban Māori adults with long-term musculoskeletal pain | Kaupapa Māori           | 6                        | 40–60               | 4 (67%)           |
| Devan et al. 2021 <sup>11</sup>          | Kaiāwhina who support whānau Māori with chronic pain   | Kaupapa Māori           | 13                       | 23–65               | 13 (100%)         |
| Magnusson and Fennell 2011 <sup>12</sup> | Kaumātua and Māori health-care providers               | Qualitative descriptive | 33                       | 33–87               | 23 (70%)          |
| McGavock 2011 <sup>13</sup>              | Māori with chronic pain                                | Kaupapa Māori           | 7                        | 26–52               | 5 (71%)           |
| McGruer et al. 2019 <sup>14</sup>        | Māori with osteoarthritis                              | Kaupapa Māori           | 7                        | 44–71               | 7 (100%)          |
| Morunga et al. <sup>15</sup>             | Kaumātua                                               | Kaupapa Māori           | 14                       | 60–83               | 11 (79%)          |

needed to meet the requirements outlined in Table 1. To meet inclusion criteria 4, studies had to focus on pain experiences. Some studies were about specific medical conditions that are typically associated with pain (e.g., arthritis, gout). For these studies, the results sections were assessed, and they were included only if they focussed on pain rather than other aspects of the health condition. Published articles as well as theses and dissertations were included. After removing duplicate records, the initial screen of titles, abstracts and keywords was conducted by two authors independently with discussion with a third author where necessary. Full texts were then screened by the same two authors independently, and with a third author when indicated.

### Data extraction

Two authors independently extracted the data for each study (DA and DB, or DA and JR). The variables extracted were the study aim, setting, methodology, number of participants and participant age and gender. Each study's results section was then coded with unique meaningful codes, and these codes and the associated quotes were extracted (see below). One of the studies included in this review was authored by some of the authors of this review; the authors implicated did not extract data from their own research.

### Assessment of study quality

The quality of included papers was not assessed using a specific tool, as the studies used a broad range of methodologies and this was not considered appropriate for Indigenous research. This decision is in line with other systematic reviews of Māori health experiences.<sup>16</sup> However, when using the Te Ara Tika framework as a lens,<sup>17</sup> all of the studies included aspects of whakapapa (Māori involvement initiation, meaningful partnerships), mana (outcomes for Māori, recognition of knowledge), tika (incorporation of tikanga and Mātauranga Māori), and manaaki (whānau Māori involvement throughout process).

### Synthesis of results

The review followed Thomas and Harden's thematic synthesis process for qualitative research in systematic reviews.<sup>18</sup> Study findings were defined as all data in the results/findings section that pertained to the concept of interest. Other sections of the manuscript (e.g., abstract, discussion) were also checked for relevant findings. First, two authors (DA and JR, or DA and

DB) independently coded the findings line-by-line, generating unique codes for each statement of interest. Codes were transferred to Miro software (Thought Industries). Four authors independently created initial descriptive themes (DA, JR, GL and DB). Next, the whole research team (DA, JR, EM, GL, DB) generated their own analytical themes based on the descriptive themes using separate Miro boards. The research team then met and discussed their analytical themes and agreed upon the main themes and related sub-themes. Two authors (DA and DB) wrote the draft theme synthesis and the research team provided feedback until all team members were satisfied with the analytic themes. In generating recommendations for practice, a strengths-based approach similar to that used in appreciative inquiry was implemented,<sup>19</sup> as it focussed on shifting from problems to solutions in healthcare.

## Ngā Hua, Results

### Study selection

The search was initially completed in January 2022, then repeated in August 2023 to ensure currency. During the secondary search one additional article was added. The final search retrieved 298 articles (Figure 1), and one further thesis was added based on word of mouth (from authors' own records or libraries). After duplicate removal, 218 publications remained. The initial screening of titles and abstracts excluded a further 171 publications. Full texts of the remaining 48 articles were screened, resulting in a final set of seven publications that were included in the review. Of these seven publications, three were original research articles, three were theses and one was an unpublished preprint of an article in submission. Six of the studies utilised Kaupapa Māori research methodologies. Table 2 details the included publications.

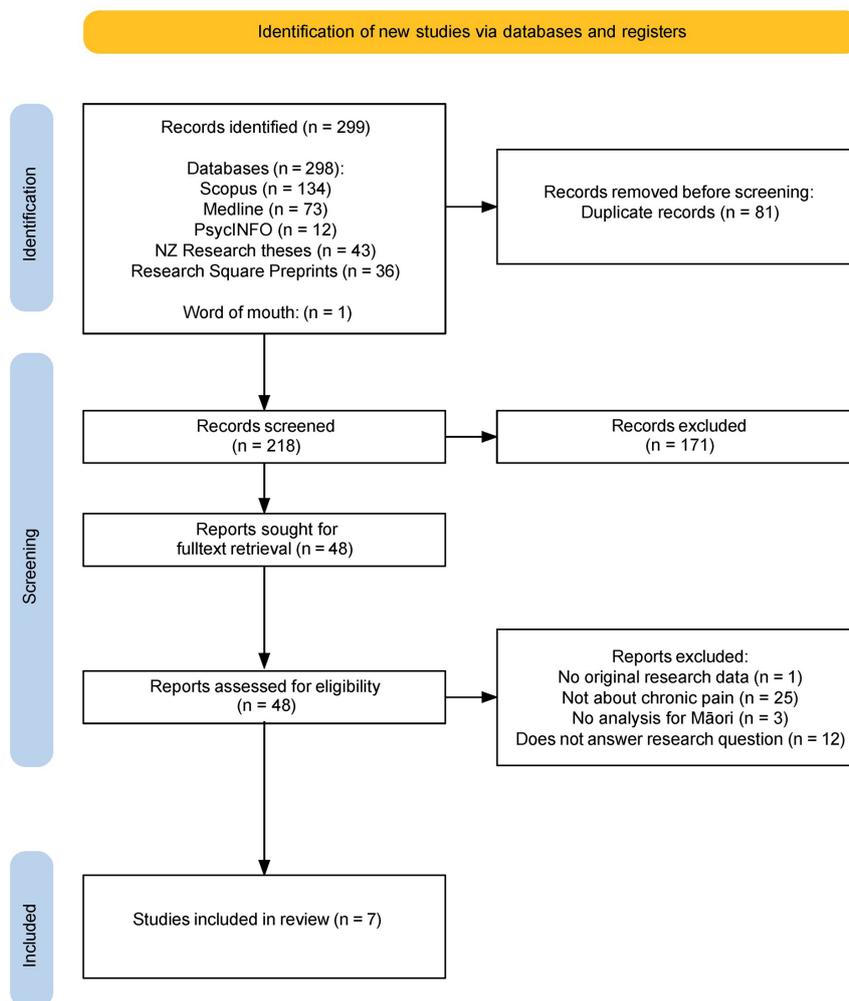
### Qualitative synthesis findings

The qualitative synthesis resulted in three themes which describe a Māori worldview of pain and pain management, highlight the responsibility for services to develop tikanga-informed care and illustrate a desire from Māori to further their understandings of pain and have autonomy in pain management.

#### *Theme one: a multidimensional view of pain and pain management*

Theme one describes the breadth of factors

**Figure 1:** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram documenting literature search and study selection.



that may contribute to pain, including historical socio-political factors, and the wide-reaching effects of pain on wellbeing. The implications of this multidimensional understanding of pain for assessment and treatment are discussed, emphasising that traditional treatments and use of broad coping strategies address the multidimensional aspects of pain.

Studies described how Māori considered pain a multidimensional holistic experience, not merely a physical sensation.<sup>10-13,15</sup> Spiritual and cultural factors, thoughts and emotions held in the body, whānau relationships, environmental factors and historic events were all noted to influence pain. For example, for kaumātua “*there was little distinction between physical and other kinds of pain*” and “*pain was sometimes seen as a manifestation*

*of emotional or mental trauma.*”<sup>15</sup> The multi-dimensional factors influencing pain were not seen as distinct but highly intertwined. For example, the grief of losing loved ones, hurtful relationships, trauma or violence and breaches of tikanga influenced pain via effects on taha wairua, whānau and hinengaro.

Pain was described as intergenerational. Intergenerational mamae was associated with the historic loss of whenua, te reo Māori and connection to one’s whakapapa. The term “*embodied historical trauma*” was used to describe the way in which the trauma experienced by one’s ancestors influences parenting, childhood and adult experiences, and becomes embedded in people’s lives and bodies, thus influencing the pain they experience throughout life.<sup>10</sup>

Studies found that pain may disrupt many dimensions of life and wellbeing. Examples of pain impacting work and social activities, engagement with cultural activities and whānau relationships were evident. These contributed to loss of mana, identity and sense of belonging. For example, McGruer et al.<sup>14</sup> explained “*In some cases, pain precluded participants from carrying out required tasks at the marae, such as kaikaranga, custodian and kitchen duties. Some participants had stopped attending their marae as a consequence.*” Pain was noted to contribute to feelings of whakamā and affect relationships, as individuals required support from whānau but did not wish to burden those around them. Studies also identified that pain could cause feelings of frustration, powerlessness and low self-worth, which impacted taha hinengaro. Thus, not only did multidimensional factors contribute to pain, but pain caused significant disruption to many aspects of life.

The multidimensional understanding of pain was also reflected in the holistic nature of traditional pain treatments and positive coping strategies that were reported. McGavock described how “*Experiences with complementary and alternative medicine [including rongoā Māori] were described as useful for general wellbeing, treating the person as a whole, and treating not just physical but psychological, emotional and spiritual aspects of living with chronic pain.*”<sup>13</sup> One participant described the broad benefits of traditional mirimiri: “*She felt awesome, because it didn’t just mirimiri her tinana [body], but her wairua [spirit] as well, and hinengaro [mind]. She just felt really, really good.*”<sup>11</sup> Many traditional treatments address multiple components of the pain experience simultaneously. For example, rongoā includes spiritual components, caring relationships and elements of nature along with a physical intervention. The broad range of positive coping strategies to manage pain reported further emphasised its multidimensional nature for Māori. Participants described the benefits of karakia and kōrero to strengthen connections with the spiritual realm and people, the use of exercise and regular movement such as music, laughter and dance, the use of natural elements including heat and wai, as well as a positive attitude and acceptance of pain. These demonstrate not only a strong resilience, or a “*kei te pai attitude*” towards pain,<sup>13</sup> but also an understanding of the multiple approaches necessary to manage pain. Finally, several studies also described how pain assessment tools need to be multidimensional.

McGavock noted that pain scales are inadequate and kaumātua indicated that broader models of health need to be included in pain measures.<sup>12,13</sup>

### ***Theme two: a responsibility—respectful tikanga-informed care***

Theme two describes the negative experiences of participants in healthcare and pain settings and the need for these settings to take responsibility for ensuring anti-racist approaches. The theme highlights the importance of establishing meaningful therapeutic relationships through whakawhanaungatanga, manaakitanga and practising tikanga-informed care in order to be mana-enhancing.

Studies demonstrated how current practices in healthcare and specialist pain settings can lead to a loss of mana and experiences of discrimination and racism. A participant said, “*Just because you’re brown right, they think you’re dumb*”; “*Don’t treat me ... like I’m a dumb Māori, or some hypochondriac who’s been Googling diseases I think I have?*”<sup>13</sup> describing how Māori may feel disrespected or disbelieved by healthcare professionals. Studies also explained how system gatekeeping may occur, preventing Māori from having access to optimal pain treatments. For example, kaiāwhina “*unanimously reported that, to their knowledge, primary healthcare providers were not referring whānau Māori to pain management services*”.<sup>11</sup> One participant explained this further,<sup>13</sup> stating “*A doctor will think, ‘I won’t refer them on to a specialist because they won’t turn up to the appointment, you know, why should I bother my time with this type of person’, it’s those type of perceptions on access as well.*” The studies also acknowledged the complexity of access and historical experiences of insensitive care or mistreatment likely influenced engagement in health services for pain.

Alongside common effective clinician practices, the studies reported that whakawhanaungatanga (building connection) is essential for establishing a therapeutic relationship and promoting better outcomes for Māori. Kaumātua said that “*Within therapeutic relationships, aroha/compassion, listening, and connecting were key to healing.*”<sup>15</sup> Taking time to listen to whānau about their concerns and build a therapeutic relationship was spoken about by kaiāwhina,<sup>11</sup> who explained, “*It was vital to spend the time needed and listen to whānau to get a complete understanding of their health situation.*”

Mana-enhancing care was more likely to be achieved when clinicians practised tikanga. Tikanga-informed care provided a safe space for

patients to heal, as Baker explained: *“Findings suggest that collective whānau values, respect for tapu and the use of karakia keep participants safe.”*<sup>10</sup> Such practices may create a space for patients to maintain and assert their Māori identity, which was identified as an important part of pain management: *“Processes that restore Māori identity and ways of being and knowing may be crucial to addressing the long-term pain.”*<sup>10</sup> Environments that support whānau to express themselves openly were lacking. For example, Magnusson and Fennell stated *“Māori were reluctant to disclose their health worries in doctor–patient interactions as these settings were often found to be inhospitable or insensitive of cultural practices.”*<sup>12</sup> This study discussed several points of culturally appropriate practices that are mana-enhancing, including: involving whānau in treatment, using whānau or nominated cultural advisors as health advocates and ensuring seating arrangements do not limit whānau presence in appointments. Several other studies also described the importance of whānau-centred care, reflecting the collectivist view of Māori that prioritises the wellbeing of the whānau.<sup>10,11,14</sup> Overall, using tikanga practices in care is essential for Māori experiencing pain.

### **Theme three: tino rangatiratanga—a desire for knowledge, choice and autonomy in pain management**

Theme three describes participants’ desire for knowledge to further understand pain, as well as a desire and ability to make their own treatment choices.

Across several studies, whānau actively expressed a desire to learn why pain occurs and how services support people in pain. McGruer et al. found that *“Almost all participants felt that more education on the condition and available treatments was needed.”*<sup>14</sup> Similarly, a desire to discuss factors contributing to the pain experience was noted by Awatere: *“I would like to talk to someone about my joint pain: what is causing it? I would also like to talk to someone, especially about my diet. I wonder if I should be taking anything special for my knee, it’s so frustrating I’ve spent a fortune visiting the doctor and still don’t bloody know what the arthritis [osteoarthritis] actually is.”*<sup>9</sup> Inherent was the idea that once a person understands their pain and the factors that may influence it, they are empowered to manage it.

This empowerment was viewed as very important. Studies reported that whānau wanted tino rangatiratanga by making their own health

decisions, choosing their pain treatment pathways and identifying their own solutions for pain. Kaumātua described *“rejecting Western medicines due to side-effects and ineffectiveness, and utilising rongoā/traditional medicine or other strategies.”*<sup>15</sup> Additionally, a kaumātua stated *“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.”*<sup>15</sup> Some studies indicated that Māori may value using Western healthcare for certain aspects of treatment, e.g., medical certificates and blood tests, while also engaging in more holistic therapies for healing. This choice should be respected and supported, and patients should be encouraged to make choices based on what is best for their whānau.

Linked to this, studies indicated that Māori may approach pain with considerable autonomy, mana and personal strength. They may, therefore, be stoical and choose not to complain about pain and not to burden others. Stoicism may reflect the influence of whakapapa on pain. One participant described *“I come from a long line of strong women. Yeah, I think that has everything to do with it, everything to do with the way I was brought up ... The women run everything in my family, not the men. We just put up with it.”*<sup>14</sup> Pain was understood as something that is commonly endured, and this stoical approach can be empowering to move forward with pain. For example, *“Delia described stoicism as a way of ‘trying to grab some self-worth back from the powerlessness imposed on her by chronic pain.’”*<sup>13</sup> Studies noted that stoicism may prevent Māori from engaging in health services and receiving support. However, if participants had sufficient knowledge to confidently manage their pain independently, stoicism was associated with positive aspects of resilience.

## **Kōrero, Discussion**

This review found that a truly holistic view of pain is needed to understand, treat, and āwhi whānau Māori choices in pain management. Certain clinician characteristics, including a deep understanding and practice of tikanga and fostering manaakitanga by building connections with the patient and whānau, and certain service characteristics, including anti-racist approaches and offering Te Ao Māori based treatments, are required for effective pain management outcomes for Māori.

The finding from theme one that Māori experience pain as multidimensional is also

reported in cancer pain,<sup>20</sup> and likely reflects the holistic perspective Māori have on health more broadly.<sup>21,22</sup> Although chronic pain services may include multidisciplinary teams and be less biomedically oriented than other health services, they may still not adequately acknowledge the holistic nature of pain for Māori. For example, spiritual and social/whānau factors may receive little attention compared to medical or individual psychological factors. This also pertains to pain assessment, as a literature review of the standardised pain assessment tools currently used in Aotearoa New Zealand pain services was unable to identify any that capture Māori experiences of pain.<sup>4</sup> It ensues that pain may not be screened or assessed appropriately, leading to inequitable opportunities for treatment. Recent work has provided initial validation of a verbal and visual tool as a culturally appropriate and meaningful assessment instrument for Māori experiencing chronic pain,<sup>23</sup> and also supports recent adaptations to traditional pain management programmes and resources.<sup>24</sup> In other areas of health, culturally appropriate measures that have been designed for Māori include Hua Oranga (a measure of mental health outcomes),<sup>25</sup> Te Waka Kuaka (a needs assessment tool for traumatic brain injury)<sup>26</sup> and Mahi Oranga (a measure of occupational health).<sup>27</sup> Therefore, future research and funding should support the ongoing development of culturally appropriate and holistic pain assessment tools and treatments or work on adapting other relevant measures to be pain focussed.

Consistent with theme two, studies have found that respectful, tikanga-informed care can lead to better clinical outcomes.<sup>28</sup> For example, research on human papillomavirus (HPV) screening for Māori women found that a culturally competent introduction of HPV self-testing resulted in a greater willingness for screening and follow-up.<sup>29</sup> Other research has revealed that whānau Māori find it difficult to be involved in their healthcare more generally and attributed this to the discrimination and related fatigue Māori have from previous healthcare engagements.<sup>30</sup> The findings in this review and wider literature confirm that health providers urgently need to take responsibility for anti-racist services,<sup>16</sup> to ensure that Māori are referred to services appropriately, that gatekeeping and barriers to access services are removed and that Māori are welcomed with manaakitanga and supported by tikanga-informed practices.<sup>16,28</sup> One established approach clinicians can use is the hui process.<sup>31</sup>

This process steps through four stages (mihi, whakawhanaungatanga, kaupapa and poroporoaki) and aims to promote mana-enhancing care through improved clinician cultural competency. Table 3 also provides some examples of how pain services and clinicians could implement the findings from the current study. To facilitate the incorporation of tikanga-informed care into practice, monetary incentives could be implemented. For example, clinic funding could be dependent on practising respectful and tikanga-informed care. Incorporation of such practices would facilitate health service delivery that is responsible to governing documents such as Pae Tū.<sup>2</sup>

Theme three revealed that whānau Māori actively wanted more information about pain and desired an active role in their treatment planning. Our findings indicate that facilitating tino rangatiratanga, or self-determination over one's own health decisions, should be a major focus for pain services. This could be achieved by incorporating the highly multidimensional view of pain, listening to preferences for treatment and promoting a range of treatment options, including traditional ones. Given the inherent holistic nature of rongoā Māori and its ability to make use of cultural strengths, we encourage open discussion for such options alongside Western approaches. It is possible that traditional Māori treatments are incorporated into mainstream pain services, or that pain services refer to local providers for elements of traditional Māori healthcare depending on the local situation and availability of providers. Additionally, pain clinicians could work in a supportive role with services whānau Māori are already actively engaged with. This would aim to āwhi both clinician and patient pain knowledge and would allow whānau Māori to make informed decisions about their own treatments and pain management strategies. Linked to this need for autonomy and self-determination, theme three also emphasised that Māori approach pain with mana and therefore may be reluctant to express pain to others. This stoical approach means that Māori may underreport pain, especially outside of trusted relationships. Therefore, clinicians need to gain trust prior to assessing pain, take pain reports seriously and ensure that the mana of patients is upheld throughout the process, in keeping with Pae Tū/Pae Ora strategies.

### Strengths and limitations

This review synthesised existing literature on pain experiences for Māori to inform more

**Table 3:** Clinical recommendations based on review findings.

| Theme                                                                                  | Clinical recommendations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. A multidimensional view of pain and pain management                                 | <p>Use culturally appropriate pain assessment tools that explore the physical, emotional, spiritual and social aspects of pain experience.</p> <p>Provide treatments that address the multidimensional (e.g., emotional, social and spiritual) aspects of the pain experience.</p> <p>Provide appropriate access to traditional Māori therapies (e.g., Rongoā).</p>                                                                                                                                                                                |
| 2. A responsibility: respectful tikanga-informed care                                  | <p>Identify and remove barriers to referral and attendance at pain services. Establish links and inform possible referrers about pain services.</p> <p>Welcome patients with manaakitanga and use whakawhanaungatanga and/or the hui process (mihi, whakawhanaungatanga, kaupapa and poroporoaki) to build relationships.</p> <p>Incorporate tikanga into clinical practice (e.g., karakia, use of te reo Māori, respect tapu/noa, manaakitanga, provision of kai, welcoming whānau, recognising patient/whānau strengths and enhancing mana).</p> |
| 3. Tino rangatiratanga: a desire for knowledge, choice and autonomy in pain management | <p>Develop and provide culturally appropriate and empowering pain education resources/strategies.</p> <p>Provide patients and whānau with treatment options to empower autonomy in treatment decisions.</p> <p>Respect stoicism and mana by taking patients' pain reports seriously, be aware of underreporting of pain.</p>                                                                                                                                                                                                                       |

equitable delivery of pain management. One limitation is that the review used a colonial process to tell Indigenous stories. Systematic reviews are considered to be high-quality evidence and we followed published guidelines;<sup>18</sup> however, these processes evolved from Western world views and may not be appropriate for synthesising mātauranga Māori. Therefore, we incorporated tikanga into our research process. All five authors worked cohesively to understand and synthesise the information in a mana-enhancing approach. The strengths of this review are the thorough search strategy, use of multiple coders and all five authors' involvement in analysis and construction

of themes. Additionally, the study included a mix of authors with clinical and research experience related to pain, and the inclusion of several unpublished documents that provided meaningful information and were previously not reported in the published literature.

## Conclusion

Health services need to understand and respect multidimensional aspects of pain, minimise racism and discrimination, use manaakitanga and tikanga-informed practices and provide culturally inclusive information to support tino rangatiratanga for pain management for Māori.

**COMPETING INTERESTS**

All authors declare that they have no competing interests.

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## Appendix

**Appendix Table 1:** Kuputaka Māori, glossary of te reo Māori terms.

| Te Reo Māori          | English                                                          |
|-----------------------|------------------------------------------------------------------|
| Aotearoa              | New Zealand                                                      |
| Āwhi                  | Support, surround, embrace                                       |
| Kaiāwhina             | Māori community health workers                                   |
| Kaikaranga            | Caller—the woman/women who make the ceremonial call onto a marae |
| Karakia               | Prayer, blessing                                                 |
| Kaumātua              | Elder, a person of status within the whānau, hapū and iwi        |
| Kaupapa Māori         | Māori approach and research methodology                          |
| Kei te pai            | I'm fine/good                                                    |
| Kōrero                | Discussion, conversation                                         |
| Mamae                 | Ache, pain, injury, wound                                        |
| Mana                  | Status, spiritual power, prestige                                |
| Marae                 | A traditional Māori meeting place                                |
| Mātauranga Māori      | Traditional Māori knowledge                                      |
| Mirimiri              | Traditional Māori massage holistic therapy                       |
| Ngā Hua               | Results                                                          |
| Ngā Tapuwae           | Method                                                           |
| Pae Ora               | Healthy Futures health strategies for New Zealand                |
| Pae Tū                | Hauora Māori Strategy (Māori Health Strategy)                    |
| Romiromi              | Traditional Māori massage holistic therapy                       |
| Rongoā                | Natural remedy, traditional treatment, Māori medicine            |
| Taha hingengaro       | Mental and emotional wellbeing                                   |
| Te Ao Māori           | Māori world                                                      |
| Te Reo Māori          | Māori language                                                   |
| Te Tiriti o Waitangi  | The Treaty of Waitangi                                           |
| Te Whatu Ora          | Health New Zealand (Health Authority)                            |
| Tinana                | Body                                                             |
| Tino rangatiratanga   | Self-determination, sovereignty, autonomy                        |
| Tuhinga Whakarāpopoto | Introduction                                                     |

**Appendix Table 1 (continued):** Kuputaka Māori, glossary of te reo Māori terms.

|                     |                                                                |
|---------------------|----------------------------------------------------------------|
| Wai                 | Water                                                          |
| Wairua              | Spirit, soul                                                   |
| Whakamā             | Shame, embarrassment                                           |
| Whakapapa           | Genealogy                                                      |
| Whakawhanaungatanga | Process of establishing relationships, relating well to others |
| Whakatakinga        | Introduction                                                   |
| Whānau              | Extended family, family group                                  |
| Whenua              | Land                                                           |