# He Kākano Ahau: Exploring Everyday Engagement with Rongoā Māori and Well-Being

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# Abstract

Rongoā Māori is a holistic healing system based on traditional Māori beliefs and values. Although New Zealanders use rongoā to tend to health and well-being, it extends beyond this as a way of living in balance and connection to the world. Research about rongoā Māori has increased in recent years. However, the perspectives and voices of those who utilise rongoā Māori practices are currently limited in the literature. In addition, there is a lack of research into how New Zealanders utilise rongoā Māori practices in their everyday lives and the contribution of rongoā engagement to well-being. The current study explored the relationship between rongoā Māori engagement and dimensions of well-being as encompassed by Te Whare Tapa Whā. Two hundred and seventy-four participants took part in an online questionnaire that measured physical, psychological, social, and spiritual well-being and included open-ended questions for participants to provide their perspectives. The findings indicate that rongoā Māori engagement contributes to improved hauora, with significant findings for psychological, social, and spiritual dimensions of well-being. In particular, the relationship between rongoā Māori engagement and spiritual well-being was prominent and highly significant. This study also illustrated the significance that rongoā Māori has to the lives of New Zealanders beyond these aspects of well-being, contributing to enhanced connections to the natural world and cultural identity. These findings contribute to the sparse literature on rongoā Māori engagement and well-being and promote a holistic preventative approach to health and well-being in Aotearoa New Zealand.

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*Kāhore taku toa i te toa takitihi, he toa takitini.*

We cannot succeed without the support of those around us (Māori proverb).

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# Glossary

This glossary provides translations of te reo Māori terms used within this study based on the context of this research. They are by no means intended to be exhaustive or definitive, as there are variations in translations, understandings and meanings across different contexts and iwi.

| | |
|---|---|
| Ahi kā | local residence |
| Aotearoa | New Zealand |
| Atua | spiritual entities, deity, God(s) |
| Awa | river |
| Hā | breath, essence |
| Hapū | subtribe |
| Hauora | well-being |
| Hīkoi | walk, journey |
| Hinemoana | female atua of the sea |
| Hinengaro | mind, thought |
| Hua Parakore | a kaupapa Māori system for growing kai |
| Inu | drink |
| Iwi | tribe |
| Kai | food |
| Kaiako | teacher |
| Kaitiaki | guardian |
| Kaitiakitanga | guardianship |
| Kākano | seeds |
| Kanohi ki te kanohi | face to face |
| Karakia | incantation, prayer |
| Kaumātua | adult, elder |
| Kaupapa | principle, purpose |
| Koha | gift, offering, contribution |
| Kuia | female elder |
| Kura | school |

| | |
|---|---|
| Mahi | work |
| Mamae | pain, injury, hurt |
| Mana | prestige, authority, status |
| Manaakitanga | to support, take care of |
| Māoritanga | Māori culture, practices, and beliefs |
| Marae | meeting place of hapū, iwi, and whānau |
| Marama | moon |
| Maramataka | Māori lunar calendar |
| Matakite | second sight, seer, clairvoyance |
| Mātauranga | knowledge |
| Mātauranga Māori | Māori knowledge |
| Mauri | life force, life essence |
| Mirimiri | soft tissue bodywork |
| Moana | sea, ocean |
| Mokopuna | grandchildren |
| Ngahere | forest |
| Noa | common, ordinary, unrestricted, free from tapu |
| Pākehā | New Zealander of European descent |
| Pani/panipani | cream, balm |
| Papatūānuku | Mother Earth |
| Pepeha | a way of introducing oneself |
| Pūrākau | story, myth, legend |
| Purepure | healing ceremony in the sea, rivers, or mountains |
| Rākau | tree, plant |
| Ranginui | Sky Father |
| Rangatahi | youth |
| Raranga | weaving |
| Ritenga | ritual, customary practice |
| Rohe | region |
| Romiromi | deep tissue bodywork |

| | |
|---|---|
| Rongoā Māori | Māori systems of healing |
| Rongoā rākau | plant medicines/remedies |
| Taiao | natural world, environment, nature |
| Tāne Mahuta | atua of the forests and birds |
| Tangaroa | atua of the sea and fish |
| Tāngata | people |
| Tāngata whenua | people of the land |
| Taonga | treasure, treasured possession |
| Taonga pūoro | musical instrument |
| Taonga tuku iho | treasure passed down from ancestors |
| Tapu | sacred, prohibited, restricted |
| Te ao Māori | the Māori world/worldview |
| Te reo Māori | the Māori language |
| Te taha hinengaro | the emotional/mental/psychological dimension |
| Te taha tinana | the physical dimension |
| Te taha wairua | the spiritual dimension |
| Te taha whānau | the family/social dimension |
| Te Tiriti o Waitangi | the Treaty of Waitangi |
| Te Whare Tapa Whā | Māori health model of the four-sided house |
| Tika | right correct |
| Tikanga | customs, values, protocols |
| Tinana | physical body |
| Tino rangatiratanga | self-determination, sovereignty, autonomy |
| Tohunga | a skilled person, expert, specialist |
| Tuakana | elder relationship |
| Tūpuna/tīpuna | ancestors |
| Tūrangawaewae | place of standing/belonging |
| Wai | water |
| Wai rākau | tonic, decoction |
| Wairua | spirit |

| | |
|---|---|
| Wairuatanga | spirituality |
| Wānanga | deliberate, consider, seminar |
| Whakaaro | thought, opinion, understanding |
| Whakapapa | genealogy, the relatedness of everything |
| Whakapiripiri | poultice |
| Whakataukī | proverb, significant saying |
| Whānau | family |
| Whenua | land, placenta |
| Whitiwhiti kōrero | discussions |

# Table of Contents

# List of Tables

# Research Background

In many ways, this research was inspired by my journey through life thus far. Like many New Zealanders, I have a multi-cultural background with ancestors from around the world – Aotearoa, China, Czech Republic, England, Scotland, and Ireland. I am of Ngāti Pūkenga descent but was born and raised in Whanganui. I grew up relatively disconnected from any particular cultural identity alongside my whakapapa, resulting in prevalent feelings of 'not being Māori enough' and not knowing where I belonged. However, this has and continues to change. My cultural identity and feelings of belonging continue to grow with me over time. Together with my studies at Massey University, I have worked in customer service and student relations and, for the past two years, as a mentor/youth worker at a Kaupapa Māori community organisation. My life experiences and both Māori and Pākehā cultures now influence my worldview.

Initially, rongoā Māori was something I stumbled upon within my interest and passion for herbal remedies and gardening, and it has quite literally changed my life. While I am still at the beginning of my journey, rongoā has enabled me to grow in terms of my cultural identity and sense of belonging in this world. It has strengthened my connection to te taiao (the natural environment) and has provided a renewed understanding and outlook on life. As a child, I always had a passion and connection with te taiao. However, as I grew older, I truly embraced this interest and connection and developed it further. The more I delved into herbalism and rongoā rākau (plant remedies), the more surprised I became that I had not been exposed to this mātauranga (knowledge) earlier. This mātauranga of plants and what they and Papatūānuku (Mother Earth) provide for us made so much sense to me. It made even more sense when I discovered that my Great-grandmother Erana utilised rongoā rākau within our whānau.

My experiences of learning about and engaging with rongoā Māori, including attending wānanga, receiving healing from practitioners, and personal engagement, have enabled me to gain a deeper understanding of rongoā. This understanding was helpful for this study but also indicated that it was essential to uphold reflexivity throughout the process. Despite these experiences and my genuine intentions and reverence towards rongoā Māori, the feelings of not being Māori enough remain present. These feelings have hindered my confidence in carrying out this research and presenting its findings, primarily out of fear of what others may think. While these feelings may linger, the reassurance that I am on the right path that I have

received from my tūpuna (ancestors) during the research process has helped to give me the strength to continue and see this work through.

While this research explores the relationship between everyday engagement with rongoā Māori practices and well-being, it also hopes to highlight that rongoā has the potential to contribute to our lives beyond specific health needs. It hopes to introduce rongoā Māori to those who may not be familiar with it, to share the benefits it can bring and perhaps encourage others to embark on their own rongoā journey.

# Chapter One: Introduction

*Mā te rongo, ka mōhio*

*Mā te mōhio ka mārama*

*Ma te mārama, ka mātau*

*Ma te mātau, ka ora*

Through listening comes awareness,

Through awareness comes understanding,

Through understanding comes knowledge,

Through knowledge comes life and well-being

(Māori proverb).

Traditional and Indigenous healing systems have been utilised throughout human history to oversee and maintain the health and well-being of communities worldwide. These holistic healing systems and the Indigenous knowledges that they are based on have faced many challenges alongside colonial processes, including appropriation, exploitation, delegitimization, lack of acceptance, oppression, stigmatisation, and suppression (Absolon, 2010; Ahuriri-Driscoll, 2014; Durie et al., 1993; Mark et al., 2019; Robbins & Dewar, 2011; Shava, 2019; Smith, 1999; Smith et al., 2016; Waitangi Tribunal, 2011; Wikaire, 2020). Despite these adversities that have occurred and prevailed to varying extents, Indigenous knowledges and healing systems have endured, with elements of these healing systems continuing to be utilised in contemporary society to tend to health and well-being needs (Robbins & Dewar, 2011).

In Aotearoa New Zealand, rongoā Māori is a holistic healing system underpinned by traditional Māori beliefs, philosophies, and values (Ahuriri-Driscoll et al., 2008; Mark et al., 2017). Rongoā Māori encompasses many modalities of healing practices and is also described as a way of life and belonging to the world (Boulton et al., 2014; Hakaraia, 2019; Kerridge, 2020). Despite the marginalisation of this healing system due to colonisation and subsequent adversities resulting in loss of knowledge, rongoā Māori remains in use today and, in recent decades, has experienced increased interest and recognition (Boulton et al., 2014; World Health Organisation, 2019). However, these adversities and consequences of colonialism have

resulted in diverse realities for Māori, including regarding access to knowledge and use of rongoā Māori. While there is growing research on rongoā, particularly from the perspectives of healers and practitioners and regarding its potential collaboration with the mainstream health system, further research into the engagement with rongoā Māori among New Zealanders is necessary.

Research has highlighted lower health outcomes and health inequities for Indigenous groups worldwide (Anderson et al., 2016). Within Aotearoa New Zealand, Māori consistently experience health inequities, including inequitable health outcomes compared to non-Māori (Waitangi Tribunal, 2019; Whānau Ora, 2019; Wilson et al., 2019). Rongoā Māori has the potential to improve Aotearoa New Zealand's healthcare system through the promotion of holistic well-being and contribute to health gains for Māori as well as support increased tino rangatiratanga (self-determination) (Ahuriri-Driscoll et al., 2008; Gemmell, 2020; Jones, 2000b, 2000c; Wikaire, 2020). Therefore, the potential of rongoā highlights the important role it could and should have within Aotearoa New Zealand.

**Research Aims**

Considering the poor state of Māori health in Aotearoa New Zealand and the potential of rongoā Māori to contribute to improved health and well-being outcomes for both Māori and non-Māori (Ahuriri-Driscoll et al., 2008; Kerridge, 2020), it is logical to explore this relationship. Previous research highlighting rongoā's contribution to well-being has focused on the perspectives of rongoā Māori healers and practitioners (e.g., Ahuriri-Driscoll et al., 2008; Ahuriri-Driscoll et al., 2012; Gemmell, 2020; Jones, 2000b; Mark & Lyons, 2010). Research centred on New Zealanders' everyday engagement with rongoā remains sparse alongside that which explores the well-being contributions of this engagement. Additionally, the perspectives and voices of those who utilise rongoā Māori practices are currently limited in the literature. This research aims to investigate the relationship between everyday engagement with rongoā Māori practices and physical, psychological, social, and spiritual dimensions of well-being. Two ancillary aims of this study are to explore how rongoā Māori is incorporated into everyday life together with barriers and facilitators to this incorporation and to explore participants' aspirations for the future of rongoā Māori. This study hopes to provide insights on the everyday engagement in rongoā practices among New Zealanders from their own perspectives that are currently missing from the literature.

This research is an exploratory study conducted to address the research questions listed below:

1. Is there a relationship between engagement in rongoā Māori practices and enhanced physical well-being?
2. Is there a relationship between engagement in rongoā Māori practices and enhanced spiritual well-being?
3. Is there a relationship between engagement in rongoā Māori practices and enhanced psychological well-being?
4. Is there a relationship between engagement in rongoā Māori practices and enhanced social well-being?
5. How is rongoā Māori incorporated as part of everyday life?
6. How does everyday engagement with rongoā Māori contribute to well-being?
7. What factors enable or inhibit the use of rongoā Māori at home, and how can these barriers be addressed?
8. What are participants' aspirations for the future of rongoā?

**Structure of Thesis**

Chapter one introduces and provides a rationale for the current study. Next, the study's aims are presented, followed by an outline of each chapter.

Chapter two provides a literature review encompassing Indigenous knowledge systems, te ao Māori, the sociohistorical context of rongoā Māori, rongoā Māori today, Māori health, and healthcare in Aotearoa New Zealand. The potential of rongoā Māori as exemplified by previous research, is also provided, followed by an overview of the current study.

Chapter three details the methodology of the study. An online self-administered survey including quantitative scales and open-ended questions was utilised to measure well-being variables and explore participants' experiences and engagement with rongoā Māori practices. Ethical considerations, the research approach, participants, procedures, measures, and an analysis outline are presented.

Chapter four provides the quantitative findings of the study. First, results between selected demographic variables, frequency of rongoā Māori use, and the well-being measures are presented. Four of the research questions are then addressed relating to the findings.

Chapter five outlines the ancillary qualitative findings from the thematic analysis. Each overarching theme and its related subthemes are then described.

Chapter six provides a discussion of the current study's findings in relation to the existing literature on rongoā Māori. The current study’s limitations are then outlined as well as suggestions for future research. Concluding comments are then presented.

# Chapter Two: Literature Review

This chapter will provide a brief overview of Indigenous knowledge systems more generally before exploring mātauranga Māori and the sociohistorical context of rongoā Māori. Next, an overview of rongoā Māori is given, followed by a discussion of the current role of rongoā within Aotearoa New Zealand. The status of Māori health and Māori understandings of well-being will also be outlined. Lastly, the potential of rongoā Māori, as exemplified by previous research, precedes an overview of the current study.

## Indigenous Knowledge Systems

Around the world, Indigenous peoples have developed intricate knowledge systems that influence their beliefs and worldviews. Some commonalities exist between Indigenous knowledges and beliefs despite the diversity among Indigenous populations. Indigenous knowledges are described as holistic, demonstrating the relational and interconnected nature of the world in which we live (Absolon, 2010; Royal, 2005; Shava, 2019). This inherent interconnectedness includes all beings, human and non-human, the natural world, the spirit world, and ancestors and extends "… across time and space, with relationships between past, present, and future entities" (Walters et al., 2020, p. 4). These beliefs and knowledge systems shape Indigenous ways of living, reflecting Indigenous ways of knowing, being and doing, and relating to every facet of life (Martin & Mirraboopa, 2003; Shava, 2019).

The relational nature of Indigenous worldviews emphasises an innate connection to the natural environment and the land on which we live. Indigenous peoples consider themselves part of the natural world; this ideology underpins their profound connection with the environment and the importance of living sustainably and in harmony with the land (Royal, 2005; Shava, 2019). This bond creates a degree of oneness wherein the condition and health of the natural environment are connected to that of the people who inhabit it, either explicitly or implicitly (Robbins & Dewar, 2011; Shava, 2019). Prompting the consideration that, to some extent, the deterioration observed in the natural world is a reflection or result of the imbalance within today's society (Royal, 2005). Indigenous peoples view the natural environment as a teacher from which humankind can learn (Absolon, 2010; Royal, 2005), which directly contrasts with capitalistic Western attitudes that advocate dominion over the environment as an economic

resource (Shava, 2019). Interactions and relationships with the environment help to shape and inform Indigenous knowledges (Durie, 2004, 2005; Shava, 2019). Consequently, Indigenous knowledges differ according to the areas in which they were formed, although some aspects of knowledge are transferable across contexts (Shava, 2019). This bond with the environment is therefore central to Indigenous knowledges and ways of living, generating a way of being that is more in tune with the world.

Globally, Indigenous cultures adopt holistic approaches to health, well-being, and healing. These approaches often incorporate physical, mental, emotional, spiritual, and family well-being as well as social and environmental factors, each equally essential to support and sustain overall health and well-being (Durie, 2004; Mark & Lyons, 2010; World Health Organisation, 2019). Mark and Lyons (2010) highlighted how many include particular emphasis on the interconnectedness of the mind, body, and spirit. Indigenous healing systems developed from generations of revered observance of cultural values, practices, and traditions that have demonstrated the ability to improve personal, communal, and environmental well-being through continued use over time (Mark et al., 2019). Indigenous knowledges essentially serve as the foundation for traditional healing and health-related decisions (Walters et al., 2020). Aspects of traditional healing systems of Indigenous peoples continue to be utilised to address health and well-being issues despite prevailing difficulties that prevent Indigenous knowledges and healing practices from reaching their potential in contemporary society (Robbins & Dewar, 2011). One of the key difficulties is that Indigenous knowledges are commonly devalued and regarded as having insufficient empirical scientific validity despite these knowledges being accumulated throughout centuries of observation, experimentation, and experiences (Smith et al., 2016; Wilson et al., 2019). This difficulty stems from the divergent philosophical underpinnings of Indigenous knowledges and Western science, which has developed to dominate global knowledge (Durie, 2005). Western science and research are based on empiricism and positivism, emphasising the importance of scientific methodology and objective measurement as key to the validity of knowledge and understanding (Durie, 2005; Smith, 1999). Traditional healing practices remind Indigenous peoples of the importance “of who we are, where we come from and what we know” (Absolon, 2010, p. 81). This reminder helps to reconnect Indigenous peoples with their cultural identity, strengthening a sense of belonging and connection to the world.

Indigenous knowledges are collective bodies of knowledge that have endured and developed over time. Despite conceptions that Indigenous knowledges represent the historical realities of

Indigenous peoples and apply solely to the past, these knowledges have been passed down through generations whilst adapting to contemporary settings to remain applicable, relevant, and meaningful (Durie, 2005; Shava, 2019; Smith et al., 2016). Indigenous peoples, communities and their knowledges are experiencing a revitalisation. Through reaffirming the significance of Indigenous knowledges and history, as well as challenging and deconstructing oppressive colonial systems, Indigenous worldviews and knowledges are re-emerging and continuing (Absolon, 2010). These knowledge systems remain in use to empower, support, and sustain Indigenous communities and individuals in healing from the intergenerational trauma experienced due to colonialism (Robbins & Dewar, 2011; Walters et al., 2020), as well as adapting to and dealing with the complex state of modern society (Shava, 2019). As Royal (2005) described, "the revitalisation of traditional knowledge is as much about understanding our future as it is about our past" (p. 4).

**Te Ao Māori**

In accordance with other Indigenous cultures, traditional Māori society was embedded in a holistic worldview known as te ao Māori, bound together by whakapapa, and guided by collectivist practices (Bennett & Liu, 2018). Several key concepts are fundamental to te ao Māori. This section will briefly describe some essential concepts of the current study. Whakapapa is a network of interrelatedness that is a fundamental component of te ao Māori (Ratima et al., 2015). Although frequently interpreted as genealogy, whakapapa includes relationships beyond whānau, hapū, and iwi ties to include the physical and metaphysical world (Ratima et al., 2015; Wikaire, 2020; Wilson et al., 2019). It allows individuals to see themselves as belonging to a relational system and, therefore, helps them to understand their identity and place in this world. Whakapapa also offers a moral foundation for the principles and practice of kaitiakitanga (guardianship) (Roberts, 2012). Kaitiakitanga is often used to refer to the guardianship, protection, and preservation of the natural world and its resources, although it is also used more broadly beyond this context. Individuals or collectives can assume the role of kaitiaki (guardian) to protect traditional knowledge for future generations (Kuntz et al., 2014).

Wairua has a central role in te ao Māori and is generally used to refer to spiritual aspects of life. While wairua is intrinsically essential to Māori ways of being, it is widely recognised that a precise definition is practically impossible (Valentine et al., 2017). Wairua is generally characterised as intangible and subjective yet can be experienced, sensed, and felt; it is also relational and connected to the wider environment (Ahuriri-Driscoll, 2014; Valentine et al.,

2017). It has been described as the world of connection to all in existence, including those before us (Kerridge, 2020). Māori have long recognised wairua as essential to health and well-being. Given the subjective nature of wairua, which is difficult to define and measure, it is challenging to research it within the prevailing Western positivist paradigm that emphasises the importance of empirical evidence (Durie, 2005). However, this does not imply that wairua should be disregarded within research despite these inherent difficulties. Instead, it highlights the importance of investigating wairua in a way that upholds its value and is conducive to understanding and representing wairua from a te ao Māori perspective rather than attempting to impose Western scientific criteria that are incapable of this.

Another key concept in te ao Māori is mauri, which refers to life force or life essence. Everything has a mauri, both the animate and inanimate, including humans, animals, plants, landscapes, carvings, and houses (McGowan, 2014; Smith, 1999). Mauri is what binds the physical and spiritual and gives us life; it is vital to leading a well-balanced, sustainable, and healthy lifestyle (Kerridge, 2012; Mark et al., 2019; McGowan, 2014). Many factors can contribute to a mauri being dimmed or strengthened, such as nourishing the hinengaro, tinana, and wairua, or disrespecting oneself, others, or the land (Kerridge, 2012). Diminished mauri can lead to imbalances and, consequently, ill health. Similarly to wairua, mauri can be characterised as subjective yet able to be sensed and felt, leading to the same intrinsic challenges to researching mauri from within a positivist paradigm as those discussed above concerning wairua. Again, this does not mean that mauri should not be investigated. Instead, research must be conducted in a manner that upholds respect for te ao Māori and does not devalue nor lead to misrepresentation of the essence of mauri.

Tapu and noa are also fundamental concepts in te ao Māori. Tapu is commonly referred to as sacred, prohibited, or restricted, while noa is described as secular, ordinary, unrestricted, or free from tapu (Durie, 2001; Walker, 2004). Locations, people, or objects can be deemed tapu and are often off-limits or require respect and caution; those that are noa, however, may be used or handled without restrictions (Durie, 2001; Walker, 2004). Traditionally, it was believed that breaking the rules of tapu could result in sickness and even death due to atua (gods) revoking their protection (Walker, 2004; Wilson et al., 2019). Tapu and noa helped maintain balance in society and served as a protective mechanism for health and the environment (Mark et al., 2017; Walker, 2004). For example, hapū or iwi would enforce a rāhui (a temporary prohibition or ban) to restrict treasured natural resources such as the sea or forest to promote wildlife recovery (Walker, 2004).

**Rongoā Māori: Sociohistorical Context**

Indigenous knowledge in Aotearoa New Zealand is referred to as mātauranga Māori. Mātauranga translates to knowledge, wisdom, understanding and skill; therefore, mātauranga Māori refers to Māori knowledge. The Indigenous peoples of Aotearoa New Zealand voyaged from Polynesia around 1000 years ago and later became known as Māori (Durie, 2000; Kerridge, 2012). They brought their mātauranga to this land, where it evolved alongside Māori culture (Royal, 2005; Smith et al., 2016). The early Polynesian explorers' survival in Aotearoa New Zealand's colder climate relied on adapting to their new environment, including learning from the plant life that grew here (Kerridge, 2012; Vennell, 2019). Experimentation with plant materials for uses such as food, clothing, shelter, hunting, and medicine allowed these explorers to adapt and thrive whilst simultaneously developing Māori culture (Vennell, 2019). It has been proposed that mātauranga was derived both directly and indirectly from the environment (Roberts, 2012). Therefore, it has been emphasised that this land, along with its native flora and fauna, shaped Māori culture and the human history of Aotearoa New Zealand (Kerridge, 2012, 2020; Vennell, 2019). Mātauranga Māori was, therefore, well established before European arrival and the colonisation of Aotearoa New Zealand (Smith et al., 2016).

Similarly to other Indigenous peoples, the land and its plant life are central to Māori culture, health, and well-being. The natural environment contributes to Māori cultural identity and ways of being in the world. As described by Kerridge (2012):

> Māori are of this land and the land is who we are – we are inseparable. If the land is unwell then so too are we. Without it we are nobody, we have no culture, our language is no longer relevant, our songs and stories become disconnected … (p. 29).

Imperative to begin to understand this intricate relationship between Māori and the natural world is acknowledging the belief that humankind and plants have shared whakapapa and tūpuna (ancestors) (Riley, 1994). Tāne Mahuta, atua of the forests and birds and son of Ranginui (the Sky Father) and Papatūānuku (the Earth Mother), created plant life, birds, and insects, followed by humankind (Mark et al., 2017; Riley, 1994; Walker, 2004). Māori respect the trees, plant life and creatures of the ngahere (forest) as tuakana (senior), as Tāne created them before humans (McGowan, 2014; Riley, 1994). Accordingly, Māori refer to themselves as tāngata whenua (people of the land) as well as kaitiaki (guardians) of Papatūānuku. This close bond between Māori and the natural environment begins from birth with the tradition of

burying the afterbirth in the whenua (land), which symbolises a connectedness to the land and remains in practice today (Walker, 2004; Wilson et al., 2019). Interestingly, whenua translates to both land and placenta. Therefore, this intimate connection with the natural environment is embedded as part of Māori cultural identity.

Correspondingly, Māori formally introduce themselves by reciting their pepeha, which begins with their whakapapa to the landscape's geographical features, including mountains, rivers, and oceans. These natural features are acknowledged first, followed by iwi, hapū, and whānau, with individuals only stating their name at the end of their pepeha (Wilson et al., 2019). Two commonly used whakataukī (Māori proverbs) demonstrate a further example of the depth of this connection to the environment: '*Ko au te Awa, ko te Awa ko au',* which translates to *'I am the river, and the river is me'* and '*Ko au te whenua, ko te whenua ko au' – 'I am the land, and the land is me.'* Shared ancestry enables Māori to establish and maintain a close bond with the environment, providing the foundation for a comprehensive understanding of the natural world.

This close connection to the natural world contributed to the expansion of mātauranga Māori, including developing a holistic healing system. Within pre-colonial society, Māori established healing systems (later known as rongoā Māori) to support and sustain the health and well-being of their people (O'Connor, 2007; Riley, 1994; Wikaire, 2020). There was a focus on collective well-being with an emphasis on spiritual, social, and environmental factors of health (Signal et al., 2015). The knowledge and understanding of rongoā were cultivated over centuries through many generations, influenced by the cultural practice of being immersed in and part of the ngahere, coupled with careful observation (Mark et al., 2017; McGowan, 2014). This system was functioning effectively, with Māori being reported by early European explorers as healthy, fit, and strong (Riley, 1994; Signal et al., 2015). Tohunga (expert Māori healers) oversaw the traditional health system and were responsible for diagnosing and treating health issues (Riley, 1994). Although traditionally, Māori believed that disease had no biological basis and was closely connected to the spiritual realm, illness and disease were thought to be messages of disapproval from atua due to violations of tapu (Mark, 2012; Mark et al., 2017; Walker, 2004). Tohunga were considered mediators between the spirit world and the living to convey messages and facilitate healing (Riley, 1994). They used various methods to concurrently treat any physical symptoms and spiritual causes relating to a decline in health or well-being (Waitangi Tribunal, 2011). There was no differentiation between the methods used, such as rongoā rākau and spiritual healing, as from a Māori worldview, they are interconnected and cannot work efficiently separately (Riley, 1994). The healing properties of some plants were well-known,

but tapu knowledge, including formal wairua learnings, were solely taught to tohunga verbally in the whare wānanga (learning institutions) (Riley, 1994).

European settlers carried diseases to Aotearoa New Zealand that Māori had no prior exposure to and, therefore, no inbuilt immunity to. Consequently, with growing numbers of settlers, the health status of Māori deteriorated swiftly, comparable to other Indigenous peoples who faced colonisation (Durie, 2000; Walker, 2004). Tohunga had difficulty treating such diseases, resulting in the popularity of effective medicines distributed predominantly by missionaries (Riley, 1994). This difficulty contributed to undermining the confidence, and faith Māori had in their tohunga and healing system, as well as the conversion of some Māori to Christianity, with many Māori believing their tohunga had lost their mana (Riley, 1994; Signal et al., 2015). The establishment of Western medicine systems and beliefs disrupted and challenged traditional Māori beliefs and understandings of healing throughout the process of colonisation, resulting in major changes to health care in Aotearoa New Zealand (Jones, 2000a, 2000b). These impacts of colonisation, among many others, remain apparent within contemporary society.

### *Te Tiriti o Waitangi*

Te Tiriti o Waitangi (the Treaty of Waitangi) was signed in 1840 between Māori chiefs and the British Crown. It established Aotearoa New Zealand as part of the British colony and defined general foundations for British settlement. The Treaty contains three articles: Article One initiated a partnership and Crown authority to govern; Article Two assured Māori tino rangatiratanga (self-determination) over all their taonga (including land and cultural practices); and Article Three guaranteed Māori equal citizenship rights and social equity (Jones, 2000b; Mark et al., 2019). Despite promises made under the Treaty, Māori suffered significantly throughout the process of colonisation through displacement from and confiscation of land, warfare, disease, and laws prohibiting Māori customs, among many other tribulations (Bennett & Liu, 2018). As a taonga, rongoā Māori knowledge and practices are entitled to protection under the Treaty alongside Māori authority to determine and govern its usage (Jones, 2000b, 2000c; Mark et al., 2019). The Crown government has a duty to uphold and protect the rights of Māori and their taonga (Mark, 2012), although the extent to which it does and has historically remains questionable.

***Tohunga Suppression Act 1907***

Rongoā Māori healers and their practices were effectively forced underground due to the Tohunga Suppression Act of 1907. The Act prohibited tohunga from practising rongoā and undermined the validity of their practices and knowledge; essentially subordinating mātauranga Māori to European knowledge (Ahuriri-Driscoll et al., 2008; Waitangi Tribunal, 2011). The Tohunga Suppression Act has been characterised as a concerted effort to replace Māori healing practices with Western concepts and approaches to healthcare resulting from the competition for medical dominance between the conflicting approaches to the health and well-being of Māori and Pākehā (Bennett & Liu, 2018; Mark et al., 2017; Waitangi Tribunal, 2011).

Numerous explanations and motivations for the implementation of the Act have been proposed and debated. Some believe the Act was justified based on health grounds due to concerns regarding the poor state of Māori health at the time (Durie, 2000; Stephens, 2001). Three renowned Māori leaders of the time, Te Rangi Hiroa Buck, Apirana Ngata, and Maui Pomare, supported the Act as they expected it to result in advantages for Māori, including the improvement and protection of Māori health (O'Connor, 2007). A humanitarian-based motive argued that the Act was necessary to protect Māori "against tohunga who claimed the ability of supernatural power to cure disease" (Voyce, 1989, p. 99). Stephens (2001) also proposed that the Act was symbolic and used to reiterate colonial political control in response to fears of Māori desire for increased autonomy as epitomised by Māori prophets such as Rua Kenana. Voyce (1989) highlighted that the Act was a classic reaction from colonial governance to the perceived threat posed by a traditional culture.

Irrespective of the rationale behind its implementation, the Tohunga Suppression Act resulted in substantial consequences for Māori. It contributed to the marginalisation of mātauranga Māori and practices relating to healing through the explicit denial and censure of the role of wairua despite its fundamental position for Māori (Bennett & Liu, 2018; Durie, 2000; Jones, 2000a). The Act also reinforced and sustained prejudicial views of rongoā Māori and added to the degradation of this knowledge (Wikaire, 2020). These consequences led to a reluctance among whānau to endow future generations with mātauranga Māori relating to rongoā (Waitangi Tribunal, 2011). The fact that many contemporary Māori are unfamiliar with rongoā practices, if not entirely unaware, demonstrates how this reluctance to pass on knowledge further contributed to the loss of mātauranga rongoā.

The Tohunga Suppression Act was not repealed until 1962. The Waitangi Tribunal (2011) determined that the Act was unjustified and concluded that:

> The legislation imposed an effective ban on traditional Māori healing overall. Thus, in our view, the Act was not only unjustified but also racist, in that it defined a core component of Māori culture as wrong and in need of 'suppression' (p. 624).

Through the Act's implementation, the Crown breached Te Tiriti o Waitangi principles of tino rangatiratanga, partnership, and active protection (Waitangi Tribunal, 2011). While official recognition of the Act as unjustifiable is important, it cannot reverse the consequences that resulted from it. The focus now needs to remain on honouring Te Tiriti and its principles and ensuring the rights of rongoā Māori and its mana are upheld for generations to come.

Reasons other than the Tohunga Suppression Act have also been identified as contributing to the loss of rongoā Māori knowledge: including the dispossession of Māori land, urbanisation of Māori away from ancestral lands, iwi, hapū, and marae; a decline in access to native bush; and loss of te reo Māori (Bennett & Liu, 2018; Waitangi Tribunal, 2011). These factors can be understood as consequences of the process of colonisation. However, despite the Act's consequences and loss of mātauranga, it must be acknowledged that rongoā Māori practices have prevailed, and knowledge has and continues to be passed on and utilised. This continuation of rongoā indicates that as an approach to health, healing, and well-being, it remains relevant and effective within contemporary society and continues to have an important role in the lives of many.

**Rongoā Māori**

Rongoā Māori is a decidedly broad subject. It is important to note that this study does not intend nor attempt to provide a full in-depth description of what rongoā Māori was and is. Truly understanding and learning about rongoā takes a lifetime. There are elements of rongoā that cannot be conveyed through words; they must be experienced first-hand. Additionally, some aspects of rongoā are tapu and are therefore not shared beyond certain esteemed individuals. This review provides an overview of some of the aspects of rongoā Māori.

Rongoā Māori comprises an array of modalities comprising but not restricted to ritenga and karakia (rituals and incantations/prayer), rongoā rākau (remedies made from plant materials),

mirimiri and romiromi (bodywork; soft and deep tissue manipulation), wai and hauwai (use of water or steam), matakite (second sight, clairvoyance), and purepure (cleansing ceremonies in water) (Ahuriri-Driscoll, 2014; Durie et al., 1993; Mildon, 2016). There can be substantial variation in the implementation and practice of these modalities among practitioners. This variation is partly due to regional, tribal, and individual differences among healers in their philosophies and techniques, as well as the therapeutic qualities of plants varying between regions (Durie et al., 1993; Jones, 2000b; Mildon, 2016). The importance of each modality being applied within a te ao Māori context and adhering to tikanga has been emphasised. For example, if mirimiri or romiromi are not applied following tikanga, they could be seen as just a massage (Ahuriri-Driscoll et al., 2008).

Although many people mainly associate rongoā with plant or herbal medicine, it is essential to acknowledge that rongoā extends far beyond herbal remedies. McGowan (2000) emphasises that the foundation of rongoā is taha wairua; it is wairua that enables the healing abilities of rongoā. Throughout each of the various modalities of rongoā, the importance and essence of wairua remains constant (Ahuriri-Driscoll, 2014; Durie et al., 1993; Jones, 2000b; McGowan, 2000). This involves but is not limited to adhering to tikanga and using karakia throughout practice to uphold rites and traditions (McGowan, 2000). Karakia is an essential component of rongoā, which has been described as incomplete without it (Waitangi Tribunal, 2011). Such rituals can be seen as indicators of authenticity for healing practices (Ahuriri-Driscoll, 2014). For example, practitioners must follow tikanga, including the recital of karakia, before gathering and using plant materials because they serve as a connector between people and their revered ancestors, Ranginui and Papatūānuku (Riley, 1994). The failure to adhere to tikanga could demonstrate a lack of legitimacy of a practitioner and their practices.

While rongoā Māori is generally described as a traditional Māori healing system, there are many ways in which it can and has been conceptualised. Rongoā Māori is much more than a healing system or approach to health; it is a way of life and belonging to the world (Boulton et al., 2014; Hakaraia, 2019; Kerridge, 2020). McGowan (2000) has described rongoā as “an expression of the culture of Māori. It is as much about identity – an expression of being Māori – as it is about healing sickness” (p. 35). Rongoā acknowledges the interconnections between humans and all living things, physical and metaphysical, the natural world, and the cosmos. It is about sensing and maintaining balance and peace within the hinengaro, tinana, wairua, whānau, and te taiao (Hakaraia, 2019). Rongoā is used to help restore equilibrium from any imbalance among these areas of well-being (Hakaraia, 2019). Another essential facet of rongoā

Māori is re-establishing connections with the whenua and te taiao as descendants of Papatūānuku; doing so enables the restoration of mauri to the people and equally the land (Kerridge, 2020; Mark et al., 2017; Mark et al., 2019; Mildon, 2016). This interconnectedness supports the Indigenous philosophy that "when we learn to heal ourselves, we also heal mother earth" (Mildon, 2016, p. 14). In this manner, rongoā facilitates the expression of kaitiakitanga by healing the land humans descend from and rely upon. Rongoā can contribute to well-being in ways other than through explicit healing practices. It can enable individuals to grow in understanding their identity and sense of belonging in this world while empowering them to remember who they are.

Due to its inherent comprehensive nature, healers have emphasised that learning about rongoā is a lifelong journey (Kerridge, 2012; McGowan, 2014). McGowan (2014), a well-known rongoā practitioner, described how contemporary ways of life do not equip us to understand rongoā Māori in the ways that specialists of the past knew it. He explains that because we generally only go to the ngahere for recreation and are no longer reliant on the environment to provide sustenance, the knowledge is no longer imperative to provide for and sustain individuals and families. Another well-known rongoā practitioner, Kerridge (2012), highlighted how this lack of connection to and consideration for Papatūānuku's lore could be a primary reason for our dis-ease. Therefore, part of the journey that is rongoā is the responsibility to uphold kaitiakitanga through environmental conservation and the passing on of knowledge to assist others (Kerridge, 2012). This sharing of knowledge not only supports the growth and continuance of rongoā Māori but also provides the opportunity for individuals, whānau, and communities to connect with their cultural identity while contributing to their well-being.

**Rongoā Māori Today**

Over the last few decades, there has been a resurgence of interest in natural and traditional approaches to health, healing, and well-being. More people are realising and appreciating the balance between mental, physical, and spiritual components of life as well as the inherent connectivity to the natural world and the cosmos in a similar manner to Indigenous cultures (Kerridge, 2020). The World Health Organisation has acknowledged the growing recognition of rongoā Māori within Aotearoa New Zealand in their 'Global Report on Traditional and Complementary Medicine' (World Health Organisation, 2019). Several factors have been proposed as contributing to the increased interest in rongoā, including the abolition of the

Tohunga Suppression Act and legal restrictions on healing; the Māori cultural renaissance and demand for autonomy and tino rangatiratanga; loss of confidence in mainstream Western healthcare; difficulty accessing primary health care services for Māori; and the negligence of the spiritual dimension of health among mainstream services (Ahuriri-Driscoll & Boulton, 2019; Durie, 1998, 2001; Durie et al., 1993; Jones, 2000b). These factors suggest that rongoā Māori can contribute to filling gaps within the current health care system in Aotearoa New Zealand.

Despite increased interest and recognition, as well as demands for rongoā Māori practices to have a more prominent role (Boulton et al., 2014), rongoā Māori remains widely unrecognised within Aotearoa New Zealand's health care system (Jones, 2000b; Mark & Koea, 2019b). Although there are arguments against it, rongoā Māori is currently categorised as a complementary and alternative medicine (CAM) in Aotearoa. CAM is "a broad set of health care practices that are not part of that country's own traditional or conventional medicine and are not fully integrated into the dominant health care system" (World Health Organisation, 2019, p. 8). There do not appear to be arguments for classifying rongoā Māori under CAM. This categorisation seems to be purely for the purpose and convenience of grouping rongoā with other 'alternative' approaches to healthcare. Bodeker and Kronenberg (2002) highlighted that the fundamental basis of traditional healing systems is founded on Indigenous beliefs, customs, and values, making them unique from complementary and alternative medicine. Therefore, it has been asserted that traditional healing systems should be distinguished separately from CAM (Bodeker & Kronenberg, 2002; Mark, 2012; Mark et al., 2019). Mark et al. (2019) argued that the incorporation of rongoā Māori healing practices under CAM for the sake of categorisation deprives rongoā of its "right to be respected as a culturally appropriate healing treatment for Māori" (p. 3). They advocate the importance of recognising and valuing the cultural significance of traditional healing practices for Māori and all Indigenous peoples. Acknowledging and respecting rongoā Māori as a uniquely Indigenous approach to healing is essential to upholding the mana and significance of this taonga for Māori.

Since 1991, some aspects of rongoā Māori have been officially contracted and provided within the public health system (Wehipeihana et al., 2021). The Ministry of Health currently funds 30 providers throughout Aotearoa New Zealand to deliver rongoā Māori services (Ministry of Health, 2021). However, a key challenge for the rongoā sector remains that Ministry funded rongoā services are limited to include mirimiri, karakia, and whitiwhiti kōrero (discussions), meaning the scope of rongoā practice is restricted considerably. These limitations may be due

to Western control and valuing Western health and well-being understandings above those of te ao Māori, resulting in resistance to accepting wairua-focused traditional Māori healing practices without a foundation of empirical scientific evidence 'proving' their efficacy. This is controversial given that wairua is essential to all rongoā modalities, including those currently funded. Rongoā providers under Ministry of Health contracts are obliged to adhere to Tikanga-ā-Rongoā, rongoā standards, while non-funded organisations can choose whether they follow them (Ministry of Health, 2021). Whilst limiting rongoā practice, the standards have simultaneously been viewed as a positive movement in the legitimisation of traditional Māori healing because it is the beginning of formal recognition of and confidence in rongoā Māori's role in Aotearoa New Zealand's health system (Durie, 2001; Jones, 2000b).

Controversially, government funding does not include rongoā rākau, despite initially being included in the contracts until 2004 (Waitangi Tribunal, 2011). The rationale for the exclusion was reported based on health and safety, although the Crown only provided scarce details, including that rongoā healers themselves suggested the omission of rongoā rākau from contracts (Waitangi Tribunal, 2011). This justification was viewed with scepticism, and the removal of funding is deemed as demonstrating an absence of belief in and support of the efficacy of rongoā rākau (Waitangi Tribunal, 2011). The Ministry of Health states that practitioners can use rongoā rākau outside of their funded contracts; however, they cannot advertise products nor present them as having therapeutic purposes (Wehipeihana et al., 2021). This restriction can be viewed as a continued undermining of the integrity of mātauranga rongoā and rongoā rākau.

According to O'Connor (2007), the government is essentially setting bureaucratic restrictions on which elements of rongoā practice and mātauranga it will preserve and, as a result, which elements may grow (Waitangi Tribunal, 2011). O'Connor (2007) argued that the government protects only modalities of rongoā that are complementary to Western medicine. For example, despite its well-acknowledged centrality to rongoā healing practices, wairua is yet to gain equal recognition (Ahuriri-Driscoll, 2014). This shortfall of recognition might be due to a lack of understanding of what wairua truly is among the health system and government of Aotearoa New Zealand because they are yet to open up to it and experience wairua within their realities. If wairua is acknowledged, it is usually tokenistic and limited to karakia. The health system exemplifies its insufficient understanding of wairua by viewing wairua experiences, such as communication with deceased tūpuna, through a biomedical lens as a symptom of a psychological disorder (Valentine et al., 2017). Given that wairua is a core component of

rongoā, the exclusion of it from funded contracts undermines the true essence of rongoā Māori. O'Connor (2007) proposed that while other rongoā practices are not actively being suppressed by the government, they are arguably marginalised and instilled as less legitimate through lack of recognition and funding. The Healthcare in Aotearoa New Zealand section will discuss potential reasons for this. Rongoā Māori practitioners consider the limited characterisation of rongoā under the funded contracts as devaluing their practice (Ahuriri-Driscoll et al., 2008; Ahuriri-Driscoll & Boulton, 2019). Mark et al. (2019) affirmed that Indigenous peoples have the right to continue using their traditional healing methods in their nations, free from hindrance from broader society or legislation.

Wehipeihana et al. (2021) recently reviewed the Ministry of Health funded rongoā sector. The review examined the sector's overall functioning as well as the difficulties and potential in producing further empirical evidence, improving access to rongoā Māori services, and expanding the rongoā Māori workforce (Wehipeihana et al., 2021). Wehipeihana et al. gathered feedback from 20 rongoā contract holders and Te Kāhui Rongoā through a series of workshops. Te Kāhui Rongoā is a national rongoā governance organisation founded in 2011 to protect, promote, and support rongoā Māori (Ministry of Health, 2021). The report outlined that Te Kāhui Rongoā aspires for transformational change for rongoā Māori through a genuine partnership that respects tino rangatiratanga and reflects an expansive vision and objective to develop and protect rongoā. The report highlighted that the funded rongoā contracts represent Western health ideals and therefore standardise and restrict rongoā practice. It concluded that current laws and regulations do not adequately reflect rongoā Māori nor the sector's goals and that as rongoā is an embodiment of mātauranga Māori, governance and monitoring should be the domain of Māori and the rongoā sector. A further conclusion of the review is that "a substantive amount of work is needed to support rongoā, rongoā practitioners, and the rongoā sector" (Wehipeihana et al., 2021, p. 10). The report highlighted many key issues of the funded rongoā sector and provided areas for consideration for the sector moving forward. However, despite offering areas for the Ministry to consider, a main limitation of the report was that it did not indicate when these areas would be deliberated or acted on. The failure to include possible timeframes indicates a lack of urgency and concern over these issues. It is frustrating, given that the future of rongoā services could be promising if the Ministry of Health takes heed of the recommendations.

***Rongoā Māori Engagement***

There is currently a lack of information available concerning the extent to which New Zealanders engage in rongoā Māori practices. As Wikaire (2020) highlighted, the New Zealand Health Survey has removed rongoā Māori as a separately collected answer. There does not appear to be information available as to why this change occurred. Due to this, the most recent data available regarding participation in rongoā Māori healing practices is from the 2006/07 New Zealand Health Survey. Results found that at the time, one in five (18.2%) adults reported seeing a complementary or alternative health care worker in the preceding 12 months, of which just 3.2 per cent had seen a rongoā Māori healer (Ministry of Health, 2008). Since 2020, Accident Compensation Corporation (ACC) has offered rongoā Māori to assist individuals in regaining independence after an injury, following the Ministry's version of rongoā (ACC, 2022). At the end of March 2022, ACC had funded more than 12,600 rongoā sessions for the nearly 2000 authorised applications from around the country (ACC, 2022). This data is the only readily available information regarding the engagement with rongoā services among New Zealanders. Despite record keeping and reporting being emphasised as an important part of the funded rongoā contracts, data regarding the utilisation of these services does not appear to be openly reported. The reasoning behind this is unclear, but it could reflect a reluctance to acknowledge and disclose the growing utilisation of rongoā Māori services that could facilitate demands for increased recognition, support, and funding of rongoā by the government. It also needs to be taken into consideration that despite more receptive attitudes towards traditional and natural therapies, a majority of rongoā services are unfunded by the government and continue to be practised outside the health system (Mark & Koea, 2019b). Additionally, many individuals and whānau engage with rongoā in their homes as part of their everyday lives, outside health care and community settings. Based on the little collected and reported data, it is arduous to estimate current levels of engagement in traditional Māori healing practices.

Much of the research relating to rongoā Māori is grey literature such as theses, reports, and conference proceedings. Grey literature was included in this review due to the valuable insights they provide that are not currently presented in the limited peer-reviewed research available. In 2000, McGowan completed his thesis investigating "The Contemporary Use of Rongoa Maori" through his journey of learning about rongoā (McGowan, 2000). He noted the revival of rongoā in Māori communities from the 1980s when it started to take on a more prominent role. McGowan identified that contemporary rongoā Māori practice still upholds the traditional values that are critical to its integrity, albeit their expression has altered with time. He

acknowledged difficulties impacting the use of rongoā in contemporary society, including urbanisation and loss of connection to the natural environment, loss of knowledge, the convenience of Western medicines in comparison to the accessibility of rongoā, including access to ngahere, assistance from kaumātua and the time requirements for collection, preparation, and administration of rongoā rākau.

Similarly, in her PhD thesis exploring whānau attitudes and behaviours towards rongoā Māori and potential innovative solutions to renormalise rongoā, Wikaire (2020) identified several issues currently impacting whānau abilities to engage with rongoā Māori. Including disconnection for te ao Māori, unsustainable whānau realities (life demands, poverty), access to rongoā knowledge and services, governance, and policy. Participants shared aspirations to pass down mātauranga Māori and rongoā knowledge to ensure its preservation. The potential of utilising technological tools (such as interactive online sources and social media platforms) to improve whānau access and use of rongoā was identified and embraced. However, these whānau aspirations were coupled with fear of appropriation and commercialisation (Wikaire, 2020). McGowan (2000) and Ahuriri-Driscoll et al. (2008) also highlighted intellectual property concerns in protecting traditional rongoā Māori knowledge from exploitation. Together, these studies provide a range of perspectives that demonstrate some of the prevalent difficulties faced by the revitalisation of rongoā Māori.

**Māori Health**

Throughout the world, Indigenous peoples face the highest rates of mortality, morbidity, and health needs (Anderson et al., 2016). Indigenous peoples have been shown to have worse health outcomes regarding life expectancy at birth, infant mortality, maternal mortality, malnutrition in children, obesity in adults and children, education level, and socioeconomic status (Anderson et al., 2016). Similarly, in Aotearoa New Zealand, the health of Māori is poor compared to that of non-Māori. Māori health is defined by consistent inequitable health outcomes, undue marginalisation, underrepresentation in the health workforce, and disproportional access to determinants of health as well as social and health systems (Reid et al., 2019; Waitangi Tribunal, 2019; Wilson et al., 2019).

The health system in Aotearoa New Zealand is clearly not serving Māori, with disparities apparent from before birth throughout the life course to old age (Health Quality & Safety Commission, 2019; Whānau Ora, 2019). These inequities are pervasive and multifaceted,

affecting both the burden of disease across an array of health conditions and access to quality medical treatment (Waitangi Tribunal, 2019; Whānau Ora, 2019). For example, Māori are less likely to report being in good health than non-Māori and have a considerably lower life expectancy, on average seven years lower than non-Māori (Ministry of Health, 2020; Whānau Ora, 2019). Māori have higher rates of registration for cancer than non-Māori, higher mortality from cancers, as well as a 2.5 times higher risk of dying from illnesses that may be treatable with prompt and effective health care (Whānau Ora, 2019). Māori are also nearly twice as likely to have experienced psychological distress and are more prone than non-Māori to die by suicide (Ministry of Health, 2020; Whānau Ora, 2019). Accident Compensation Corporation data also shows that Māori are less likely to access ACC services despite being more likely to suffer a major, life-altering injury (ACC, 2022). Māori do not have the same access to services as non-Māori, and even when they do, they do not benefit from them to the same extent (Health Quality & Safety Commission, 2019; Whānau Ora, 2019). The persistence of these inequities has been described as unacceptable, unjust, preventable, and a violation of Te Tiriti o Waitangi and the rights of Māori as the Indigenous peoples of this country (Mark, 2012; Waitangi Tribunal, 2019; Wikaire, 2020). However, the health system continues to fail to redress these injustices.

There are many multi-faceted and interconnected causes for the health inequities Māori experience. The reasons behind these health inequities have been determined by the Health Quality and Safety Commission (2019) and Whānau Ora (2019) as unequal exposure to wider determinants of health (economic, environmental, political, and social), an inequitable health system, colonisation, institutional racism, and failure to uphold Te Tiriti o Waitangi obligations and principles. In line with this, Reid et al. (2019) highlighted that it is becoming increasingly acknowledged that health inequities and marginalisation among Indigenous populations are a consequence of historical events such as colonisation. However, the close connection between colonialism and racism is less recognised and the way these factors still serve as primary determinants of health for Indigenous peoples today (Reid et al., 2019). In this manner, Reid et al. (2019) acknowledge that colonisation is an ongoing process. It has been outlined that commitment and accountability to fulfilling the obligations of Te Tiriti o Waitangi are crucial to improving the functioning of the health system, enhancing Māori health, attaining health equity, and combatting institutional racism (Health Quality & Safety Commission, 2019; Whānau Ora, 2019).

Despite multiple government initiatives attempting to advance Māori health and reduce health inequities, they are continuing. Such initiatives have included “the establishment of Māori health care providers, cultural competence training, community-led programmes, and a health literacy focus” (Hobbs et al., 2019, p. 1613). However, systemic inefficiency of our Western biomedical approach to health and a seeming aversion to addressing the root causes of the inequities typically limit these efforts, which have resulted in minimal or no improvements for Māori (Hobbs et al., 2019; Whānau Ora, 2019). For example, initiatives primarily concentrate on addressing ‘risk factors’ at an individual level, such as alcohol consumption, instead of focusing on the inequitable social and institutional factors that lead to those behaviours (Reid et al., 2019). Further, Wilson et al. (2019) highlighted that due to disparities in how wellness is viewed, evaluated, and defined, mainstream efforts to improve Māori health have been ineffective in addressing inequities. Ratima et al. (2015) echo this sentiment, emphasising that a key restriction of health promotion initiatives is that they are based on Western constructs and, therefore, do not represent a Māori worldview or approach to health and well-being. Evidently, Aotearoa New Zealand's current approach to health care is not working effectively for Māori. As highlighted by McGowan (2022), “we won’t find a solution to our current crisis out of the thinking that created it” (p. 1).

**Healthcare in Aotearoa New Zealand**

As mentioned previously, Aotearoa New Zealand's healthcare system is primarily based on Western biomedical conceptions of health and illness. The philosophical underpinnings of the biomedical model are embedded in reductionism which believes that dividing complex phenomena into separate parts is the most effective way to gain understanding (Rocca & Anjum, 2020). Furthermore, according to ontological reductionism, all phenomena are believed to derive from physical issues (Rocca & Anjum, 2020). Therefore, this approach to health and illness tends to emphasise finding biomedical explanations and solutions for health issues, including those that may not necessarily be biological in nature; for example, shyness could be medicalised as social anxiety (Rocca & Anjum, 2020). This approach is juxtaposed with te ao Māori’s holistic view that focuses on the broader context and interacting components (Durie 2005). Aotearoa New Zealand's biomedical health system emphasises physical aspects of health, individuals, and personal responsibility (Wilson et al., 2019). This limited understanding of well-being contrasts with Indigenous and Māori views of health and health promotion, which focus on improving the holistic health and well-being of individuals and

collectives beyond physical health (Cram et al., 2003; Mark & Lyons, 2010; Ratima et al., 2015).

There is hope, however, with a significant reform of the Aotearoa New Zealand health system currently underway, including establishing the Māori Health Authority. The reform aims to transform the health system to become more accessible, unified, equitable, and person and whānau-centred to enhance the health and well-being of all New Zealanders, particularly groups such as Māori who have been and continue to be underprivileged (Future of Health, 2022). The new national system was officially established on 1 July 2022, with the Māori Health Authority – Te Aka Whai Ora working as an equal partner with Health New Zealand – Te Whatu Ora and the Ministry of Health – Manatū Hauora to guide and oversee transformational change in how health and well-being needs of Māori are both understood and addressed (Te Aka Whai Ora, 2022). In addition, the Māori Health Authority will collaborate with Māori stakeholders, including Māori health providers and professionals, iwi, hapū, and communities, to ensure Māori voices are heard and prioritised in strategies and services (Te Aka Whai Ora, 2022). Te Aka Whai Ora (2022) has stated that their collaboration with Te Whatu Ora and Manatū Hauora will fund te ao Māori based services and ensure that Te Tiriti o Waitangi commitments are upheld in healthcare strategies. This collaborative approach has the potential to contribute toward enhancing tino rangatiratanga for Māori by ensuring greater Māori influence over service design and strategies. It must be acknowledged that these changes will not immediately impact Aotearoa New Zealand's health care and outcomes, but it is promising for the future, including that of rongoā Māori.

The dominance of the Western biomedical system as the main and often only form of health treatment for New Zealanders has resulted in rongoā practitioners being largely seen as an alternative and secondary health care option (Durie, 2001; Mark, 2012). Nonetheless, the biomedical approach to health is frequently challenged due to its bio-reductionist care model, which emphasises physical health and quantifiable results (Mark & Koea, 2019a). This approach limits how successfully Western medicine can address the holistic well-being of Māori, including the influence of whānau, wairua, and te taiao (Mark & Lyons, 2010; Mark & Koea, 2019a). In contrast to our biomedical system, rongoā Māori can address cultural, psychological, social, and spiritual dimensions of well-being as well as physical health (Jones, 2000c). Additionally, rongoā's holistic approach can address the root causes of symptoms contributing to ill-health or diminished well-being. It is important to examine the root causes

to ensure the underlying issue(s) can be managed instead of lingering and potentially worsening or leading to more severe health outcomes.

Furthermore, Mark et al. (2019) emphasise the importance of acknowledging that Indigenous healing systems extend beyond the biomedical and individualistic focus of Western health practices and represent a culturally relevant way of life for people and, equally, the land. Rongoā Māori offers a more culturally appropriate form of health care for Māori through upholding traditional beliefs and values vital to Indigenous health, healing, and well-being (Kerridge, 2020; Mark et al., 2017). Rongoā has the potential to improve Aotearoa New Zealand's healthcare services and Māori health gains, as well contribute to tino rangatiratanga for Māori (Jones, 2000b, 2000c). Consequently, there has been an increase in the desire for more meaningful integration of rongoā into the healthcare system and collaboration between rongoā Māori and mainstream health care services (e.g., Ahuriri-Driscoll et al., 2008; Boulton et al., 2014; Jones, 2000b, 2000c; Mark & Chamberlain, 2012; Mark & Koea, 2019a; Waitangi Tribunal, 2011). The potential for rongoā Māori to generate benefits for individuals, whānau, communities, and Aotearoa New Zealand more widely must therefore be taken into consideration and acted upon.

## Te Whare Tapa Whā

Māori models of health have been developed that reflect a Māori worldview and demonstrate the importance of a holistic approach to health and well-being. One of the most prominent Māori models of health, Te Whare Tapa Whā – the house with four walls, was developed by Sir Mason Durie (1998). This model uses the analogy of a whare (house) to represent the notion of well-being, with each of the four walls corresponding to a dimension of health. The walls must be balanced in order to achieve good health. If any of the walls are unstable or weakened, the whole structure is compromised. In regard to health, if any dimension of well-being is impaired the other dimensions will also be imbalanced and may result in ill health, highlighting the importance of a holistic approach to health. The dimensions of health in this model are physical (te taha tinana), mental and emotional (te taha hinengaro), family and social (te taha whānau), and spiritual (te taha wairua).

### *Te Taha Wairua*

Te taha wairua encompasses spirituality and is recognised as the most fundamental and essential prerequisite for health and well-being (Durie, 1985, 1998). An individual with a lack

of connection to wairua is therefore deemed as having poor well-being and is more vulnerable to illness (Durie, 1985). Wairua is also regarded as the key to understanding health and sickness (Cram et al., 2003). Although wairua is inherently difficult to define, it is generally characterised as intangible and subjective yet has the capacity to be experienced, sensed, and felt, including ways of knowing that are not currently amenable to scientific explanations (Ahuriri-Driscoll, 2014; Valentine et al., 2017). Within te ao Māori, spiritual experiences such as communication with deceased are generally unquestioned as genuine and acceptable expressions of wairua (Valentine et al., 2017). However, from the perspective of Western psychology, such experiences would likely be seen as being associated with psychological illnesses (Valentine et al., 2017). Belief in oneself, others, or a higher power, and interconnection have been described as supporting wairua and contributing to personal contentment (Ahuriri-Driscoll, 2014). Spiritual well-being also entails religious beliefs and a connection to the natural world, communion with and respect for the land and environment strengthens one's spirituality (Durie, 1985, 1998).

### *Te Taha Hinengaro*

Te taha hinengaro incorporates psychological and emotional components of well-being including the patterns and communication of thoughts as well as emotional expression (Durie, 1985). Māori believe that emotional awareness and cognition are intimately connected and therefore appropriate expression requires the communication of both while "frustrated self-expression is likely to lower morale and reduce wellness" (Durie, 1985, p. 484). Te taha hinengaro has a significant influence on how we see ourselves and the world around us (Hakaraia, 2019). It includes motivation, cognition and behaviour, management of thoughts and feelings, and knowledge and understanding (Kingi, 2002, p. 301). These components of psychological well-being encompass clarity of thoughts, the capacity to control thoughts and feelings and maintain a sense of reality, as well as the ability to process information to achieve clearer understanding (Kingi, 2002). Having a positive, secure cultural identity is also a protective factor for te taha hinengaro (Ratima et al., 2015).

### *Te Taha Tinana*

Te taha tinana considers physical health, functioning, growth, and development (Kingi, 2002). It is characterised by notions of energy, vitality, and physical integrity as well as physical functioning in terms of mobility, flexibility, balance, coordination, and pain (Ahuriri-Driscoll et al., 2012). Māori view physical health as influenced by one's surroundings including whānau, whakapapa and wairua (Wilson et al., 2019) as well as the connection between the

mind and body (Kingi, 2002). Therefore, te taha tinana does not subscribe to reductionist conceptions of physical well-being. Physical symptoms of ill health are often thought to be manifestations of broader issues that must be identified for successful treatment.

### *Te Taha Whānau*

Te taha whānau encompasses family and social relationships. It acknowledges that individuals are part of wider social systems that influence their well-being (Kingi, 2002). Within te ao Māori, the health and well-being of individuals is correlated with that of the collective (Ratima et al., 2015) and family is viewed as the main support system for individuals (Cram et al., 2003; Durie, 1985). The role of whānau is vital to Māori well-being and should ideally involve mutual assistance, dispute resolution within the group, nurturing, cultural development, and group identity reinforcement (Ratima et al., 2015). Connection to whānau also contributes to a sense of identity which is understood as an essential component of health (Durie, 1985). Te taha whānau incorporates social participation, connectedness, relationships, social functioning, belonging and identity (Ahuriri-Driscoll et al., 2012; Kingi, 2002). Positive social connectedness, interactions and healthy functioning relationships contribute to well-being while dysfunctional relationships can negatively impact well-being alongside lack of connectedness.

## The Possibilities for Rongoā Māori

A limited yet expanding amount of rongoā Māori literature currently exists. The majority of this literature focuses on the potential for greater incorporation of rongoā Māori into the health system alongside issues intrinsic to this. Also prominent among rongoā Māori specific literature is a focus on strengthening understandings of rongoā Māori from the perspectives of rongoā healers, practitioners, or tohunga.

Jones (2000b) examined the main obstacles to integrating rongoā Māori healing practices into primary healthcare in Aotearoa New Zealand. The issues identified throughout 18 key informant interviews included compliance with Te Tiriti o Waitangi, multidisciplinary collaboration, the health system's capacity to incorporate Māori viewpoints, professionalism, and financial issues. Jones emphasised the importance of rongoā Māori not being changed in order to assimilate into the health system. Integration of rongoā at the local level was identified as a starting point to protect rongoā healers and practitioners and to address some of these issues (Jones, 2000b). Additional research by Jones (2000a) investigated the diagnostic

approach of rongoā Māori healers in comparison to that used by Western medical practitioners. Similarities and differences in approaches were identified, with one key distinction of rongoā practitioners' approach being a focus on spiritual elements. Due to this differential focus, rongoā Māori may be able to provide understanding of health issues that Western medical approaches are unable to address. This research contributes to the justification for the coexistence of rongoā Māori and Western medicine in Aotearoa New Zealand's health system due to their complementary nature (Jones, 2000a). This is consistent with findings by Cram et al. (2003) as well as Mark and Chamberlain (2012) who explored how traditional Māori healers view the challenges of collaboration between rongoā Māori healers and general practitioners (GPs). Some healers supported the collaboration between rongoā Māori and mainstream medicine because of their complementarity that would allow them to work alongside each other (Mark & Chamberlain, 2012). On the other hand, some healers opposed a collaborative approach due to the inadequate knowledge and consequent mistrust of rongoā held by GPs, as well as apprehension about preserving rongoā's integrity. Use of a pluralistic approach was identified as a potential strategy to manage these concerns whilst still encouraging cooperation (Mark & Chamberlain, 2012). The potential collaboration between rongoā Māori and the mainstream healthcare system is nuanced with many facets to take into consideration. The hesitancies and opposition to collaboration expressed by some practitioners to protect rongoā Māori are completely understandable and justified, however, the desire for rongoā healing practices to become a more easily accessible healthcare option is also understandable and warranted. The central focus must be complete respect for and protection of rongoā Māori as a traditional Māori knowledge system and taonga. If this could be ensured, a collaborative approach could result in positive health outcomes for Māori especially, but also the wider population of Aotearoa New Zealand.

Mark and Koea (2019a) recently conducted a qualitative research synthesis to determine the next steps in implementing rongoā Māori and medical partnerships effectively. The review found several key issues influencing collaboration that was grouped into three themes, as well as 17 sub-themes and sub-categories. The three main themes found were: the interface between rongoā and medical, implementation of rongoā and medical collaboration, and patient-centred approach (p. 7). Overall, there was clear conflict between the requirement for a particular degree of quality assurance for medical practitioners and the necessity for rongoā practitioners to maintain control over treatment to preserve rongoā's cultural integrity. The synthesis concluded that additional detail is required for collaboration implementation to progress and

resulted in the development of a Rongoā Māori/Medical Collaboration Considerations Guidelines (RMM-CCG) framework. The RMM-CCG provides preliminary questions and talking points to prompt discussions that may be utilised in further research investigating the issues, possible solutions, and pathways for increasing prospective collaboration between rongoā practitioners, medical professionals, and patients (Mark & Koea, 2019a).

Several research initiatives have been conducted by Mark investigating rongoā Māori that have contributed to increasing understandings and insights into both rongoā as a healing tradition as well as potential collaboration with the mainstream health system (e.g., Mark, 2012; Mark & Chamberlain, 2012; Mark et al., 2017; Mark et al., 2019; Mark & Lyons, 2010; Mark & Koea, 2019a, 2019b). For example, Mark et al. (2017) explored contemporary rongoā Māori healers' understandings and perceptions of rongoā and discovered a new finding that challenged previous conceptions of healing. Through examining healers' perspectives and experiences, their study identified that rongoā can heal the dead as well as the living (including the whenua). This generates a new understanding that "healing facilitates a process of change for patients" (Mark et al., 2017, p. 89) rather than solely contributing to enhancement of health or well-being. This expands our understandings of healing by providing new insights that challenge conventional approaches that focus on physical health gain or elimination of symptoms.

Research into rongoā Māori and well-being is relatively scarce. In 2008, a research report conducted by Ahuriri-Driscoll et al. (2008) on behalf of the Ministry of Health was published, "The Future of Rongoā Māori: Wellbeing and Sustainability." The project aimed to explore the contribution of rongoā Māori to well-being and identify challenges for the long-term sustainability of rongoā Māori healing practices. It included the collection of qualitative data from focus groups and workshops across five communities around the country. The project concluded that sustaining rongoā Māori practices contributes to enhancing Māori well-being in many ways, including the promotion of cultural values and traditions, preservation of connections to the environment, and individual well-being improvements. Alongside these benefits, the research identified fundamental obstacles to sustaining rongoā practices including access to rongoā rākau and retaining the cultural integrity of traditional Māori practices whilst pursuing acceptance and legitimacy for incorporation into the healthcare system (Ahuriri-Driscoll et al., 2008).

Gemmell (2020) investigated how traditional Māori practices including rongoā can assist rangatahi Māori with alleviating suicidal behaviours through interviewing seven Māori

practitioners. The traditional Māori practices explored were raranga (weaving), pūrākau (myths, legends) and rongoā in terms of rongoā rākau and mirimiri. Findings showed that rongoā rākau can aid emotional distress including anxiety, as well as assist in reconnecting to the environment, and mirimiri assists with balancing psychological, physical, and spiritual well-being (Gemmell, 2020). This finding is consistent with Gregg et al.'s (2006) assessment of a kaumātua mirimiri programme. Their results showed that participants experienced pain relief, increased mobility and flexibility, reduced tension and stress, reduced blood pressure, and social support (Gregg et al., 2006). These findings demonstrate the ability of rongoā to contribute to holistic well-being.

Recent research by Diamond (2019) implemented a rongoā programme with the hapū Ngāti te Maunga to aid ahi kā (local residence) in confidently utilising rongoā Māori for their well-being. Additional goals were for ahi kā to use a Facebook page regularly to both communicate and learn knowledge pertaining to rongoā and create a database of local rongoā rākau (Diamond, 2019). This is similar to Wikaire's (2020) suggestions regarding using technological tools, including social media platforms, to improve access to rongoā information. Findings from Diamond's (2019) study demonstrated that sharing and learning knowledge about rongoā within a hapū setting enables and strengthens connections to hapū identity and land, which is healing in itself.

**Summary**

This chapter explored the importance of Indigenous knowledges to Indigenous worldviews and ways of being in the world, including the role of mātauranga Māori to te ao Māori. Rongoā Māori is embedded within te ao Māori and mātauranga Māori as a healing system and a way of life, a taonga tuku iho (treasure passed down from ancestors). Although colonialism has sought to undermine and control Māori practices, traditions, and mātauranga and continues to have ongoing negative effects for Māori, rongoā Māori has endured and has been experiencing a revitalisation over the last few decades. The role of rongoā Māori today is growing alongside demands for the recognition and expansion of its role within the healthcare system that is currently not serving the tāngata whenua of Aotearoa New Zealand. Rongoā Māori has the potential to contribute to the holistic well-being of all New Zealanders, particularly Māori.

## The Current Study

There is an apparent gap in research on engagement in rongoā practices among New Zealanders as well as on the contribution of rongoā Māori to well-being. Current research largely focuses on the perspectives of rongoā healers and service providers regarding the capabilities of rongoā to contribute to well-being rather than on the perspectives of those who utilise rongoā Māori healing practices for their well-being. This is an important area to explore, especially when we consider the substantial enduring health inequities that Māori experience compared to non-Māori (Waitangi Tribunal, 2019) and the potential of rongoā Māori to promote well-being and cure illness as well as contribute to the wider movement towards tino rangatiratanga for Māori (Jones, 2000b, 2000c). Therefore, the current study aims to explore the relationship between everyday engagement with rongoā Māori and several dimensions of well-being as depicted by the Te Whare Tapa Whā model (hinengaro/psychological, tinana/physical, wairua/spiritual, and whānau/social). Two ancillary aims are to explore how rongoā Māori is incorporated into everyday life together with the enabling and inhibiting factors to this incorporation and to explore participants' aspirations for the future of rongoā Māori.

It is hoped this research will help to contribute towards addressing some of the gaps in the literature regarding rongoā Māori engagement within Aotearoa New Zealand through expanding knowledge and understanding of how and why rongoā is utilised in everyday life. This research hopes to demonstrate the well-being benefits of rongoā Māori whilst providing perspectives that are currently missing from research. The findings from this research could help to support calls for wider recognition of rongoā Māori within Aotearoa New Zealand in general and also within the healthcare system. They could also inform strategies moving forward to facilitate the use of rongoā at home to aid individuals and whānau to support their own well-being needs.

This study will address the following research questions:

1. Is there a relationship between engagement in rongoā Māori practices and enhanced physical well-being?
2. Is there a relationship between engagement in rongoā Māori practices and enhanced spiritual well-being?
3. Is there a relationship between engagement in rongoā Māori practices and enhanced psychological well-being?

4. Is there a relationship between engagement in rongoā Māori practices and enhanced social well-being?
5. How is rongoā Māori incorporated as part of everyday life?
6. How does everyday engagement with rongoā Māori contribute to well-being?
7. What factors enable or inhibit the use of rongoā Māori at home, and how can these barriers be addressed?
8. What are participants' aspirations for the future of rongoā?

# Chapter Three: Method

This chapter details the methodology of the current study. It describes the participants, procedures, ethical considerations, measures, and data analysis. A description of the various analyses that were performed will also be presented.

## Ethical Considerations

The Massey University Human Ethics Committee (MUHEC): Human Ethics Southern A Committee (SOA 21/21) granted ethics approval for this research. In line with the MUHEC guidelines, the ethical considerations of autonomy, avoidance of harm, beneficence, confidentiality, and cultural responsiveness were adhered to.

Advice regarding cultural considerations was sought after and provided by several Māori advisors throughout the research project. Additionally, two rongoā practitioners who opted to remain unnamed provided advice regarding the rongoā Māori-centred questions, including wording, to ensure accuracy and that the cultural considerations of manaakitanga and tika were adhered to. In the context of research ethics, manaakitanga is associated with cultural and social responsibility and respect, ensuring the mana of all parties involved in the research is upheld through cultural sensitivity and safety (Hudson et al., 2010). Tika refers to "what is right and what is good for any particular situation" (Hudson et al., 2010, p. 8), ensuring the research is conducted in a manner that protects the interests and rights of Māori. This study also incorporated manaakitanga through the reciprocity of kindness and respect (Kuntz et al., 2014) to participants and advisors. As a gesture of thanks for their participation, respondents had the choice to enter a prize draw for rongoā-based gift packs made by the researcher. Advisors were also gifted a rongoā-based gift pack as a koha (gift, offering) and thanks for their advice and support. These more meaningful reciprocal exchanges were deemed more appropriate than providing a financial incentive to participate. As will be discussed in the Research Approach section, Māori beliefs, ideals, understandings and mātauranga were also prioritised throughout the research process.

The data was anonymised and stored on an online database during data collection. This data was only accessible to the researcher and the data analyst of the Massey University School of Psychology. Following data collection, the data was securely shared with the researcher and

then stored on the researcher's personal computer under password-protected files that only the researcher had access to.

Participants were provided with contact details for a range of psychological support services; however, no participants indicated they needed to use them after completing the survey.

**Research Approach**

A quantitative approach with a qualitative component was undertaken for this research project; Kaupapa Māori theory and principles also informed this study. Kaupapa Māori theory and research is an approach grounded within te ao Māori and mātauranga Māori. Whilst upholding traditional Māori beliefs, knowledge, and practices, Kaupapa Māori theory also challenges the dominant Westernised conceptions of knowledge and the systematic devaluation of mātauranga Māori, which previous research argues to reinforce the ongoing repressive effects of colonisation (Bishop 2011; Walker et al., 2006). This approach aims to understand the Māori ways of thinking and doing within the broader context of te ao Māori whilst assuming the legitimacy and validity of Māori culture, knowledge systems, and practices (Smith, 1999). Essentially, it allows space for Māori worldviews, knowledge, and practices to be prioritised and normalised.

Key principles of Kaupapa Māori theory, as highlighted by Walker et al. (2006), that guided this research included tino rangatiratanga (self-determination, autonomy, sovereignty): participants had the right not to answer any question(s). They also had opportunities to provide their responses through open-ended questions using free text fields to describe their experiences and realities. Participants were able to assert tino rangatiratanga by highlighting their aspirations for the future of rongoā Māori and how they would like these aspirations to occur with their responses being heard and represented.

Social justice was another principle included in this study, aiming to balance prevalent power inequities through prioritising and recognising Māori values, mātauranga, and lived experiences, enabling meaningful benefits for Māori (Walker et al., 2006). This was particularly important in interpreting the research findings to ensure that Māori worldviews and experiences were acknowledged, represented, and valued in a way that respected their diverse realities. In terms of benefits for Māori, the researcher understood and anticipated that

rongoā Māori engagement might have a positive impact on well-being. Meaning this research could be viewed as helping to establish and augment literature supporting the ongoing resurgence of rongoā Māori engagement to improve Māori well-being.

## Participants

The prevalence of engagement in rongoā practices in Aotearoa New Zealand is currently unknown. Therefore, a statistical power analysis was conducted using the most recent information regarding engagement in rongoā Māori practices: wherein 3.2 per cent of adults had seen a rongoā Māori healer (Ministry of Health, 2008) – 3.2 per cent of adult New Zealanders and the approximate population of adults in Aotearoa New Zealand (4,154,000). The statistical power analysis proposed a sample size of at least 164 participants (CI = 1.28, *SD* = .5, *E* = ± 5%).

Participants 18 years and older from the New Zealand general population were invited to participate in this study. Purposeful sampling (Palinkas et al., 2015) was utilised to identify and target groups interested in rongoā Māori and related practices (discussed more in detail in the procedure section).

From the original sample size of 367 respondents, 123 were excluded from the analysis. Nineteen were excluded due to lack of consent, while a further 104 were excluded due to having more than 10% of data missing for one or more of the scales. The final sample size for the study was 244 participants. Two groups were created; those who actively engaged with rongoā Māori practices (RM group) and those who did not (non-RM group). The RM group had 132 participants, and the non-RM group had 112 participants. For participants with less than 10% of data missing per scale, missing data were replaced using mean imputation. Mean imputation involves replacing missing values of a variable with the mean of the non-missing values for that variable (Lodder, 2014). The majority of items did not have any missing data. The two items with the largest amount of missing data had four data points (2.3%) missing each.

### *Participant Demographics*

As shown in Table 3.1, most of the participants for this survey were female (85.20%). Participant ages ranged from 18-25 through to 56+. In terms of ethnicity, 107 participants (43.90%) identified as New Zealand Māori, and 171 (70.10%) identified as New Zealand

European/Pākehā. Eighty-five participants (35%) identified with two or more ethnic groups. Forty participants (16.40%) identified with two or more religious/spiritual beliefs, while 92 respondents (37.70%) identified as having no religious beliefs. Full demographic details for the entire sample, the RM group and non-RM group, are provided in Table 3.1.

**Table 3. 1**
*Demographic Characteristics of the Participants*

| **Variable** | **Total Frequency** (%) (*n*=244) | **RM Group** (*n*=132) | **Non-RM Group** (*n*=112) |
|---|---|---|---|
| **Gender** | | | |
| Female | 208 (85.20%) | 114 (86.40%) | 94 (83.90%) |
| Male | 31 (12.70%) | 14 (10.60%) | 17 (15.20%) |
| Non-binary | 3 (1.20%) | 2 (1.50%) | 1 (0.90%) |
| Did not specify | 2 (.80%) | 2 (1.50%) | 0 (0.00%) |
| **Age** | | | |
| 18-25 | 64 (26.20%) | 28 (21.20%) | 36 (32.10%) |
| 26-35 | 73 (29.90%) | 37 (28.00%) | 36 (32.10%) |
| 36-45 | 55 (22.50%) | 35 (26.50%) | 20 (17.90%) |
| 46-55 | 36 (14.80%) | 21 (15.90%) | 15 (13.40%) |
| 56+ | 16 (6.60%) | 11 (8.30%) | 5 (4.50%) |
| **Ethnicity*** | | | |
| New Zealand European/Pākehā | 171 (70.10%) | 77 (58.30%) | 94 (83.90%) |
| New Zealand Māori | 107 (43.90%) | 84 (63.60%) | 23 (20.50%) |
| Pasifika** | 21 (8.60%) | 16 (12.10%) | 5 (4.50%) |
| Asian*** | 8 (3.30%) | 4 (3.00%) | 4 (3.60%) |
| Other**** | 22 (9.00%) | 11 (8.30%) | 11 (9.80%) |
| **Religious/Spiritual Beliefs**[a] | | | |
| No religious beliefs | 92 (37.70%) | 25 (18.90%) | 67 (59.80%) |
| Māori religions, beliefs, and philosophies | 64 (26.20%) | 62 (47.00%) | 2 (1.80%) |
| Spiritualism and New Age religions | 60 (24.60%) | 43 (32.60%) | 17 (15.20%) |
| Christian [b] | 44 (18.00%) | 25 (18.90%) | 19 (17.00%) |
| Buddhism | 13 (5.30%) | 13 (9.80%) | 0 (0.00%) |
| Other [c] | 22 (9.00%) | 19 (14.40%) | 3 (2.70%) |
| Prefer not to say | 13 (4.90%) | 6 (4.50%) | 7 (6.30%) |

*Participants were able to select multiple ethnic groups; therefore, the percentages presented exceed a total of 100.
**Includes participants identifying as Samoan, Cook Island Māori, Tongan, Niuean, Tokelauan, Tuvaluan, Hawaiian, and Fijian.
***Includes participants identifying as Chinese, Indian, Anglo-Luso Indian, and Indonesian.

****Includes participants identifying as American Caucasian, Ashkenazi Jewish, Australian, Brazilian, British, Dutch, English, French, German, Irish, Italian, Mexican, Middle Eastern, Pakistani, Scottish, South African, and Spanish.
[a]Participants were able to select multiple religious/spiritual groups; therefore, the percentages presented exceed a total of 100.
[b]Includes participants identifying as Catholic and Roman Catholic.
[c]Includes participants identifying with/as Agnostic; Animism; Divine feminine; Druid; Islam; Judaism; Earth-based philosophies; Earth-based practices; Hinduism; Left-hand path; Meg beliefs; Mother Earth; Niue and Samoan traditional beliefs; own philosophy; Pagan; Shamanism; the Universe; Wicca; Witch, Yogic and Ayurvedic.

**Procedure**

The self-administered online survey was created using the Qualtrics survey programme and was hosted on an external Qualtrics server. Both online and printed advertisements were used to invite potential participants to take part in the study (see Appendix A). Online advertisements were directed at rongoā Māori and natural healing groups on Facebook. Printed advertisements were displayed in more general locations, including local shopping centres and community organisations in Whanganui – the residential location of the researcher. Existing acquaintanceship networks were also utilised to recruit participants.

Prior to beginning the questionnaire, participants were presented with an information page that provided a description of the research, participant rights, confidentiality, and contact details for the researcher and research supervisor (See Appendix B). If participants consented to participate in the study, they were directed to the demographics section of the questionnaire. The next section required participants to indicate whether they knew about and used rongoā Māori. Those who did know about and used rongoā formed the RM group, and those who did not know about or use rongoā formed the non-RM group. RM participants then completed a series of questions regarding their understanding of and engagement with rongoā Māori practices. All participants were then presented with a section regarding their engagement in wider healthcare services. Participants then completed the four scales which are discussed further in the measures section.

At the conclusion of the survey, participants were again provided with contact details for the researcher and research supervisor, should they wish to discuss the study or any concerns. Also provided to participants were details for mental health support services. Lastly, participants could choose to enter a prize draw to win one of ten rongoā-based gifts packs and indicate if

they would like to receive a summary of the results once the research was complete. Responses were anonymised and not connected to the prize draw contact information.

**Measures**

The survey entailed 107 items, including four established psychometric measures, demographic background questions, and questions about their understanding and engagement with rongoā Māori practices. These questions included what rongoā Māori means to them, frequency of usage, types of ailments or conditions rongoā is used for, and whether they provide rongoā for others. Open-ended questions were also used throughout the questionnaire to gather narrative data. The following psychometric measures were used in the survey to gather a more holistic understanding of well-being, in accord with te ao Māori worldview and the dimensions of Te Whare Tapa Whā.

***The Brief Inventory of Thriving*** (See Appendix C, section 5).

The *Brief Inventory of Thriving* (Su et al., 2014; BIT) is a 10-item scale used to measure psychological well-being and to briefly assess mental health status (Duan et al., 2016; Su et al., 2014). The BIT assesses aspects of positive functioning and human flourishing, and it includes items such as, "My life is going well", "There are people who appreciate me as a person", and "I am optimistic about my future" (Su et al., 2014). Items are scored on a five-point Likert scale that ranges from 1 - *strongly disagree* to 5 - *strongly agree.* Scores range from 10-50, with high scores indicating more robust psychological well-being.

The BIT has demonstrated good internal consistency with alpha coefficients over .90 across four samples (Su et al., 2014). All ten items appeared to be satisfactory scale indicators, with item loadings from .58 to .84 (Su et al., 2014). The BIT has also indicated good test-retest reliability of .83 over four months (Su et al., 2014). The scale also demonstrated convergent validity by correlating highly with other existing psychological well-being measures, with correlations ranging from .72 to .82 (Su et al., 2014). Consistent with internal consistency reported by Su et al. (2014), the present study demonstrated high internal consistency of the BIT with a Cronbach's alpha of .92. The BIT was selected for this study due to its sound psychometric properties coupled with its brevity in attempt to reduce participant drop out attributable to survey length.

***The Short Form Health Survey*** (See Appendix C, section 6).

The *Short Form Health Survey* (Ware et al., 1996; SF-12) is a 12-item scale used to assess general health and well-being or health-related quality of life (Turner-Bowker & Hogue, 2014; Ware et al., 1996). The scale was developed to be a shorter alternative to the SF-36 and is made of two subscales, the Physical Health subscale and the Mental Health subscale. The 12 items cover eight domains of health outcomes with four domains for each subscale. The physical health questions cover physical functioning (PF), role physical (RP), bodily pain (BP), and general health (GH). The mental health questions cover vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH).

Responses to the items are used to estimate the Physical Component Summary (PCS) and Mental Component Summary (MCS). All items were scored using Likert scales. Six items used a 5-point Likert scale, two used a 3-point scale, and four used a 2-point scale. Example items for the physical health subscale include: "Have you had any of the following problems with your work or other regular activities as a result of your physical health," "Accomplished less than you would like?" and "Were limited in the kind of work or other activities?" These two items were scored on a 2-point scale, 1 - *yes*, 2 - *no*. Example items for the mental health subscale include: "Did you have a lot of energy?", "Have you felt calm and peaceful?" These items were answered on a 5-point Likert scale ranging from 1 - *All of the time,* 2 - *Some of the time,* 3 - *A good bit of the time,* 4 - *Some of the time,* and 5 - *A little of the time.* Negatively worded items are reverse scored. Total scores were summed, with higher scores indicating better mental and/or physical health.

The SF-12 has demonstrated good test-retest reliability with correlations of .89 and .76 for PCS and MCS, respectively, over two weeks (Ware et al., 1996). There was also high correspondence in reproducing the SF-36 PCS and MCS measures using SF-12 items; the correlations between SF-12 and SF-36 versions of PCS and MCS were .951 and .969, respectively, respectively, demonstrating good convergent validity (Ware et al., 1996). The current study found the SF-12 and its physical and mental component subscales to have acceptable to good levels of internal consistency with Cronbach's alpha values of .85, .80, and .81, respectively. The SF-12 was selected for this study due to its psychometric properties and brevity in an attempt to reduce participant dropout attributable to survey length.

***Spiritual Well-Being Questionnaire*** (See Appendix C, section 7).

The *Spiritual Well-Being Questionnaire* (Gomez & Fisher, 2003; SWBQ) covers four domains of spiritual well-being: personal, communal, environmental, and transcendental well-being (Gomez & Fisher, 2003). The personal scale corresponds to how an individual relates to oneself regarding meaning, purpose, and values in life. The communal domain relates to the depth and quality of interpersonal relationships between self and others. The environmental domain deals with care and nurture for the physical and biological world. The transcendental scale relates to the relationship of the self with something or someone beyond the human level (Gomez & Fisher, 2003, p. 1976). Gomez & Fisher (2003) suggested that these four domains of the spiritual well-being questionnaire combine to determine an individual's overall or 'global' spiritual well-being.

The SWBQ comprises 20 items, five for each of the four scales; items include statements such as "Developing oneness with nature", "Developing meaning in life", and "Developing a sense of identity" (Gomez & Fisher, 2003). Items are scored on a five-point Likert scale, ranging from 1 - *very low* to 5 - *very high*, with respondents indicating how each statement describes their personal experience over the last six months. Scores range from 20 to 100, with higher scores indicating higher spiritual well-being.

The SWBQ has demonstrated good internal consistency with Cronbach's alpha coefficients of 0.8 and above for the four scales. All items appeared to be good indicators of the SWBQ, with item loadings ranging from .54 to .83 (Gomez & Fisher, 2003). Both exploratory and confirmatory factor analyses indicated strong support for the SWBQs construct validity (Gomez & Fisher, 2003). The current study found the SWBQ and its communal, environmental, personal, and transcendental subscales to have high internal consistency with Cronbach's alpha values of .95, .85, .91, .90. and .96, respectively.

All 20 items were slightly re-worded for the current study. Nineteen items were reworded to read "developing/feeling" rather than just "developing" to ensure the questions were inclusive to participants who related to the statements but may not have necessarily felt they were "developing" in that area. Item 15 was reworded to read "Incorporating karakia or prayer in life" rather than "Developing prayer in life" to ensure the item was inclusive to all religious/spiritual backgrounds. The four items referring to God were also reworded to include "a greater force or higher power (e.g., God(s), Io, the Universe, Supreme Being)" for this

reason. The SWBQ was selected for this study due to the four domains of spiritual well-being it encompasses that fit with values of te taha wairua compared to other similar available scales.

***Social Connectedness Scale-Revised*** (See Appendix C, section 8).

The *Social Connectedness Scale-Revised* (Lee et al., 2001; SCS-R) "measures social connectedness as a psychological sense of belonging or, more specifically, as a cognition of enduring interpersonal closeness with the social world *in toto*" (Lee et al., 2001, p. 316). The scale includes 20 items, 10 positively worded and 10 negatively worded. Items include statements such as "I am able to connect with other people", "I feel distant from people", and "My friends feel like family". Items are rated on a 5-point Likert scale ranging from 1 - *strongly disagree* to 5 - *strongly agree*, and scores range between 20 and 100. Negatively worded items are reverse scored so that higher scores indicate a greater degree of social connectedness or social well-being (Capanna et al., 2013).

The SCS-R has demonstrated good internal reliability as well as convergent and discriminant validity (Capanna et al., 2013; Lee et al., 2001). The SCS-R demonstrated convergent validity by significantly and positively correlating with existing measures of resiliency, independent self-construal and collective self-esteem and negatively with measures of depression, hostility, loneliness, social distress, and avoidance, as well as dysfunctional interpersonal behaviours (Lee et al., 2001). The current study found the SCS-R to have a high level of internal consistency with a Cronbach's alpha value of .94. The SCS-R was selected for this study due to its fit with values of te taha whānau aspect of well-being compared to other available scales.

**Data Analysis**

The quantitative data was analysed using the Statistical Package for the Social Sciences (SPSS) for Windows, version 28.0.0.0 (IBM, 2022). To assess for normal distribution, skewness, kurtosis, and histograms were examined for each measure, as well as the Shapiro-Wilk test statistic. However, the majority of scales and subscales violated the assumptions of normality, with only the SCS-R scale meeting assumptions of normality. Therefore, as recommended, non-parametric analyses were conducted for the measures and their associated subscales that violated assumptions of normality (Nahm, 2016).

Univariate statistics were conducted to calculate descriptive statistics such as medians, means, standard deviations, frequencies, and ranges. Bivariate and multivariate statistical analyses were then conducted to determine and examine group differences. Pearson's correlation coefficients, *t*-tests and one-way ANOVA analyses were performed for normally distributed data. Non-parametric equivalent Spearman's Rho correlation coefficients, Kruskal-Wallis and Mann-Whitney U tests were performed for non-normally distributed data. Standard multiple linear regression analyses were then performed if significant effects were discovered at the bivariate level.

Internal consistency for each measure was calculated using Cronbach's alpha (α). Values above 0.7 are considered acceptable, while values above 0.8 are preferable (Pallant, 2020).

Effect size interpretation criteria for each analysis in the study are presented below:

- Effect sizes for correlation coefficients are reported using Cohen's (1988) criteria which recommend values less than .01 indicate a minimal effect, 0.1- 0.3 a small effect, 0.3-0.5 a moderate effect, and above 0.5 a large effect.
- Effect sizes for *t*-tests and ANOVAs are reported using $\eta^2$ (Eta squared), 0.01 as a small effect, 0.06 as a medium effect, and 0.14 as a large effect (Cohen, 1988).
- Effect sizes for Kruskal-Wallis tests are reported as $f = .10$, a small effect, .25, a medium effect, and .40, a large effect size (Allen & Bennett, 2008).
- Effect sizes for Mann-Whitney U tests are reported as $r = .10$ for a small effect, .30 for a medium effect, and .50 for a large effect (Cohen, 1988).
- Effect sizes for standard multiple regression analyses are reported as $f^2 = .02$, a small effect, .15, a medium effect, and .35, a large effect (Cohen, 1988).

**Ancillary Qualitative Analysis**

As an additional aspect of the study, thematic analysis was used to recognise, analyse, and report patterns within the qualitative data (Braun & Clark, 2006) gathered from open-ended questions. The open-ended questions enabled participants to freely describe their engagement with rongoā Māori rather than being constrained to closed-ended questions.

As the researcher had prior understandings and experiences with rongoā Māori, ensuring reflexivity was essential throughout the research, particularly within the thematic analysis and interpretation of findings. Discussions with the research supervisor, colleagues, and advisors

alongside continuous self-reflection were utilised to maintain reflexivity and reinforce the study's reliability and integrity.

The researcher followed Braun and Clarke's (2006) recommendations for conducting thematic analysis. An essentialist method was used, which "reports experiences, meanings, and the reality of participants" (Braun & Clarke, 2006, p. 81). Both semantic and latent analyses were utilised as both provide valuable information. A semantic approach examines participants' written responses at the explicit or surface level to identify themes (Braun & Clarke, 2006). A latent approach looks further than the surface level and begins to explore the underlying assumptions and concepts that are thought to have influenced the semantic content (Braun & Clarke, 2006).

Braun and Clark (2006) describe the thematic analysis process as including six phases: familiarising with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report.

1. Firstly, each set of responses was read and re-read to become familiar with the content, and initial notes were made to capture common ideas.
2. Initial codes were developed in the second phase to arrange the data into relevant groups—many responses aligned with more than one coding group. Colour coding responses assisted this process.
3. The codes were then organised into potential themes and subthemes. Brainstorming and mind maps were used to aid in understanding the connections among the themes and subthemes.
4. Next, the themes were revised to ensure they aligned with the coded data extracts and the data set as a whole.
5. Phase five involved further refinement of the themes to help determine the overall story the analysis tells. Then, names for themes and subthemes were finalised.
6. The last stage included the selection of data extracts for examples and the final analysis and write-up, following Braun and Clarke's (2006) emphasis that thematic analysis aims to understand and tell the story of the data rather than simply describe it.

# Chapter Four: Quantitative Results

This chapter presents the quantitative results for rongoā Māori engagement, demographic variables, and the measures used in this study. Key participant demographics and descriptive statistics for each measure used in the study will be provided. Also presented are results from bivariate and multivariate statistical analyses.

## Rongoā Māori Engagement

As shown in Table 4.1, the frequency of use of rongoā Māori practices varied among respondents. The frequency of usage ranged from daily (20.10%) to never (45.90%). Participants have used rongoā Māori for a range of conditions, ailments, or situations (see Table 4.2). The most common uses were wairua related (58.30%) and mental health (50.00%). Participants have utilised many rongoā Māori modalities (see Table 4.3). Karakia (81.10%) was reported as the most utilised modality, followed by wairua (59.10%), mirimiri (56.80%), and rongoā rākau (53.80%).

**Table 4. 1**
*Frequency of Use of Rongoā Māori Among Participants*

| **Rongoā Māori Engagement** | **Total Frequency** (%) (*n*=244) | **RM Group** (*n*=132) | **Non-RM Group** (*n*=112) |
|---|---|---|---|
| As required | 18 (7.40%) | 18 (13.60%) | |
| Never* | 112 (45.90%) | 0 (0.00%) | 112 (100%) |
| Daily | 49 (20.10%) | 49 (37.10%) | |
| Weekly | 27 (11.10%) | 27 (20.50%) | |
| Fortnightly | 4 (1.60%) | 4 (3.00%) | |
| Monthly | 5 (2.00%) | 5 (3.80%) | |
| Yearly | 8 (3.30%) | 8 (6.10%) | |
| Other** | 10 (4.10%) | 10 (7.60%) | |
| Prefer not to say | 11 (4.50%) | 11 (8.30%) | |

*Includes 96 participants who did not know what rongoā Māori is.
**Includes: I should probably use it more than I do; once in a blue moon; Not as often as I'd like due to lack of knowledge; Not as often as I should or would like to; Not enough!; One-off; When I can access good quality plant material.

**Table 4. 2**
*Conditions, Ailments or Situations Participants use Rongoā Māori for*

| **Situations rongoā was used for*** | **RM Group Frequency** (%) |
|---|---|
| Chronic illness | 32 (24.20%) |
| Injury | 57 (43.20%) |
| Mental health | 66 (50.00%) |
| Short-term illness | 53 (40.20%) |
| Wairua related | 77 (58.30%) |
| Other** | 19 (14.40%) |

*Multiple options were able to be selected; therefore, percentages presented exceed a total of 100.
**Includes: Cultural supervision; Daily use in skincare; Enhancing wellness; Everyday wellness; General health, skin balms etc., & plant oils for holistic health; General well-being; Hapū Māmā; Haputanga; Infertility; Meth & suicide; Pregnancy – mirimiri; Recovery from miscarriage; Skin and inflammation; Sores, aches and pains.

**Table 4. 3**
*Frequency of Rongoā Māori Modalities that Participants have Engaged with*

| **Rongoā Māori Modality** | **RM Group Frequency*** (%) |
|---|---|
| Karakia | 107 (81.10%) |
| Matakite | 36 (27.30%) |
| Mirimiri | 75 (56.80%) |
| Pure | 26 (19.70%) |
| Romiromi | 37 (28.00%) |
| Rongoā rākau | 71 (53.80%) |
| Wai | 48 (36.40%) |
| Wairua | 78 (59.10%) |
| Other** | 12 (9.10%) |

*Participants were able to select more than one option; therefore, the percentages presented exceed a total of 100.
**Includes: Advocacy, healing the person or family, learning about Mirimiri and Rongoā; Childbirth rituals and blessings of taonga/specific wisdom from known Elder; Ensuring I care for my tinana, hinengaro, wairua, whānau & whenua; Honouring of the wisdom of tipuna and Papatūānuku; Hua parakore; Rongoā certificate via TWoA; Rongoā workshop; Taonga pūoro, Wānanga; Whanaungatanga; Whitiwhiti kōrero.

For many participants, their engagement in rongoā Māori practices extended to providing rongoā for their whānau and others outside their whānau. Table 4.4 breaks down the frequency of participants providing rongoā for their whānau; 24 participants (18.20%) reported providing rongoā to their whānau daily, while 36 participants (27.30%) reported never providing rongoā for their whānau. Table 4.5 presents the frequency of participants providing rongoā for others outside their whānau; 20 participants (15.20%) reported providing rongoā Māori for others every week, while 55 participants (41.70%) reported never providing rongoā for others outside their whānau. Twenty participants (15.20%) reported identifying as a rongoā Māori healer, practitioner, or tohunga.

Eighty-eight participants (66.70%) reported engaging with rongoā Māori through pursuing outside assistance from rongoā Māori practitioners, healers, or tohunga. However, as shown in Table 4.6, just seven participants (5.30%) reported rongoā Māori services as easily accessible, and 60 participants (45.50%) reported services as somewhat accessible.

Seventy-seven participants (58.30%) reported being concerned about the sustainability of rongoā Māori knowledge or practices. A further 30 participants (23.00%) reported being unsure if they were concerned about the sustainability of rongoā Māori knowledge or practices, and 22 participants (17.00%) reported not being concerned.

**Table 4. 4**
*Frequency of Participants Providing Rongoā Māori for Whānau*

| **Provision of Rongoā Māori** | **RM Group Frequency** (%) |
|---|---|
| As required | 20 (15.20%) |
| Never | 36 (27.30%) |
| Daily | 24 (18.20%) |
| Weekly | 26 (19.70%) |
| Fortnightly | 4 (3.00%) |
| Monthly | 10 (7.46%) |
| Yearly | 7 (5.30%) |
| Other* | 5 (3.80%) |

*Includes: Depends on the situation; My family are not connected to our Māori traditions; My mum helps me, I'm on my own rongoā journey; Not very often; When I can get good plant material.

**Table 4. 5**
*Frequency of Participants Providing Rongoā Māori for Others Outside their Whānau*

| **Provision of Rongoā Māori** | **RM Group Frequency** (%) |
|---|---|
| As required | 20 (15.20%) |
| Never | 55 (41.70%) |
| Daily | 8 (6.10%) |
| Weekly | 20 (15.20%) |
| Fortnightly | 2 (1.50%) |
| Monthly | 12 (9.10%) |
| Yearly | 9 (6.80%) |
| Other* | 6 (4.50%) |

*Includes: 6 monthly make a herbal balm for achy joints; I don't think I provide but am happy to share or supply Kawakawa balm if I can to friends and whānau; I give advice if people can access plant material or refer on if people are interested in their culture; I have offered services of others that are known to me other people to engage with; I make tea, balms, oil blends – I don't have training to use rongoā so I stick to what I know when working with others.

**Table 4. 6**
*Participants' Perceptions of Rongoā Māori Service Accessibility*

| **Service Accessibility** | **RM Group Frequency** (%) |
|---|---|
| Easily Accessible | 7 (5.30%) |
| Somewhat Accessible | 60 (45.50%) |
| Neither Accessible nor Inaccessible | 26 (19.70%) |
| Somewhat Inaccessible | 32 (24.20%) |
| Very Inaccessible | 7 (5.30%) |

**Measures**

Table 4.7 shows the range of scores, medians, standard deviations, and Cronbach's alphas for each scale and subscale used in the current study. Scores for the total sample, the rongoā Māori (RM) and non-RM groups are displayed separately. The scores for all measures spread across the available range.

Before each analysis, the assumptions of normality were examined for each of the scales and subscales using kurtosis, skewness, and Shapiro-Wilk tests, as well as examining histograms. The majority of the scales and their associated subscales violated assumptions of normality (for

the full sample and the RM group) and were slightly to moderately skewed with platykurtic distributions. The BIT scale, however, was left-skewed (Skewness = -.869) and had a leptokurtic distribution (Kurtosis = .972). The SCS-R scale did not show evidence of non-normality, as shown by Shapiro-Wilk test results, $W(244) = .991$, $p = .133$.

**Table 4. 7**
*Range, Medians, and Cronbach's Alphas (α) for Measures*

| **Measure** | **Range** | **Total Median** (*n*=244) | **RM Group Median** (*n*=132) | **Non-RM Group Median** (*n*=112) | **α** |
|---|---|---|---|---|---|
| Brief Inventory of Thriving (BIT) | 10-50 | 39.00 | 40.00 | 38.00 | .92 |
| Short Form Health Survey (SF-12) | 15-44 | 33.00 | 33.50 | 32.50 | .85 |
| Physical Component Summary (PCS) | 6-20 | 16.00 | 16.00 | 16.35 | .80 |
| Mental Component Summary (MCS) | 7-24 | 17.00 | 18.00 | 16.00 | .81 |
| Social Connectedness Scale-Revised (SCS-R)* | 25-100 | 69.10 (*14.23*) | 71.78 (*13.39*) | 65.94 (*14.60*) | .94 |
| Spiritual Well-Being Questionnaire (SWBQ) | 24-100 | 69.00 | 78.00 | 61.00 | .95 |
| Communal | 5-25 | 19.00 | 20.00 | 17.00 | .85 |
| Environmental | 5-25 | 18.00 | 21.00 | 16.00 | .91 |
| Personal | 5-25 | 18.00 | 19.50 | 16.00 | .90 |
| Transcendental | 5-25 | 15.00 | 19.00 | 9.00 | .96 |

*Means and standard deviations were reported for SCS-R as it was the only normally distributed measure.

**Demographic Findings**

Bivariate analyses were conducted between the demographic and scale data to identify potential confounding variables. Kurtosis, skewness, and Shapiro-Wilk statistics indicated that the SCS-R scale total scores met the assumptions of normality. Pearson's correlation

coefficients, one-way ANOVAs and *t*-tests were used to determine whether significant relationships existed among demographic variables and social connectedness. As the remaining scales and subscales violated assumptions of normality, non-parametric equivalent analyses were conducted instead (Spearman's Rho, Kruskal-Wallis, and Mann-Whitney U tests). Bonferroni-adjusted alphas were calculated based on the number of comparisons made for post hoc analyses.

***Ethnicity***

Due to participants being able to select multiple ethnicities, participants were grouped into Māori and non-Māori categories for analyses. These two categories were selected rather than having multiple groupings because there was overlap with different ethnic groups where multiple ethnicities were selected. Table 4.8 presents the medians of scores on each scale across participant ethnicity groups. For the total sample, participants identifying as Māori had higher median scores across the four main scales used in this study than non-Māori. One-way ANOVA analyses were conducted and did not find a statistically significant difference between ethnicity and SCS-R scores for both the RM and non-RM groups.

As the remaining scales and subscales violated assumptions of normality, Kruskal-Wallis and Mann-Whitney U tests were used. For the RM group, Kruskal-Wallis tests indicated significant differences between ethnicity and frequency of use of rongoā Māori ($H(1)= 3.95$, $p = .047$, $f = .18$) with a small effect size. Post hoc Mann-Whitney U tests showed that Māori (*Mean rank* = 71.34) had higher frequency of use of rongoā Māori practices than non-Māori (*Mean rank* = 58.03), ($U = 1609.500$, $z = -1.987$, $p = .047$, $r = .17$), with a small effect size.

Kruskal-Wallis tests also indicated significant differences between ethnicity and SF-12 total scores ($H(1)= 4.60$, $p = .032$, $f = .19$) as well as scores on the SF-12 Mental Health Subscale (MCS) ($H(1)= 4.25$, $p = .039$, $f = .18$) with small effect sizes. Post hoc Mann-Whitney U tests showed that Māori had significantly higher scores on the SF-12 (*Mean rank* = 71.89) than non-Māori (*Mean rank* = 57.07), ($U = 1563.500$, $z = -2.144$, $p = .032$, $r = .19$). Māori also had significantly higher scores on the MCS subscale (*Mean rank* = 71.67) than non-Māori (*Mean rank* = 57.45), ($U = 1581.500$, $z = -2.062$, $p = .039$, $r = .18$). No other differences according to ethnicity were found for any of the other measures. For the non-RM group, Kruskal-Wallis tests indicated no significant differences between ethnicity and any of the measures.

**Table 4. 8**

*Median Scores for Each Measure for Participant Ethnicity Groups*

| **Measure** | **Total Median** (*n*=244) | | **RM Group Median** (*n*=132) | | **Non-RM Group Median** (*n*=112) | |
|---|---|---|---|---|---|---|
| | Māori (*n*=107) | Non-Māori[a] (*n*=137) | Māori (*n*=84) | Non-Māori (*n*=48) | Māori (*n*=23) | Non-Māori (*n*=89) |
| BIT | 39.00 | 39.00 | 40.00 | 40.00 | 34.00 | 38.00 |
| SF-12 | 35.00 | 32.60 | 35.00 | 32.30 | 32.00 | 33.00 |
| PCS | 17.00 | 16.00 | 17.00 | 16.00 | 17.00 | 16.00 |
| MCS | 18.00 | 17.00 | 19.00 | 17.00 | 15.00 | 17.00 |
| SCS-R* | 70.92 (*14.10*) | 67.67 (*14.23*) | 72.35 (*13.88*) | 70.78 (*12.58*) | 65.70 (*13.94*) | 66.00 (*14.84*) |
| SWBQ | 75.00 | 64.00 | 77.50 | 79.00 | 62.00 | 61.00 |
| Communal | 19.00 | 18.00 | 20.00 | 20.00 | 17.00 | 17.00 |
| Environmental | 20.00 | 18.00 | 20.50 | 22.00 | 18.00 | 16.00 |
| Personal | 19.00 | 17.00 | 20.00 | 19.00 | 17.00 | 16.00 |
| Transcendental | 17.00 | 13.00 | 18.00 | 19.50 | 10.00 | 9.00 |

*****Means and standard deviations were reported for SCS-R as it was the only normally distributed measure.

[a]Includes participants identifying as American Caucasian, Anglo-Luso Indian, Ashkenazi Jewish, Australian, Brazilian, British, Chinese, Cook Island Māori, Dutch, English, Fijian, French, German, Hawaiian, Indian, Indonesian, Irish, Italian, Kiwi, Mexican, Middle Eastern, New Zealand European, Niuean, Pākehā, Pakistani, Samoan, Scottish, South African, Spanish, Tokelauan, Tongan, Tuvaluan, and/or a combination of these.

### *Religious/Spiritual Beliefs*

Due to participants being able to select multiple religious/spiritual belief groups that they identify with, a 'mixed religious/spiritual beliefs' category was created for analyses. One-way ANOVAs were conducted to examine the effect of religious/spiritual beliefs on SCS-R scores for both groups. The results show demonstrated statistically significant differences in SCS-R scores across religious/spiritual belief groups for the RM group ($F(6, 125) = 3.596$, $p = .003$, $\eta^2 = .15$), with a large effect size. Post hoc comparisons using the Tukey HSD test show that the mean SCS-R score for No religion was significantly lower than Māori religions, beliefs, and philosophies, and Christian beliefs (See Table 4.9). The remaining religious/spiritual belief

groups did not significantly differ from the No religion, Māori religions, beliefs, and philosophies, or Christian groups regarding SCS-R scores. No statistically significant differences were found for the non-RM group.

**Table 4. 9**
*One-Way Analysis of Variance Comparing SCS-R Scores Across Religious/Spiritual Groups for the Rongoā Māori Group*

| | **No Religion** (*n*=25) | **Māori religions & beliefs** (*n*=28) | **Spiritualism & New Age Religions** (*n*=16) | **Christian** (*n*=13) | **Mixed beliefs** (*n*=39) | **Other** (*n*=5) | **Prefer Not to Say** (*n*=6) |
|---|---|---|---|---|---|---|---|
| | ***M (SD)*** | ***M (SD)*** | ***M (SD)*** | ***M (SD)*** | ***M (SD)*** | ***M (SD)*** | ***M (SD)*** |
| SCS-R Scores | 64.97 (*12.27*) | 78.12 (*12.95*) | 70.33 (*10.47*) | 80.00 (*11.41*) | 70.58 (*13.13)* | 69.43 (*13.30*) | 66.33 (*16.97*) |

For the non-RM group, Kruskal-Wallis tests indicated statistically significant differences between religious/spiritual beliefs groups and scores for BIT ($H(6)= 13.36$, $p = .038$, $f = .37$) and SWBQ personal ($H(6)= 13.42$, $p = .037$, $f = .37$) with medium effect sizes. Significant differences were also found for SWBQ ($H(6)= 17.55$, $p = .007$, $f = .43$), MCS subscale ($H(6)= 16.72$, $p = .010$, $f = .42$), and SWBQ transcendental ($H(6)= 46.32$, $p < .001$, $f = .85$) with large effect sizes. Dunn's post hoc pairwise comparisons with significance values adjusted by the Bonferroni correction for multiple tests were conducted, and no significant pairwise comparisons were found for BIT or SWBQ personal. Significant Dunn's pairwise comparisons for the MCS subscale, SWBQ, and SWBQ transcendental can be found in Table 5.10. For the SWBQ, No religious beliefs had significantly lower mean ranks than Christian beliefs. For the MCS subscale, Spiritualism and New Age Religions had significantly lower mean ranks than both No religious beliefs and Christian beliefs. For the SWBQ transcendental subscale, No religious beliefs had significantly lower mean ranks than both Spiritualism & New Age Religions and Christian beliefs.

**Table 4. 10**
*Significant Dunn's Pairwise Comparisons for Measures According to Religious/Spiritual Beliefs for the non-RM Group*

| **Measures** | **Group Pairs** | **Test Statistic (*H*)** | **Std Error** | **Std Test Statistic** | ***p**** |
|---|---|---|---|---|---|
| MCS | No religion – Christian | -28.69 | 8.60 | -3.34 | .018 |
| SWBQ | Spiritualism – No religion | 28.53 | 9.24 | 3.09 | .042 |
| | Spiritualism – Christian | -36.07 | 11.32 | -3.19 | .030 |
| SWBQ | No religion – Spiritualism | -35.95 | 9.20 | -3.91 | .002 |
| Transcendental | No religion – Christian | -48.25 | 8.55 | -5.65 | < .001 |

*Significance values adjusted by the Bonferroni correction for multiple tests.

For the RM group, Kruskal-Wallis tests indicated statistically significant differences between religious/spiritual beliefs groups and scores for on SWBQ communal ($H(6)= 14.84$, $p = .022$, $f = .35$), SWBQ environmental ($H(6)= 15.32$, $p = .018$, $f = .36$), and frequency of use of rongoā Māori ($H(6)= 15.08$, $p = .020$, $f = .36$) with a medium effect sizes. Statistically significant differences were also found for scores on SWBQ ($H(6)= 19.80$, $p = .003$, $f = .42$), SWBQ transcendental ($H(6)= 31.02$, $p < .001$, $f = .56$), and SWBQ personal ($H(6)= 18.45$, $p = .005$, $f = .40$), all with large effect sizes.

Dunn's post hoc pairwise comparisons were conducted for each of these scales/subscales (see Table 4.11). No significant pairwise comparisons were found for the frequency of use of rongoā Māori. The most significant differences for the SWBQ scale were between no religious beliefs ($Md = 65.00$) and both mixed religious/spiritual beliefs ($Md = 84.00$) and Māori religions, beliefs, and philosophies ($Md = 81.00$).

The most significant differences for the SWBQ communal subscale were between no religious beliefs (Md = 18.00) and Christian beliefs ($Md = 21.00$). For the SWBQ environmental subscale, the most significant differences were found between Christian beliefs ($Md = 17.00$) and mixed religious/spiritual beliefs ($Md = 23.00$). For the SWBQ personal subscale, the most significant differences were found between no religious beliefs ($Md = 17.00$) and both Māori religions, beliefs, and philosophies ($Md = 20.00$) and mixed religious/spiritual beliefs ($Md = 21.00$). For the SWBQ transcendental subscale, the most significant differences were between no religious beliefs ($Md = 13.00$) and Christian beliefs ($Md = 21.00$), Māori religions, beliefs,

and philosophies (*Md* = 20.50), and mixed religious/spiritual beliefs (*Md* = 21.00). Table 4.11 provides the details of the pairwise comparisons.

**Table 4. 11**
*Significant Dunn's Pairwise Comparisons for Measures According to Religious/Spiritual Beliefs for the Rongoā Māori Group*

| **Measures** | **Group Pairs** | **Test Statistic (*H*)** | **Std Error** | **Std Test Statistic** | ***p**** |
|---|---|---|---|---|---|
| SWBQ | No religion – Māori philosophies | -36.15 | 10.52 | -3.44 | .012 |
| | No religion – Mixed | -37.56 | 9.80 | -3.83 | .003 |
| SWBQ Communal | No religion – Christian | -41.31 | 13.00 | -3.18 | .031 |
| SWBQ Environmental | Christian – Mixed | -38.91 | 12.16 | -3.20 | .029 |
| SWBQ Personal | No religion – Māori philosophies | -32.62 | 10.49 | -3.11 | .039 |
| | No religion – Mixed | -31.92 | 9.77 | -3.21 | .023 |
| | No religion – Christian | -53.49 | 13.04 | -4.10 | .001 |
| SWBQ Transcendental | No religion – Māori philosophies | -41.23 | 10.49 | -3.93 | .002 |
| | No religion – Mixed | -48.56 | 9.77 | -4.97 | < .001 |

*Significance values adjusted by the Bonferroni correction for multiple tests.

***Age***

Among the rongoā Māori group, participants aged 46-55 years had the highest mean scores for frequency of use of rongoā Māori practices (*M* = 6.52, *SD* = 2.16), closely followed by participants aged 56 years and older (*M* = 6.45, *SD* = 2.54) and participants aged 18-25 years (*M* = 6.14, *SD* = 2.22). Participants aged 18 – 25 had the highest SF-12 PCS mean score of 16.68 (*SD* = 3.03) and the lowest mean scores for SCS-R, SF-MCS, SWBQ, SWBQ communal,

SWBQ personal, and SWBQ transcendental. Participants aged 56 years and older had the highest mean scores for the majority of the measures: BIT (*M* = 41.73, *SD* = 5.16), SCS-R (*M* = 75.02, *SD* = 14.18), SF-MCS (*M* = 19.55, *SD* = 3.24), SWBQ (*M* = 87.09, *SD* = 15.35), SWBQ communal (*M* = 20.55, *SD* = 3.67), SWBQ environmental (M = 23.55, *SD* = 2.16), SWBQ personal (*M* = 21.18, *SD* = 2.79), and SWBQ transcendental (*M* = 21.82, *SD* = 3.87).

Pearson's correlation coefficients did not find a statistically significant relationship between age and SCS-R scores for both the RM and non-RM groups. Spearman's Rho correlation coefficients were assessed and found that among the RM group, age was positively significantly associated with SF-12 MCS ($r_s$ = .256, *p* = .003), SWBQ ($r_s$ = .237, *p* = .006), SWBQ environmental ($r_s$ = .216, *p* = .013), SWBQ personal, ($r_s$ = .190, *p* = .029), and SWBQ transcendental ($r_s$ = .228, *p* = .009). For the non-RM group, Spearman's Rho correlation coefficients found that age was negatively significantly associated with SF-12 PCS ($r_s$ = -.187, *p* = .048). No other significant results were found for the non-RM group.

There were no significant differences according to gender in this study.

**Research Questions**

This section describes the quantitative findings in relation to four of the research questions of this study.

***Is there a relationship between engagement in rongoā Māori practices and enhanced physical well-being?***

Mann-Whitney U tests were conducted to assess for significant differences between the RM and non-RM groups. Results showed that for the PCS subscale, although the RM group had a higher mean rank (124.27) than the non-RM group (*Mean rank* = 120.41), the difference was not statistically significant (*p* = .668). Mann-Whitney U tests also showed that the RM group (*Mean rank* = 131.78) had significantly higher total SF-12 scores than the non-RM group (*Mean rank* = 111.57), (*U* = 8616.500, *z* = 2.231, *p* = .026, *r* = .14), with a small effect size.

As shown in Table 4.7, the RM group had a higher median score for the SF-12 than the non-RM group. However, the non-RM group had a slightly higher median score on the physical health subscale (PCS) (*Md* =16.35) than the RM group (*Md* = 16.00). Spearman's Rho

correlation coefficients were conducted using scores on the SF-12 and the PCS subscale and the frequency of use of rongoā Māori practices. Both the SF-12 ($r_s$ = .128, $p$ = .145) and the PCS subscale ($r_s$ = .068, $p$ = .435) had positive associations with frequency of use of rongoā Māori, although neither were statistically significant.

***Is there a relationship between engagement in rongoā Māori practices and enhanced spiritual well-being?***

Mann-Whitney U tests were then conducted to assess for significant differences between the RM and non-RM groups. For SWBQ, the RM group had significantly higher scores (*Mean* rank = 155.83) than the non-RM group (*Mean rank* = 83.22), ($U$ = 11791.500, $z$ = 8.010, $p$ <.001, $r$ = .51), with a large effect size. As shown in Table 4.12, the RM group had significantly higher scores than the non-RM group across the four SWBQ subscales.

As shown in Table 4.7, the RM group had considerably higher mean scores for SWBQ and its four subscales than the non-RM group. Spearman's Rho correlation coefficients were performed to assess the relationship between SWBQ and its four subscales and the frequency of use of rongoā Māori practices within the RM group. The SWBQ scale ($r_s$ = .381, $p$ <.001) as well as the environmental ($r_s$ = .397, $p$ <.001), and personal ($r_s$ = .355, $p$ <.001) subscales of the SWBQ showed positive, moderate, statistically significant relationships with frequency of use of rongoā Māori. The SWBQ communal ($r_s$ = .230, $p$ = .008) and transcendental subscales ($r_s$ = .292, $p$ <.001) showed small statistically significant and positive relationships with the frequency of rongoā Māori use.

Age, religious/spiritual beliefs, and frequency of use of rongoā Māori were all significantly correlated with SWBQ and SWBQ subscale scores. To determine which of these independent variables contributed to the greatest variance in SWBQ scores, a standard multiple linear regression analysis was performed. Assumption testing indicated that no outliers were found, and assumptions of homoscedasticity, linearity, and multicollinearity were met. Mahalanobis distances did not exceed the critical value for $df$ = 3 of 16.27 for any cases, signalling multivariate outliers were not a concern. The combined variables were responsible for 19.2% of the variance in SWBQ scores, demonstrating a large effect. $R^2$ for the overall model was .192 and adjusted $R^2$ = .173, F(3, 128) = 10.162, $p$ <.001, $f^2$ = .24. As shown in Table 4.13, frequency of use of rongoā Māori, age, and religious/spiritual beliefs were all significant predictors of SWBQ scores. Frequency of use of rongoā Māori was the most significant

predictor variable for SWBQ scores, followed by age and religious/spiritual beliefs. Participants with a higher frequency of use of rongoā Māori were anticipated to score 1.858 points higher on the SWBQ scale than participants with a lower frequency of use of rongoā Māori.

**Table 4. 12**
*Mann-Whitney Results for the Spiritual Well-Being Measures According to Rongoā Māori and Non-Rongoā Māori Groups*

| **Measure** | **RM Group** | **Non-RM Group** | **Mann-Whitney** | ***p*** | ***r*** |
|---|---|---|---|---|---|
| | **Mean Rank** | **Mean Rank** | | | |
| SWBQ | 155.83 | 83.22 | $U$ = 11791.500, $z$ = 8.010 | < .001 | .51 |
| SWBQ Communal | 143.19 | 98.11 | $U$ = 10123.500, $z$ = 4.992 | < .001 | .31 |
| SWBQ Environmental | 148.59 | 91.75 | $U$ = 10835.500, $z$ = 6.287 | < .001 | .40 |
| SWBQ Personal | 145.61 | 95.26 | $U$ = 10443.000, $z$ = 5.569 | < .001 | .36 |
| SWBQ Transcendental | 156.81 | 82.07 | $U$ = 11920.500, $z$ = 8.260 | < .001 | .53 |

*Note.* Effect sizes: $r$ = .10 is considered small, $r$ = .30 is considered medium, and $r$ = .50 is considered large.

**Table 4. 13**
*Standard Multiple Regression Analysis for Significant Predictor Variables and Spiritual Well-Being*

| **Predictor Variable** | ***B*** | **β** | ***t*** | ***p*** |
|---|---|---|---|---|
| Age | 2.456 | .216 | 2.698 | .008 |
| Religious/Spiritual Beliefs | 1.391 | .179 | 2.239 | .027 |
| Frequency of rongoā Māori use | 1.858 | .321 | 4.019 | < .001 |

***Is there a relationship between engagement in rongoā Māori practices and enhanced psychological well-being?***

Mann-Whitney U tests were conducted to assess for significant differences between the RM and non-RM groups. For BIT, the RM group had higher scores (*Mean rank* = 136.84) than the non-RM group (*Mean rank* = 105.60), ($U$ = 9284.500, $z$ = 3.450, $p$ <.001, $r$ = .22) with a small effect size. The RM group also had higher MCS subscale scores (*Mean rank* = 135.38) than the non-RM group (*Mean rank* = 107.33), ($U$ = 9091.500, $z$ = 3.102, $p$ = .002, $r$ = .20) with a small effect size.

As shown in Table 4.7, the RM group had higher mean scores for the BIT and SF-12 Mental health subscale than the non-RM group. Spearman's Rho correlation coefficients were performed using scores on the BIT scale, the SF-12 mental health subscale, and the frequency of use of rongoā Māori. Results show the BIT ($r_s$ = .169, $p$ = .053) and SF-12 MCS subscale ($r_s$ = .153, $p$ = .081) both had positive associations with frequency of use of rongoā Māori, although neither were statistically significant.

***Is there a relationship between engagement in rongoā Māori practices and enhanced social well-being?***

An independent samples *t*-test was conducted to compare the SCS-R scores for the RM and non-RM groups. There was a significant difference in scores for the RM group ($M$ = 71.78, $SD$ = 13.40) and the non-RM group ($M$ = 65.94, $SD$ = 14.60; $t(242)$ = -3.256, $p$ = .001, two-tailed). The magnitude of the differences in the means (mean difference = -5.840, 95% CI [-9.40, -2.31]) was small ($\eta^2$ = .046).

As shown in Table 4.7, the RM group had higher mean scores for the SCS-R than the non-RM group. Pearson's correlation coefficients were conducted using scores on the SCS-R scale and the frequency of use of rongoā Māori. Results show a positive, statistically significant association between social connectedness and frequency of use of rongoā Māori ($r$ = .187, $p$ = .032).

Because age, religious/spiritual beliefs and frequency of use of rongoā Māori were all significantly correlated with SCS-R scores, a standard multiple linear regression analysis was performed to determine which independent variables was contributed to the greatest variance in SCS-R scores. Assumption testing indicated that no outliers were found, and assumptions of

homoscedasticity, linearity, and multicollinearity were met. Mahalanobis distances did not exceed the critical value for *df* = 3 of 16.27 for any cases, signalling multivariate outliers were not a concern. Results did not reveal a statistically significant effect, with the combined variables accounting for just 4.8% of the variance in SCS-R scores, demonstrating a small effect. $R^2$ for the overall model was .048 and adjusted $R^2$ = .025, F(3, 128) = 2.132, $p$ = .099, $f^2$ = .05. As shown in Table 4.14, frequency of use of rongoā Māori was the only significant predictor of SCS-R scores.

**Table 4. 14**
*Standard Multiple Regression Analysis for Significant Predictor Variables and Social Well-Being*

| **Predictor Variable** | ***B*** | **β** | ***t*** | ***p*** |
|---|---|---|---|---|
| Age | 1.239 | .113 | 1.299 | .196 |
| Religious/Spiritual Beliefs | .029 | .004 | .044 | .965 |
| Frequency of rongoā Māori use | .995 | .178 | 2.054 | .042 |

# Chapter Five: Ancillary Qualitative Results

This chapter outlines the qualitative findings from the survey's open-ended questions in relation to four of the research questions.

A total of 850 responses were examined, with 128 participants giving at least one response to the seven open-ended questions analysed in the thematic analysis. Responses to these questions were predominantly one or two sentences long, although many participants provided more in-depth answers, ranging from one to 200 words.

A thematic analysis was conducted and identified four overarching themes with several sub-themes. The overarching themes were kaitiakitanga and accessibility, healing, mātauranga, and whakapapa. It is imperative to note that while the themes and sub-themes have been categorised separately, they are inherently interconnected.

Each theme is connected to multiple research questions. See Table 5.1 for a breakdown of which questions each theme relates explicitly to and the questions as they appeared in the survey.

**Table 5. 1**
*Overarching Themes and Related Research Questions*

| Themes | Research Questions | Questions from Survey |
|---|---|---|
| Whakapapa | RQ5: How is rongoā Māori incorporated as part of everyday life?<br><br>RQ6: How does everyday engagement with rongoā Māori contribute to well-being? | - In what ways, if any, do you or your whānau integrate rongoā into your daily lives?<br><br>- How do you think your engagement in rongoā Māori contributes to your well-being? |
| Healing | RQ5: How is rongoā Māori incorporated as part of everyday life?<br><br>RQ6: How does everyday engagement with rongoā Māori contribute to well-being? | - In what ways, if any, do you or your whānau integrate rongoā into your daily lives?<br><br>- What types of conditions, ailments or situations have you used rongoā for?<br><br>- How do you think your engagement in rongoā Māori contributes to your well-being? |
| Mātauranga | RQ5: How is rongoā Māori incorporated as part of everyday life?<br><br>RQ7: What factors enable or inhibit the use of rongoā Māori at home, and how can these barriers be addressed? | - In what ways, if any, do you or your whānau integrate rongoā into your daily lives?<br><br>- What are your thoughts on the use of social networking sites such as Facebook groups being used to share rongoā Māori knowledge?<br><br>- What are the barriers to or facilitators of using rongoā at home?<br><br>- How can these barriers be addressed? |
| Kaitiakitanga and Accessibility | RQ7: What factors enable or inhibit the use of rongoā Māori at home, and how can these barriers be addressed?<br><br>RQ8: What are participants' aspirations for the future of rongoā Māori? | - What are the barriers to or facilitators of using rongoā at home?<br>- How can these barriers be addressed?<br><br>- What are your aspirations for rongoā use in the future? |

## Research Questions

This section briefly describes the qualitative findings in relation to four of the research questions of this study.

### *How is rongoā Māori incorporated as part of everyday life?*

There was substantial variation in how participants reported incorporating rongoā Māori practices in their everyday lives. Some integrate rongoā into daily life for general wellness, for example, through karakia and wai rākau, as well as for specific purposes, including managing health conditions such as mental health or chronic illnesses. Participants also reported utilising rongoā practices to help develop and strengthen connections to the natural environment as well as to their tūpuna and atua. Many also incorporate it through learning and expanding their knowledge about rongoā Māori, teaching others within and outside their whānau by sharing knowledge, or through their mahi as practitioners or teachers. The majority of participants reported using rongoā on a daily or weekly basis. Others incorporate rongoā practices as required, while others do so less regularly. Some participants detailed their daily rongoā practices, from waking up through to going to bed, while most did not report this level of integration. Others chose not to provide details of their everyday engagement with rongoā Māori. As mentioned in Table 5.1, the themes of Whakapapa, Healing, and Mātauranga and their associated sub-themes relate to this research question.

### *How does everyday engagement with rongoā Māori contribute to well-being?*

This research question relates to the themes of Whakapapa and Healing, and the findings are discussed below in the corresponding sections. Although participant responses varied in the level of detail provided, it was evident that rongoā Māori engagement was viewed as undeniably contributing to well-being.

### *What factors enable or inhibit the use of rongoā Māori at home, and how can these barriers be addressed?*

This research question relates to the themes of Mātauranga and Kaitiakitanga and Accessibility, along with their associated sub-themes. Participant responses predominantly focused on the barriers to engagement are discussed further in the corresponding section below. While some participants reported not having any barriers to their rongoā Māori engagement, very few identified enabling factors. These were participants' existing knowledge of rongoā and having access to some native plants for rongoā rākau, such as Kawakawa.

Key strategies to address the identified barriers were increasing knowledge and education on rongoā Māori and tikanga rongoā including through the schooling system and tertiary education providers, as well as easily accessible online resources. In addition, growing native plants at home was identified as being able to improve access to rākau. Also highlighted as helping to address barriers was clear messaging on what is appropriate for Pākehā to engage with to help alleviate fears of appropriation among non-Māori who want to engage with rongoā Māori respectfully.

***What are participants' aspirations for the future of rongoā Māori?***

This research question also relates to the themes of Kaitiakitanga and Accessibility and their associated sub-themes. The aspirations identified by participants are discussed in the Acting as Kaitiaki section, with a key hope for rongoā Māori to grow and flourish whilst being protected and maintaining the reverence it deserves.

## Whakapapa

The theme of Whakapapa incorporates the layers of interconnection that are intrinsic to engagement in rongoā Māori. It also demonstrates the innate relationship between humankind and the natural environment. In addition, engaging with rongoā has helped participants develop and strengthen a sense of connection beyond the self. These layers of interconnection include the sub-themes of connection to te taiao and connection to cultural identity.

### *Connection to te Taiao*

Participants described how their engagement with rongoā Māori included and enhanced their connection to te taiao – the natural environment – and specific aspects of te taiao, including the whenua, ngahere, awa, moana, and marama. For some Pākehā participants, this helped them to feel more at home in Aotearoa New Zealand. Many participants reported spending time in and immersing themselves in te taiao to enhance their connection in addition to cleansing, grounding, and balancing their hinengaro, tinana, and wairua.

> I like to be active in the environment through hikoi to wānanga with myself on something that may be on my mind. The natural environment provides a sense of serenity which helps to slow down, feel the hā of the environment and to settle my thoughts (Participant 1).

> "Just by being in the ngahere, around all our native plants and bush is uplifting and can bring us feelings of relaxation and peace" (Participant 2).

> "Being present in a natural environment such as the ngahere, awa, or moana with the aim of connecting on a wairua level to atua Māori and ancestral environments" (Participant 1).

> "Cleansing my body in Hinemoana when I'm feeling lost, heavy, and in pain. I also follow the Maramataka which my body is now in tune with our environment" (Participant 3).

Some participants reported connecting with the environment as part of their everyday lives, while others described doing so less frequently or only when they felt the need. Nurturing a connection to the environment through appreciation, respect, and picking up rubbish was also highlighted by some participants.

> "Going to the ngahere has grounded me and brought me back to multiple times, going to Tangaroa everyday before mahi cleanses my mind before I begin" (Participant 4).

> "Daily usually through everyday connection to our environment/home which has a lot of native birds and endangered wildlife" (Participant 5).

### *Connection to Cultural Identity*

Participants described how engaging with rongoā Māori helps to establish and strengthen their connection to their cultural identity alongside their whakapapa and tūpuna. Honouring the wisdom of tūpuna and Papatūānuku was highlighted. Developing and enhancing connections to cultural identity was reported as contributing to well-being through helping participants feel more empowered and complete, helping them to restore their identity whilst addressing intergenerational trauma that resulted from colonisation. Some participants reported consciously tending to these connections daily, while others do so less frequently or only when they feel necessary.

> "Karakia and general practice of making rongoā connects me to my whakapapa, even if I don't know who that is, and nourishes me spiritually" (Participant 6).

> “To me, rongoā Māori is a way to connect to my Māoritanga, tūpuna, the atua and the environment, helping me to encompass my identity and connect to tūrangawaewae” (Participant 7).
>
> “It gives me a sense of connection. It helps me to learn more about who I am in my culture” (Participant 8).
>
> Rongoā for healthy hinengaro means getting outside, growing kai oranga using ‘Hua parakore’ principles. This not only grows kai but also grows me as a person. Connection to atua, connection to nature and the whenua, connection through whakapapa, e.g. the kākano I use grows the same food that my mokopuna will get to eat. The kākano is a taonga to be nourished and cherished along with the whenua (Participant 9).

**Healing**

The theme of Healing incorporates engagement in rongoā Māori and its various modalities for an array of ailments, conditions, and situations. Participants described utilising rongoā for general health and well-being, short-term ailments, chronic illnesses, injury, mental health and wairua-related issues (see Table 5.2). Participants varied in their use of rongoā for healing, from personal engagement as an individual to interpersonal engagement with whānau and friends, as well as community engagement through their mahi (work). The sub-themes identified were Hauora and Preference for Natural Approaches to Healing.

**Table 5. 2**
*Ailments, Conditions, Illnesses, and Situations Participants Reported Using Rongoā Māori for*

| | **Specific ailments, conditions, illnesses, or situations** | **Rongoā modalities used** |
|---|---|---|
| General health and well-being | Daily skincare; overall health; immunity; enhancing well-being. | Karakia; rongoā rākau (balms, wai rākau, rongoā baths); kai, inu. |
| Short-term conditions | Skin conditions (cuts, rashes, boils, bites, bruises, burns, infections, cradle cap); respiratory issues; chest infection; inflammation; dental issues; colds, flu, coughs; viral and bacterial illnesses; earache; muscle pain; joint pain; menstrual issues; pregnancy; headaches; stomach pains; worms; weight loss; optic neuritis; palliative care; sciatica; sleep issues; skeletal alignment. | Karakia; rongoā rākau (wai rākau, pani, whakapiripiri, tinctures); mirimiri; childbirth rituals. |
| Chronic illnesses and conditions | Skin conditions (eczema, psoriasis, diabetic inflamed skin); diabetes; heart disease; kidney failure; chronic pain; support with cancers; strokes; fibromyalgia; arthritis, high blood pressure; circulation; coronary angiospasm; respiratory issues; autoimmune diseases; menstrual issues; multiple sclerosis; appetite increase; sleep issues, asthma; swollen joints (arthralgia); digestion and gut health. | Karakia; rongoā rākau (wai rākau, whakapiripiri, panipani, oils, rongoā baths); mirimiri; romiromi; wairua healing. |
| Injury | Sprains; strains; broken bones; pain (lower back, knee, neck, hip, spinal); skin-related injuries (wounds, sores, cuts, grazes, burns, | Karakia; romiromi; mirimiri; rongoā rākau (rongoā baths, |

| | | |
|---|---|---|
| | bites); pulled muscles; muscle spasms; brittle bones; body recovery after training; sports injuries; head wounds; pain relief; skeletal alignment; pain relief for dog. | panipani, poultice; oils; wai rākau); time in ngahere. |
| Mental health | Depression; anxiety; stress; grief; help move mamae; emotional and psychological trauma; seeking relaxation and calmness; post-traumatic stress disorder; lifting sadness; lifting mauri; reconnecting with self; reducing head noise and distress; addictions; suicidal ideation; personal interconnection; imbalances; settle thoughts; grounding. | Karakia; immersion in and connection with te taiao; growing kai; wānanga; cleansing in moana; mirimiri; rongoā rākau (wai rākau, poultice); matakite; whitiwhiti kōrero; pūrākau; wairua healing; pure; tohi. |
| Wairua | Restore tapu; intergenerational trauma; wairua clearing, strengthening, and healing; grounding; connecting to tūpuna, atua, the Earth, environment, whenua, whakapapa; releasing trauma; spiritual attacks; lift sorrows and pains; nightmares; mauri; makutu; develop a sense of tūrangawaewae; emotional attachment; lifting and cleansing negative energies. | Karakia; mirimiri; immersion in te taiao; rongoā rākau (wai rākau); matakite; taonga pūoro; connecting with Tangaroa and Papatūānuku; blessings from tohunga; romiromi; whitiwhiti kōrero. |

*Note*: Participants did not report all engagement with rongoā. Some participants preferred to keep their engagement private, while others chose not to elaborate further than the categories or modalities they have engaged with.

### ***Hauora***

Participants described how their engagement with various rongoā modalities led to healing experiences and contributions to their well-being across four main aspects of hauora: physical, psychological, social, and spiritual. Some participants referred to specific areas of well-being that rongoā has contributed to, particularly spiritual well-being. Many others outlined how the aspects of hauora are interconnected; therefore, rongoā has contributed to their overall well-being, with a few referencing Te Whare Tapa Whā. A few participants reported using rongoā

mainly for physical ailments and injuries. Several participants also explicitly mentioned that a higher frequency of use of rongoā contributes more extensively to their well-being.

> "I feel a lot more balanced overall and empowered to not be afraid to follow my purpose. I'm settled mentally, have met and developed strong relationships with people and physically, feel much stronger" (Participant 10).

> Hugely! Rongoā helps affirm my identity and belonging as tāngata Māori, and to ensure I can continue with that matrilineal knowledge transmission. It keeps me connected to my whānau, my tinana, my wairua and keeps my hinengaro capable of doing what I need to do (Participant 11).

> "A huge contribution, especially the spiritual. Makes perfect sense being spiritual beings having a human experience" (Participant 12).

> "It [rongoā] certainly contributed to all four attributes of my well-being when I was taking it regularly. The connection between all four states are inseparable therefore all are affected" (Participant 13).

> It has a positive impact on every aspect of my health and it makes me feel good to know I'm integrating and normalising rongoā in the world of my babies so they are empowered to use rongoā and return to their roots as they grow up (Participant 14)

Many participants described how rongoā has contributed to their personal growth, and many reported that rongoā Māori has changed or even saved their lives.

> "It has changed my life, given me my health back, and brought me peace of mind and spiritual enlightenment" (Participant 15).

> I cannot describe it in words, so powerful for all of my being, a deeper understanding of self and the world around me. Definitely filled a huge hole in my life and gives me a sense of purpose, a connection to my whakapapa (Participant 16).

> "For me coming to rongoā Māori was like coming into Te ao Mārama [the world of life and light] for the first time" (Participant 17).

Participants also highlighted that rongoā Māori had changed their understanding of well-being.

> I think my engagement in rongoā Māori helps me recognise that wellbeing is not measurable but it is a dynamic of different taha that can be explored, reflected on and changed. … I can't make myself undisabled, I'm never going to be "well" in the western sense. But I can still have a flourishing mauri (Participant 18).

### *Preference for Natural Approaches to Healing*

Many participants expressed a preference for rongoā Māori and other natural approaches to health, healing, and well-being over Western medicine. The reasons described for this preference include the holistic nature of rongoā that encompasses aspects of health that are neglected or not acknowledged by Western medicine, as well as that rongoā helps to find and address the root cause of issues rather than merely targeting symptoms. In addition, some participants reported negative or unhelpful experiences with the medical health system that pushed them towards rongoā and natural healing, which has helped them to gain positive health outcomes.

> "I only trust rongoā for my hauora" (Participant 3).

> "It [rongoā] has helped me a lot. From taking prescription pain medicine for 20 years, I now only use rongoā" (Participant 19).

> "It [rongoā] has helped me when nothing else has after years and years of treatments" (Participant 20).

> "Great holistic approach that a lot of western medicine doesn't account for" (Participant 21).

Other participants described that despite being medical health professionals, they turn to and often rely on rongoā for healing and well-being. Several participants also highlighted how to some extent, their engagement with rongoā intersects with their involvement in other earth-based and holistic practices such as Druidry and reiki.

> "I am a mental health registered nurse, my job is very difficult at times. I don't believe I would have the strength to carry on if I didn't have my knowledge of rongoā Māori" (Participant 22).

> My Father now a retired GP shared much western medical practice with me, it never sat well with me. There was always so much missing. Wairua was never mentioned. Hauora – complete wellbeing never taken into account. Rongoā Māori felt right from the start, it makes so much sense to me. My journey of healing is only fully realised through rongoā Māori (Participant 17).

> "I strongly believe that the way Māori view health – physical, spiritual, mental and community is essential to all healing modalities. Colonisation has not destroyed it, but western paradigms of medicine and healing completely disregard everything other than the symptoms" (Participant 23).

**Mātauranga**

The theme of Mātauranga includes how participants apply their knowledge of rongoā in their daily lives outside of explicit healing, as previously discussed in the section on the theme of Healing. It also incorporates the current state of mātauranga rongoā transmission as described by participants. Teaching and Learning and the Impacts of Colonisation and Globalisation were identified as sub-themes.

***Teaching and Learning***

Some participants' engagement with rongoā includes learning, which can be self-directed, with whānau, or in formal settings through tertiary education or employment. Other participants detailed acquiring mātauranga rongoā as gifts from their tūpuna, including learning from deceased ancestors. Some participants described the importance of learning more about rongoā before being comfortable furthering their engagement. Others outlined that the teaching of mātauranga rongoā is part of their daily lives through their mahi or sharing knowledge with whānau members, particularly their children.

> "We meet fortnightly in wānanga, but I use daily …. and am regularly building my collection of rākau mātauranga for use with rongoā" (Participant 24).

> "Rongoā is a constant in our home, we are always learning, everyday, and always putting into practice the things we have learned" (Participant 2).

> "As a Māori Kaiako, I include topics such as use of our whenua to help us e.g., making kawakawa teas/balms for health, karakia daily. It is more about getting to know more about the topic rather than practicing it" (Participant 8).

***Impacts of Colonisation and Globalisation***

Some participants described how the effects of colonisation have impacted their knowledge of rongoā, specifically through disconnection from Te ao Māori as well as the loss of mātauranga within whānau. There were mixed views among participants regarding the transmission of mātauranga rongoā. Many highlighted that kanohi ki te kanohi (face to face) learning from whānau, hapū, and iwi is the ideal way to learn about rongoā. However, some participants also acknowledged that this type of learning is not an option available for everyone. Similarly, there were varied opinions around mātauranga being shared through online mediums such as social networking sites. Many endorse online platforms as an effective way to share and gather information but expressed hesitancies surrounding monitoring what is shared to ensure it is safe and correct. Other participants do not support mātauranga rongoā being shared in this manner for many reasons, including risks of misinformation, lack of tikanga, and risks of appropriation.

> I think there's definitely still a lot of protection of knowledge, though this can be understood as a consequence of acts like the Tohunga Suppression Act. However, there are diverse realities of Māori which means that many likely do not know where to go to access knowledge about rongoā Māori. This ends up in a type of fate-keeping situation (Participant 10).

> The intergenerational trauma that colonisation has caused – loss of the culture and language. My Kuia and whānau had our culture beaten from them and as a result, never passed down any knowledge. So I personally have struggled with the knowledge of rongoaa in regards to what, how, why, when, where, who, etc. The only knowledge available is limited on the internet. Being born and raised in a city away from where I come from has created a barrier of not knowing who, or where to get this knowledge (Participant 25).

> It is important to follow tikanga, however, it is also important to remember our Tīpuna were innovative and adapted to utilise new materials found in new

> environments, they knew how to evolve and harness everything for efficiency. I guess it's all about which perspective you come from (Participant 26).
>
> I think it's divisive if we don't move forward. We don't live in an iwi or hapū situation anymore and not all of us live on our whenua. That creates barriers for those of us who have little connection to our whānau, whenua, iwi and or tohunga from our whenua. There is a place for traditional learning but us as Māori need to expand on our thinking. I'm for it [the use of social networking sites to share knowledge] but like anything on the internet do your research that backs up that knowledge. People are lazy and don't. Then the blame game happens and also fierce tikanga keepers think everything is only one way (Participant 27).

**Kaitiakitanga and Accessibility**

This theme includes the accessibility to and protection of mātauranga rongoā, rongoā practices, and the natural resources that are incorporated with rongoā. It also incorporates challenges to this accessibility and protection and potential ways to address them. The sub-themes of barriers to engagement and acting as kaitiaki were identified.

***Barriers to Engagement***

While some participants reported no barriers to engaging with rongoā at home, many participants highlighted difficulties across individual, interpersonal, community, and societal levels. Extensively mentioned as barriers to engagement with rongoā were lack of knowledge, especially tikanga rongoā and the accessibility of this information as well as appropriate guidance or teaching. For example, "Lack of knowledge of traditional rongoā Māori and ensuring the right practices are being completed" (Participant 28) and "Tikanga – knowing how to properly practice rongoā with the right guidance" (Participant 8) were identified as barriers to engagement. In addition, some participants reported a sense of loss that they do not have more knowledge of rongoā.

Access to rongoā services and native bush/plants that participants want or need to use was highlighted alongside restrictive legislation. Participants also outlined the cost of courses and services as issues of accessibility. Other barriers identified by participants included the stigma and beliefs of others such as whānau and flatmates, time commitments, clashes with religious beliefs, as well as confidence and belief in one's abilities.

> "Essentially, due to deforestation, it is not easy to access a range of rongoā for myself, except for kawakawa. Therefore, travel has to be taken to areas that will be difficult to access on foot" (Participant 1).

> "I tend to keep my rongoā practices private, I worry others who I live with will not understand the things I do" (Participant 29).

> "A barrier might be the ready availability of fast-acting "mainstream" drugs such as paracetamol or aspirin, which are tempting to take instead of rongoā" (Participant 30).

Many non-Māori participants described being concerned or unsure about engaging with rongoā in terms of what is considered cultural appropriation. For example, "Not knowing how to engage with it [rongoā] as a non-Māori" (Participant 31) and "As I'm not Māori, I am concerned of cultural appropriation in my practices" (Participant 32) were highlighted as barriers to engaging with rongoā at home.

***Acting as Kaitiaki***

Participants described a need to protect rongoā as a taonga to be valued, respected, and upheld. This includes protecting the mātauranga and practices as well as the natural environment and resources relied upon. The majority of participants highlighted an explicit desire to see rongoā Māori continue to grow and flourish. For some, this includes rongoā being more widely recognised and promoted within society as well as accepted and respected within the health system to the same extent as Western medicine.

> "Land and plants must be respected and honoured, therefore, sustainability and protection of these plants should be a priority" (Participant 33).

> Ensuring more and more people are encouraged to share their knowledge and guide others on their rongoā hikoi, to keep the tapu and sacred aspects of this beautiful Kaupapa safe and delivered with the mana and reverence it deserves, whilst letting others feel welcome to join in this hikoi to learn the knowledge safely… and keep sharing this and using rongoā practices safely (Participant 34).

Coupled with this were concerns about the appropriation, commercialisation, and westernisation of rongoā. Some non-Māori participants suggested that having clear messaging on what level of engagement with rongoā is appropriate for Pākehā would help prevent

appropriation. Increasing education and awareness while upholding mana were key strategies identified by participants to help ensure rongoā is sustained and passed on to future generations, along with the protection and revitalisation of native bush.

> I think hapū and iwi have always had a close relationship with sustainability and protection of resources through the value of kaitiakitanga. However, urbanisation and commercialisation has not only impacted the environment but also alienated people from cultural knowledge bases. So I guess I'm concerned about the sustainability of local/regional rongoā Māori knowledge being passed on to future generations in a culturally sensitive way, and the ability of those practices to be carried out in the future due to environmental impacts such as climate change (Participant 7).

> Like reo Māori I believe we will need strategic plans to ensure the revitalisation of our knowledges and practices. An awesome way to start would be incorporating more rongoā Māori information into horticulture/science/Māori classes at kura (Participant 8).

# Chapter Six. Discussion

This research aimed to explore the relationship between everyday engagement with rongoā Māori practices and the contribution of this engagement to well-being. Two ancillary aims were to explore how rongoā Māori is incorporated into everyday life together with barriers and facilitators to this incorporation and to explore participants' aspirations for the future of rongoā Māori. An online questionnaire examined these aims through quantitative measures of dimensions of well-being as depicted by the Te Whare Tapa Whā model. In addition, open-ended questions enabled participants to provide narrative data on their subjective experiences of their rongoā Māori engagement and well-being.

This chapter provides an overview of the study's key findings, followed by a discussion of the findings in relation to prior research and literature. The study's limitations are outlined alongside suggestions for future research. Lastly, concluding comments are presented.

## Summary of Key Findings

Overall, the findings of this study demonstrate a positive relationship between both use of rongoā Māori practices in general and the frequency of rongoā Māori usage and several dimensions of well-being for participants.

The findings of the eight research questions are summarised below:

### *1. Is there a relationship between engagement in rongoā Māori practices and enhanced physical well-being?*

The rongoā Māori group had significantly higher SF-12 scores than the non-RM group, suggesting that the use of rongoā Māori resulted in better general health. However, there was no difference between groups on the Physical Component Summary (PCS) subscale, suggesting that physical health was not impacted. There was a positive association between the frequency of rongoā Māori use and SF-12 and PCS scores, suggesting that a higher frequency of use resulted in improved general and physical health. However, this was not at a level of statistical significance.

***2. Is there a relationship between engagement in rongoā Māori practices and enhanced spiritual well-being?***

Overall, SWBQ scores and scores on the four SWBQ subscales, communal, environmental, personal, and transcendental, were significantly higher among the RM group than the non-RM group, suggesting the use of rongoā Māori resulted in improved spiritual well-being. There was a significant positive correlation between the frequency of use of rongoā Māori practices and spiritual well-being, indicating that greater frequency of use results in more significant improvements to spiritual well-being. The frequency of use was the most significant predictor variable of spiritual well-being, followed by age and religious/spiritual beliefs.

***3. Is there a relationship between engagement in rongoā Māori practices and enhanced psychological well-being?***

The rongoā Māori group had significantly higher BIT and SF-12 Mental Component Summary (MCS) scores than the non-RM group, suggesting that the use of rongoā Māori resulted in better mental health. In addition, there were positive associations between the frequency of use of rongoā Māori practices and both BIT and MCS scores, suggesting that a higher frequency of use improved psychological well-being. However, this was not at a level of statistical significance.

***4. Is there a relationship between engagement in rongoā Māori practices and enhanced social well-being?***

The rongoā Māori group had significantly higher SCS-R scores than the non-RM group, suggesting that the use of rongoā Māori resulted in improved social well-being. There was a significant positive correlation between the frequency of use of rongoā Māori practices and social well-being, indicating that greater frequency of use results in more significant improvements to social well-being. Frequency of use was the only significant predictor variable for SCS-R scores.

***5. How is rongoā Māori incorporated as part of everyday lives?***

There was considerable variation in how participants reported utilising rongoā as part of their everyday lives. For example, from use for everyday wellness practices, enhancing connections, and engagement for specific purposes, including managing short-term and chronic conditions,

injuries, mental health, and wairua-related issues through to teaching and learning about rongoā and use as part of their mahi.

***6. How does everyday engagement with rongoā Māori contribute to well-being?***

Engaging with rongoā Māori practices contributed to subjective feelings of well-being across multiple interconnected dimensions. Specific areas of well-being identified included hinengaro, tinana, whānau, and wairua, as well as connections to the natural world, tūpuna, whakapapa, and cultural identity.

***7. What factors enable or inhibit the use of rongoā Māori at home, and how can these barriers be addressed?***

Participants highlighted inhibiting factors to using rongoā Māori at home across the individual, interpersonal, community, and societal levels. Knowledge and accessibility of knowledge and resources were identified as both enabling and inhibiting factors. Increased access to knowledge and resources were highlighted as key strategies to address these barriers.

***8. What are participants' aspirations for the future of rongoā Māori?***

A key aspiration highlighted was for rongoā Māori to grow and be more widely utilised, recognised and accepted within Aotearoa New Zealand. Essential to these aspirations were that rongoā Māori practices and knowledge are respected with their mana upheld and tikanga adhered to, including protection from appropriation, commercialisation, and Westernisation.

The following sections will discuss the above findings in more detail.

## Rongoā Māori Engagement and Well-Being

The quantitative analyses found positive relationships with the use of rongoā Māori for physical, psychological, social, and spiritual dimensions of well-being. The contribution of rongoā Māori engagement to well-being as perceived by participants through their subjective experiences was also substantial. Psychological, social, and spiritual dimensions of well-being all demonstrated statistically significant results. A lack of significant results for physical well-being could be due to the use of rongoā for physical health needs such as healing injuries or soothing pain, which returns participants to 'normal' physical health when effective. The RM group's engagement with rongoā could have contributed to improvements in their physical health and well-being that was initially lower than the non-RM group, which the current study

did not account for. Additionally, the RM group reported using rongoā for physical health needs such as skin conditions, heart disease, blood pressure, circulation, and digestion issues. The scale used to measure physical health in this study may not have been able to reflect improvements in well-being for these types of issues as it was more focused on physical functioning and bodily pain.

Within the open-ended responses, participants emphasised the interconnected and inseparable nature of the dimensions of well-being, acknowledging that their rongoā Māori engagement contributed to all interconnected aspects of hauora. Rongoā modalities were utilised to aid various conditions, including injuries, short-term conditions such as respiratory illnesses, chronic conditions such as chronic pain and high blood pressure, mental health conditions including stress, depression, and anxiety, and wairua-related issues such as cleansing negative energies. Numerous participants described the transformative nature of their engagement with rongoā contributing to personal growth as well as changing or even saving their lives, aligning with recent research by Gemmell (2020) that highlighted rongoā's ability to assist in alleviating suicidal behaviours. The current study's findings coincide with previous research outlining healing occurring across multiple dimensions of hauora, including physically through pain relief, increased mobility, and flexibility; psychologically with stress, anxiety, and emotional distress; spiritually through promoting vitality and balance; and socially with increased social support (Gregg et al., 2006; Gemmell, 2020).

The relationship between the use of rongoā Māori in general and mental health was significant. Rongoā Māori use for mental health-related issues was the second highest reported reason for participants' engagement with rongoā healing practices. Within the open-ended responses, participants also emphasised utilising rongoā for their hinengaro to heal emotional mamae, uplift their mauri, assist with specific mental health struggles, and promote calmness and relaxation. These findings indicate that people use rongoā Māori because it helps improve their mental health and psychological well-being. The targeting of mauri within rongoā use for hinengaro demonstrates that rongoā Māori's contribution to mental health may be linked to spiritual well-being, highlighting the interconnected nature of hauora. Furthermore, this supports Durie's (2001) proposition that the enhancement of mauri may be one of the most fundamental outcomes of rongoā Māori healing.

Additionally, the relationship between the use of rongoā Māori in general, and the frequency of use, was significant for social well-being. The scale used to measure social well-being in

this study relates to a sense of belonging and connectedness with others and the world (Lee et al., 2001), consistent with rongoā Māori's focus on interconnectedness. Within the open-ended responses, there was less specific mention of social well-being in terms of connecting with other people and social functioning. However, there was an emphasis on the connections that rongoā Māori engagement contributes to and enhances—suggesting and reinforcing that strengthening these connections are a key function of and reason for rongoā Māori engagement.

In particular, the relationship between the use of rongoā Māori and spiritual well-being was prominent and highly significant. Engagement with rongoā Māori may contribute to stronger spiritual well-being; however, it is also possible that strong spiritual well-being initiates interest in rongoā. The qualitative and quantitative findings support both possibilities, although they indicate that the former is more likely to be the primary causal factor in the current study. Religious/spiritual beliefs were a significant predictor of SWBQ scores. Participants in the RM group reported having religious/spiritual beliefs considerably more than those in the non-RM group. Based on the assumption that having religious or spiritual beliefs generates enhanced spiritual well-being, these findings could support the notion that having strong spiritual well-being initiates interest in and use of rongoā Māori. On the other hand, frequency of use of rongoā Māori was the most significant predictor of SWBQ scores, and the SWBQ transcendental subscale was the most significant with the largest effect size. The transcendental subscale relates to the relationship of the self with something or someone beyond the human level (Gomez & Fisher, 2003, p. 1976), which aligns with rongoā Māori's emphasis on the interconnected nature of the world, including between humans, te taiao, and the cosmos. Participants reported utilising rongoā Māori for wairua-related issues or situations more than for any other type of condition, ailment, or situation. Within the open-ended responses, there was a notable emphasis on rongoā being used to support wairua-related issues and on rongoā's contribution to spiritual well-being. These findings all indicate that participants engage with rongoā Māori to tend to and strengthen their spiritual well-being, reinforcing the notion that engagement with rongoā Māori contributes to enhanced spiritual well-being.

The significance of rongoā Māori to wairua (and vice versa) highlighted in this study aligns with the understanding of rongoā as a primarily spiritual or wairua-based practice (Ahuriri-Driscoll, 2014; Ahuriri-Driscoll et al., 2008; Durie et al., 1993; Jones, 2000b; Mark, 2012; McGowan, 2000). Wairua is fundamental to well-being and the key to understanding health and sickness within te ao Māori (Cram et al., 2003; Valentine et al., 2017). The emphasis on wairua in this study is consistent with previous research where participants defined healing as

taking place on a spiritual level instead of only treating the physical symptoms of illness (Cram et al., 2003). This also aligns with findings by Jones (2000a) that highlighted that wairua is frequently the focus of rongoā Māori healing practices as it is believed to be the most successful approach to treating most health conditions, consistent with the belief that many illnesses are spiritual in origin. The importance of wairua demonstrated in the current study and previous research continues to reflect its importance within te ao Māori as part of daily life and healing practices (Mark & Lyons, 2010). These findings demonstrate the significance of spiritual well-being as a core component of health and well-being that needs to be addressed within healthcare in Aotearoa New Zealand. Such understandings support the role of rongoā Māori within the health system and continue to nudge the narrative of what it means to be well.

Participants also accentuated the contribution of their rongoā Māori engagement to their connections to te taiao, whakapapa, tūpuna, and their cultural identity as Māori. They also highlighted that the enhancement of connections to te taiao was balancing, cleansing, and grounding for their hinengaro, tinana, and wairua. Developing and strengthening connections to cultural identity were reported as helping participants to feel more empowered and complete, helping them to restore their identity whilst addressing intergenerational trauma that resulted from colonisation. These findings are consistent with previous research (Ahuriri-Driscoll et al., 2008; Diamond, 2019; Gemmell, 2020; Mark & Lyons, 2010). For example, Mark & Lyons (2010) found that whānau, whakapapa, and whenua are significant for Māori health and well-being alongside the mind, body, and spirit. The significance of connecting to the natural environment, cultural identity, and whakapapa were also demonstrated by Gemmell's (2020) research as protective factors to help alleviate suicidal behaviours in rangatahi Māori. Diamond's (2019) participatory action research implementing a rongoā Māori programme also found that rongoā became a means of developing identity and contributing to well-being. The strengthening of connection to Māori cultural identity through rongoā Māori engagement can therefore be understood as contributing to the processes of decolonisation and indigenisation for Māori. This can occur through healing the impacts of colonisation by reconnecting to te ao Māori, upholding mātauranga Māori, values, and customs to strengthen tino rangatiratanga (Mark, 2012). In this sense, rongoā Māori has multiple layers of healing that contribute to health and well-being for individuals and collectives across numerous dimensions.

It is clear that the contribution to well-being as perceived by participants was extensive. The extent to which participants reported their engagement with rongoā Māori contributed to their well-being was not always reflected in the quantitative well-being measures used in this study.

However, as illustrated above, the ways in which rongoā Māori contributes to well-being are likely both direct and indirect and are, therefore, not necessarily measurable. For example: through healing intergenerational trauma, enhancing mauri, contributing to tino rangatiratanga, and generating feelings of connectedness with the environment, whakapapa, and cultural identity do not lend themselves as readily to objective measurement. Nevertheless, these aspects may improve well-being due to the intrinsic holistic nature of hauora through implicitly influencing interconnected aspects of well-being such as hinengaro and whānau. Healing intergenerational trauma, for example, links back to the damage done by colonisation, including disconnection to land and cultural identity that for Māori has been passed down through generations. Rongoā Māori can be viewed as a set of modalities containing the lived realities and experiences of tūpuna. By utilising these modalities, Māori are able to get closer to their tūpuna while healing themselves at the same time. This healing could lead to feelings of strength and pride in that the trauma is healed not only for the individual but for their tūpuna and future generations. Furthermore, enhancing feelings of connectedness beyond the self can contribute to a sense of belonging in the world, which can be empowering and, in turn, impact one's outlook on life (Wong et al., 2021).

The findings demonstrate the inherent difficulty in understanding Indigenous knowledges within a positivist paradigm that emphasises objective measurement over subjective experiences and medical systems that prioritise physical health. This paradigm fails to give credence to the subjective nature of well-being, particularly wairuatanga (spirituality). Previous research on subjective well-being has focused on happiness and life satisfaction. Diener et al. (2018) described the importance of relying on participants' evaluations regarding their overall lives and specific aspects of life, such as well-being, because their responses are based on their conceptions and standards rather than those pre-determined by researchers. As Ahuriri-Driscoll (2014) highlighted, "The personal and direct experience of reality is also crucial, not just observation for the purpose of quantification" (p. 38). Including and emphasising participants' subjective experiences within the current study rather than relying on quantitative data alone supports this assertion. If the current study did not capture subjective data as well as quantitative data, the overall findings might have misrepresented the participants' experiences and well-being outcomes that have resulted from their rongoā Māori engagement. These findings could have missed the true value of rongoā healing practices based on quantitative well-being scales that may not be capable of evaluating the impact that rongoā can have on different areas of well-being, including health improvements across time and

space. The current study's findings demonstrate the ability of rongoā Māori to contribute to holistic well-being beyond the hinengaro, tinana, wairua, and whānau. This illustrates the significance of the intention behind using quantitative measures and how their findings may be interpreted. It alludes to the value of reframing how measures are perceived by seeing them as tools that can contribute to gaining understanding rather than all-important or sole elements of research.

Understanding the interconnected nature of well-being enables rongoā Māori to provide healing benefits that mainstream services fail to deliver. Fulfilling holistic health needs is particularly important to consider given the consistent health inequities experienced by Māori throughout the life course (Waitangi Tribunal, 2019; Whānau Ora, 2019). Rongoā Māori has the potential to offer solutions to issues that Western modernity has caused but is unable to address (McGowan, 2022; Shava, 2019). For example, the increasing stress the health system in Aotearoa New Zealand is under. While this pressure is likely due to an accumulation of contributing factors, arguably, it is at least partly due to the mainstream approach to health that concentrates on targeting symptoms or illnesses once they have already occurred. Rongoā Māori reflects a preventative approach to well-being that focuses on improving general health and well-being that can help to prevent health problems from occurring in the first place. The everyday use of rongoā practices at home could help improve and promote individual and whānau overall wellness as well as assist them in being more self-reliant.

**Rongoā Māori and Everyday Life**

Overall, there was substantial variation in participants' descriptions of how they incorporate rongoā Māori into their everyday lives. Some integrate rongoā practices into daily life for general wellness and specific purposes, including tending to connections or managing health conditions. Others incorporate this mātauranga through teaching or learning. The responses illustrate the multitude of applications and uses of rongoā Māori in everyday life; demonstrating how for many New Zealanders, rongoā Māori is a way of life and a way of connecting beyond the self to their cultural identity and the world around them, rather than something used only in times of specific health need (Boulton et al., 2014; Hakaraia, 2019; Kerridge, 2020). The variance in the integration of rongoā in everyday life illustrated in this study may be due to the enabling and inhibiting factors identified by participants. While there is currently a lack of research exploring how New Zealanders integrate rongoā Māori practices

into everyday life, this study provides some insights into this area. It reinforces the proposition by Jones (2000c) that rongoā Māori is undoubtedly utilised more than what mainstream health practitioners recognise. The incorporation of both Māori and Pākehā participants in this study highlights that the use of rongoā to support well-being and connectedness is not limited to tāngata whenua. It also provides perspectives that are largely missing from the literature. The findings demonstrate the significance of rongoā Māori practices and mātauranga to the daily lives of many New Zealanders that may not necessarily be widely recognised.

Participants provided insights demonstrating how individual, interpersonal, community, and societal variables all influence at-home rongoā engagement. Key barriers identified were a lack of knowledge and accessibility of both knowledge and resources. Also mentioned were personal realities (time commitments, clashes with religious beliefs, and self-confidence) and interpersonal factors (stigma and the beliefs of others). In addition, some participants directly linked their barriers to engagement to colonisation's historical and ongoing impacts on them and their whānau. These findings are congruent with research by Wikaire (2020), highlighting whānau realities and social and political contexts as inhibiting whānau participation with rongoā Māori services as well as at-home engagement. On the other hand, some participants reported not experiencing any barriers to their engagement, although very few identified factors enabling it. Interestingly, for some, accessibility and knowledge were also acknowledged as enabling factors to use rongoā Māori at home, demonstrating the diverse realities of New Zealanders. The emphasis on barriers to rongoā engagement indicates that there is currently an abundance of factors inhibiting rongoā Māori engagement for New Zealanders compared to those facilitating it. These barriers must be addressed for everyday rongoā engagement to become an accessible reality. As detailed, rongoā as an accessible reality could enhance individual and whānau hauora in numerous ways and would simultaneously contribute to tino rangatiratanga for Māori by enabling them to have the choice to engage in culturally appropriate well-being practices within their own homes.

The key strategies identified to address the inhibiting factors to rongoā engagement were similar to the aspirations participants outlined for the future of rongoā Māori. The need to protect and sustain rongoā Māori as a taonga to be valued, respected, and upheld was emphasised alongside the passing on of this mātauranga to future generations. Increasing accessibility to knowledge and resources were highlighted as strategies, aligning with aspirations for rongoā Māori to grow and flourish in Aotearoa New Zealand through becoming more widely accepted, recognised, and utilised. These aspirations are in line with those outlined

in previous literature, essentially supporting the revitalisation of rongoā Māori (Ahuriri-Driscoll et al., 2008; Ahuriri-Driscoll et al., 2012; Boulton et al., 2014; Jones, 2000b; 2000c; Mark et al., 2019; Wikaire, 2020). This includes rongoā becoming an equally accessible form of healthcare alongside mainstream health services. Also, at the societal level, it was suggested this could be done through the schooling system and tertiary education as well as easily accessible online resources and more promotion of rongoā in general. Some participants endorsed the use of online platforms such as groups on social networking sites to share and gather information on rongoā; however, participants also expressed hesitancies surrounding the safety and tikanga of this. Diamond (2019) and Wikaire (2020) have also explored the potential of technological tools such as social media to improve access to rongoā Māori information, with participants in Wikaire's (2020) study highlighting similar concerns about the risks of this form of knowledge transmission. These same issues regarding safety would likely also apply to incorporating rongoā within the schooling and health systems. A collaborative approach that included consultation with, advice, and active involvement from local practitioners, iwi, and Te Kāhui Rongoā regarding implementation would be essential to ensuring safety and tikanga were upheld within each rohe (region). Also suggested in the current study was having clear messaging regarding what is appropriate for Pākehā to engage with to help alleviate fears of appropriation of rongoā among non-Māori who want to engage with rongoā Māori practices respectfully. Addressing these barriers is nuanced and not as straightforward as it may initially seem due to the need to first and foremost protect rongoā Māori.

Furthermore, also linked to the aspirations for the future of rongoā were concerns regarding the potential for appropriation, commercialisation, and Westernisation of rongoā Māori. These concerns also support previous research in this area (Ahuriri-Driscoll et al., 2008; Ahuriri-Driscoll et al., 2012; Boulton et al., 2014; Jones, 2000b; 2000c; Mark et al., 2019; Wikaire, 2020), highlighting the enduring tensions that exist for Indigenous knowledges and healing systems within contemporary society. The potential integration of rongoā Māori into the health system initiated concerns regarding the possibility of Westernisation of rongoā. Participants emphasised the importance of maintaining rongoā's mana and integrity as a distinct form of healing rather than changing it to fit into Western health ideals, consistent with previous research (Ahuriri-Driscoll et al., 2008; Jones, 2000b). Also related to integration into the health system and increased access to mātauranga rongoā were apprehensions about the heightened risks of appropriation and commercialisation of rongoā Māori practices and mātauranga. These apprehensions are congruent with those outlined in previous research, which also highlighted

that appropriation and commercialism are already occurring, as with other Indigenous knowledges (Ahuriri-Driscoll et al., 2008; Mark et al., 2019; Wikaire, 2020). The complexities of revitalising rongoā Māori whilst protecting it are prevalent and not easily navigable.

These tensions demonstrate that while individuals, whānau, and communities can do their part as kaitiaki to sustain, protect, and promote the continuance of rongoā Māori by passing on mātauranga and regenerating native bush and plant life; larger-scale aspirations at the societal level are more complicated. Under Te Tiriti o Waitangi, rongoā Māori practices and knowledge, as taonga, are entitled to protection by the Crown government alongside Māori authority to determine and govern its usage (Jones, 2000b, 2000c; Mark et al., 2019). However, despite the government's responsibility to uphold and protect the rights of Māori and their taonga, including from appropriation, commercialisation, and Westernisation, these obligations are yet to be fulfilled. Limiting legislation, lack of recognition within the health system, lack of funding, limited natural resources, and the ongoing impacts of colonisation on rongoā are some of the ways that government protection of rongoā is deficient (Wikaire, 2020). As previously mentioned, a collaborative approach is required moving forward to address these issues whilst actively protecting and promoting rongoā Māori. The revitalisation of rongoā Māori is distinctly beneficial for Māori and is also valuable for the wider Aotearoa New Zealand population. Therefore, despite the prevailing complexities, this does not mean revitalisation should not occur. Instead, it highlights that substantial time, effort, and thought must be continually allocated to overcome and minimise these tensions. The aspirations for the future of rongoā Māori are encouraging. In spite of the difficulties in fulfilling them, it is important to remain hopeful that they can and will be realised. In the meantime, we can all act as kaitiaki of he taonga tuku iho (the treasures passed down from ancestors) to protect and preserve rongoā Māori.

**Limitations and Future Research**

Although contributing to the limited existing knowledge and literature on rongoā Māori engagement among New Zealanders, this study's limitations should be taken into account. Firstly, there was an uneven distribution of demographic factors across the sample, including age, gender, ethnicity, and religious/spiritual beliefs, meaning it is challenging to generalise the results. A larger and more representative sample would be beneficial in future research. Secondly, the way ethnicity data was collected, with participants being able to select multiple

ethnicities without indicating the ethnic group they most identify with, made it difficult to classify participants for analyses. Thirdly, response bias is possible because this research relied on self-reported data. Participants may have answered questions how they believed they should respond to make themselves look favourable and socially desirable (Goodwin & Goodwin, 2013). As a result, participants may have provided answers that portray aspects of their well-being as more positive than their true experiences. Participants were also self-selected and chose to participate in the questionnaire. As a result, it is feasible that many New Zealanders who utilise rongoā as part of their daily lives were not interested in taking part or did not have access to or the opportunity to participate. The findings may therefore be biased towards those who are able, motivated, and interested in participating in online surveys.

Many potential participants started the survey but did not complete it. There are many possible reasons for this, including lack of interest, attention, and survey length. Past research has found that longer surveys tend to have lower completion rates and that respondents are more likely to complete a survey if it takes less than 15 minutes (Liu & Wronski, 2017; Saleh & Bista, 2017). Compared to more straightforward questions, such as multiple-choice questions, open-ended questions also have lower completion rates (Liu & Wronski, 2017). The current study included numerous open-ended questions and took approximately 15-20 minutes to complete, although many participants took longer. Some questions could have been omitted from the survey as they were not necessarily essential to answer the research questions despite providing interesting additional information. The overall completion rate may have increased if the survey had been shorter and included fewer open-ended questions. Therefore, future research utilising surveys should be mindful not to include questions beyond the scope of the research questions to minimise survey incompletion.

Additionally, there were limitations in the measures used in this study. The scales were utilised to measure well-being holistically through the dimensions of well-being according to Te Whare Tapa Whā; however, they were not specifically designed relating to the model. At the time the survey was created, no other established, more appropriate alternatives were available. Using approaches and measures not grounded in te ao Māori can make it challenging to reflect Māori understandings of well-being. Well-being measures developed in accordance with the dimensions of well-being outlined in Māori models of health such as Te Whare Tapa Whā and embedded in te ao Māori would be beneficial for future research in the Aotearoa New Zealand context.

Furthermore, the two groups (RM and non-RM) may not have been equivalent in base-level health. Participants in the RM group may have had more health issues that led them to engage with rongoā Māori in the first place. The well-being scales used in the current study were not able to measure improvements in well-being across time. Rather, they provided a snapshot of participants' well-being when they took the survey. Future research could consider a longitudinal approach to explore health and well-being gains over time.

The fact that the study was conducted during the occurrences of Covid-19, including the second nationwide lockdown, was another limitation. New Zealanders were isolating at home for some of this time while also dealing with the changing regulations of the Covid-19 response. The degree to which these circumstances impacted respondents' physical, psychological, social, and spiritual dimensions of well-being, as well as their ability to engage with rongoā Māori practices and, therefore, their survey responses, is unknown.

Future research could build upon this study and take a qualitative approach that utilises interviews with members of the public who utilise rongoā Māori practices and services to enable more in-depth insights into participants' engagement and well-being experiences with rongoā Māori. For example, this would allow follow-up questions to elicit further details of personal experiences and perceptions. This would result in more meaningful understandings, leading to more valuable inferences and results. Further quantitative research in this area would also be beneficial as most of the literature regarding rongoā is qualitative. However, this must be conducted cautiously to avoid misrepresenting participant realities. The inclusion of a qualitative component would help to mitigate this risk. As previously discussed, although there is growing literature on rongoā Māori in Aotearoa New Zealand, the majority of research has been conducted based on the perspectives of professional providers of rongoā services rather than recipients. While this research is undoubtedly important, further research should be conducted on the recipients of services to gain a deeper understanding from a different perspective.

## Conclusion

While aiming to contribute to the existing literature on rongoā Māori and well-being and demonstrating the significant contributions that rongoā can have to hauora, this study also illustrated the significance that rongoā Māori can have to the lives of New Zealanders beyond contributing to specific health needs. Rongoā has the potential to reconnect individuals to the

natural world, to te ao Māori and their cultural identity, to support decolonisation and tino rangatiratanga for Māori, to generate a sense of belonging, and to promote a different way of looking at and being in the world. As one participant described, “For me coming to rongoā Māori was like coming into Te ao Mārama [the world of life and light] for the first time.”

This study provided the perspectives of both Māori and Pākehā regarding the perceived contribution that their use of rongoā has to their well-being; as well as how they incorporate rongoā Māori into their daily lives that are otherwise missing from the literature. Despite numerous barriers to at-home rongoā Māori engagement, participants supported the potential of rongoā to grow and flourish as a healing practice and way of life for themselves and the collective. The findings from this study could have important implications for healthcare in Aotearoa New Zealand. Exploring the healing and well-being benefits of everyday use of rongoā Māori promotes a holistic preventative approach to health and well-being that is largely absent from the mainstream health system that is under increasing pressure. In addition, the findings could inform strategies moving forward to facilitate the use of rongoā at home to aid individuals and whānau to support their well-being needs.

Throughout the process of this research, lingering feelings of not being Māori enough have impacted my confidence to complete it. However, reading participant responses detailing their experiences with rongoā has served as a reminder that I need to lean into rongoā Māori and the connections it strengthens to help heal these feelings as I continue my journey. Receiving emails from participants thanking me for allowing a space for them to reflect on and share their own journeys and connections also affirmed the importance of my research. It was inspiring to see that many individuals from various backgrounds are interested in learning about and utilising rongoā Māori for healing and as a way of living in connection to the world. I hope this thesis helps to encourage and promote engagement in rongoā Māori to enhance the holistic well-being and lives of individuals and whānau in Aotearoa New Zealand. For those who may be interested in beginning their rongoā journey but are unsure where to start, do not be afraid to reach out. As long as your intentions are genuine and you respect this taonga tuku iho, you have already made the first step.

*Manaaki whenua, manaaki tāngata, haere whakamua.*

Care for the land, care for the people, go forward.

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# Appendix A: Advertisements

1. Facebook Advertisment

Kia ora koutou,
Ko Ngāti Pūkenga tōku iwi. He akonga ahau I Te Kura o Te Hinengaro Tāngata o Te Kunenga ki Pūrehuroa/Massey University.
I am currently completing a Master of Arts (Psychology) at Massey University and am conducting research that explores 'everyday' engagement in rongoā Māori practices among New Zealanders and the contribution of this engagement to perceived well-being.
The research consists of a questionnaire that will take approximately 15-20 minutes to complete. If you currently reside in Aotearoa New Zealand and are over the age of 18, you are able to participate.
If you are interested in participating, please follow the link below and feel free to share it with anyone you think may be interested. Everyone's input will be valued and greatly appreciated.
https://massey.au1.qualtrics.com/jfe/form/SV_6KWncfg8hrkScuO
Thank you!

2. Print Advertisement

# Appendix B: Information Sheet

**NGĀ KUPU WHAKAMĀRAMA/INFORMATION SHEET**

**He aha te kaupapa o tēnei rangahau? / What is this research about?**

Rongoā Māori is a holistic healing system based on traditional Māori beliefs and values. Rongoā Māori encompasses a range of modalities and has a locally specific nature with variations in healing practices, rituals and techniques between regions and iwi. Rongoā Māori can promote well-being and cure illness as well as contribute to the movement towards tino rangatiratanga (self-determination) for Māori. There is currently very little research regarding the current usage of rongoā Māori among New Zealanders. I am conducting a study to explore the engagement in rongoā Māori practices among New Zealanders and the contribution of rongoā practices to perceived well-being.

**Mā wai e mahi tēnei rangahau? / Who is doing this research?**

Ko Lily Keats-Farr tōku ingoa. Ko Ngāti Pukenga tōku iwi. He akonga ahau i Te Kura o te Hinengaro Tāngata o Te Kunenga ki Pūrehuroa/Massey University.

The primary researcher is Lily Keats-Farr, a postgraduate student of the School of Psychology at Massey University. Dr Nicole Lindsay is the supervising staff member. The research will contribute towards the requirements of a Master of Arts (Psychology) degree.

**He aha āku mahi mā ngā kairangahau? / What will I be asked to do?**

If you decide to take part in this research, you will be required to answer some demographic questions regarding your background, including your age, gender and ethnicity. Next are questions regarding your engagement in rongoā Māori practices and a few about your engagement with other health services. Following this are a series of scales designed to measure different aspects of your perceived well-being.

The online questionnaire will take approximately 15-20 minutes to complete. As a token of gratitude for your time and input, you can enter to go in the draw to win one of ten rongoā-based gift packs.

**Mā wai ngā tāngata e whai wāhi tēnei rangahau? / Who can take part in this research?**

If you are a member of the New Zealand public and are 18 years or older, you are eligible to take part in this study.

**He aha ōku mōtika? / What are my rights as a participant?**

Your decision to participate in this questionnaire will imply consent. If you do participate, you have the right to decline to answer or skip particular questions, ask questions about the study, and withdraw from the study at any time. Your responses to the questionnaire will remain completely anonymous, and no material that could personally identify you will be used or captured during this study. All data collected will be stored on the researching student's password secured computer and external hard drive using encryption software. Data security will adhere to the Massey University Code of Responsible Research Conduct.

If you indicate that you would like to receive a summary of the project results or enter the prize draw, you will be directed to an anonymised page to enter your contact email address. This page is not directly connected to the questionnaire and ensures your responses remain confidential.

**Me aha ahau ināianei? / What do I do now?**

If you would like to participate in this research, please select the 'Next' button below to begin the online questionnaire.

**Mēnā he pātai āku, mā wai aku pātai e whakautu? / Who can I contact about the research?**

If you have any further questions or would like to know more about this study, please contact Lily or Nicole:

**Primary Investigator**
Lily Keats-Farr
School of Psychology
Massey University
Palmerston North

Lily.Keats-Farr.1@uni.massey.ac.nz

**Research Supervisor**
Nicole Lindsay, PhD
School of Psychology
Massey University
Palmerston North 4442

+64 06 951 8080

n.lindsay1@massey.ac.nz

*This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern A, Application 21/21. If you have any concerns about the conduct of this research, please contact Dr Negar Partow, Chair, Massey University Human Ethics Committee: Southern A, telephone 04 801 5799 x 63363, email humanethicsoutha@massey.ac.nz.*

# Appendix C: Questionnaire

---

Thank you for participating in this questionnaire. Your participation implies consent. You have the right to decline to answer any particular question.

**Consent**
I have read and understood the information sheet for this study and consent to the collection of my responses. *(Please click on the 'Yes' choice if you wish to proceed.)*

- Yes (1)
- No (2)

**Demographics**

The following are a series of demographic-related questions. Please remember there are no right or wrong answers.

D1 Age

- 18-25 years (1)
- 26-35 years (2)
- 36-45 years (3)
- 46-55 years (4)
- 56-65 years (5)
- 65+ years (6)
- Prefer not to say (7)

D2 Gender

What gender do you identify as?

---

D3 Which ethnic group do you belong to? (*Select all that apply*).

- New Zealand European (1)
- Māori (2)
- Samoan (3)
- Cook Island Māori (4)
- Tongan (5)
- Niuean (6)
- Chinese (7)
- Indian (8)
- Other (please state, e.g. Dutch, Japanese, Tokelauan) (9)

---

D4 If you identify as Māori, please advise your iwi affiliation(s).

---

D5 Do you live in an urban or rural location?

- Rural (1)
- Urban (2)

D6 Which region do you live in?

- Northland (Te Tai Tokerau) (1)
- Auckland (Tāmaki-makau-rau) (2)
- Waikato (3)
- Bay of Plenty (Te Moana-a-Toi) (4)
- Gisborne (Te Tai Rāwhiti) (5)
- Hawke's Bay (Te Matau-a-Māui) (6)
- Taranaki (7)
- Manawatu-Whanganui (8)
- Wellington (Te Whanga-nui-a-Tara) (9)
- Tasman (Te Tai-o-Aorere) (10)
- Nelson (Whakatū) (11)
- Marlborough (Te Tauihu-o-te-waka) (12)
- West Coast (Te Tai Poutini) (13)
- Canterbury (Waitaha) (14)
- Otago (Ōtākou) (15)
- Southland (Murihiku) (16)

D7 What is your current occupation?

_____

D8 Do you have any religious or spiritual beliefs?

- No religion (1)
- Buddhism (2)
- Christian (3)
- Hinduism (4)
- Islam (5)
- Judaism (6)
- Māori religions, beliefs, and philosophies (7)
- Spiritualism and New Age religions (8)
- Prefer not to say (9)
- Other (please specify) (10) _____

RM_hdr **Section 2: Rongoā Māori**
**This section is interested in your engagement and understanding of rongoā Māori.** The meanings people give to some of these terms differ between individuals; please base your answers on your own understanding or perspective. Please answer honestly and remember there are no right or wrong answers.

RM_1 Do you know what rongoā Māori is?

- Yes (1)
- No (2)

RM_2 would you be interested in learning about rongoā Māori?

- Yes (1)
- No (2)

RM_3 How would you prefer to get this information?

- Online self-directed learning (1)
- Online course
- Wānanga/educational seminar/course in person (3)
- Other (please specify) (4) _____

RM_4 What is rongoā Māori to you? (*Select all that apply*)

- A way of life (1)
- Creating balance (2)
- Sensing (3)
- Being in the ngahere (4)
- Traditional plant medicine (5)
- Connecting with nature (6)
- Lifting or restoring mauri (7)
- Karakia (8)
- Rongoā rākau (9)
- Mirimiri (10)
- Romiromi (11)
- Wai (12)
- Matakite (13)
- Wairua (14)
- Pure (15)
- Healing the land (16)
- Healing the living (17)
- Healing the dead (18)
- Other (please specify) (19) _____

RM_5 do you or your whānau engage in rongoā Māori practices?

- Yes (1)
- No (2)

RM_6 What forms of rongoā have you engaged with? (*Select all that apply)*

- Karakia (1)
- Rongoā rākau (2)
- Mirimiri (3)
- Romiromi (4)
- Wai (5)
- Matakite (6)
- Wairua (7)
- Pure (8)
- Other (please specify) (9) _____

RM_7 Do you identify as a rongoā Māori healer, practitioner or tohunga?

- Yes (1)
- No (2)

RM_8 Do or have you pursued outside assistance from rongoā Māori practitioners/healers/tohunga?

- Yes (1)

- No (2)

RM_9 What types of conditions, ailments, or situations have you used rongoā for? (*Select all that apply*)

- Short-term illness (1)
- Chronic illness (2)
- Wairua related (3)
- Injury (4)
- Mental health (5)
- Other (6) _____

RM_9_text1 Please elaborate if you desire about your use of rongoā for short-term illness.

_____

RM_9_text2 Please elaborate if you desire about your use of rongoā for chronic illness.

_____

RM_9_text3 Please elaborate if you desire about your use of rongoā for Wairua related.

_____

RM_9_text4 Please elaborate if you desire about your use of rongoā for injury.

_____

RM_9_text5 Please elaborate if you desire about your use of rongoā for mental health.

_____

RM_9_text6 Please elaborate if you desire about your use of rongoā for other.

_____

RM_10 How often do you engage in rongoā Māori practices?

- Daily (1)
- Weekly (2)
- Fortnightly (3)
- Monthly (4)
- Yearly (5)
- Prefer not to say (6)
- Other (please specify) (7) _____

RM_11 In what ways, if any, do you or your whānau integrate rongoā into your daily lives?

_____

_____

RM_12 How often do you provide rongoā for your whānau?

- Daily (1)
- Weekly (2)
- Fortnightly (3)
- Monthly (4)
- Yearly (5)
- Other (please specify) (6) _____
- Not at all (7)

RM_13 How often do you provide rongoā for others outside your whānau?

- Daily (1)
- Weekly (2)
- Fortnightly (3)
- Monthly (4)
- Yearly (5)
- Other (please specify) (6) _____
- Not at all (7)

RM_14 What are the barriers to or facilitators of using rongoā at home?

_____

_____

_____

RM_15 How can these barriers be addressed?

_____

_____

_____

RM_16 How have you acquired your current knowledge of rongoā Māori? (*Select all that apply*)

- Whānau/iwi (1)
- Acquaintances/friends (2)
- Formal learning (e.g., through a wānanga) (3)
- Self-directed online (4)
- Self-directed offline (e.g., books) (5)
- Online forums and social networking sites (e.g., Facebook groups) (6)
- Prefer not to say (7)
- Other (please specify) (8) _____

RM_17 How do you think rongoā Māori knowledge should be passed on/transmitted? (*Select all that apply*)

- Taught by whānau/iwi (1)
- Kanohi ki te kanohi (face to face) (2)
- Formal learning (e.g., through a wānanga) (3)
- Online forums and social networking sites (e.g., Facebook groups) (4)
- Other (please specify) (5)

RM_18 how do you think the form of knowledge transmission of rongoā Māori knowledge affects its practice?

_____

_____

_____

RM_19 What are your thoughts on the use of social networking sites such as Facebook groups being used to share rongoā Māori knowledge?

_____

RM_20 Who do you think you engage in rongoā Māori practices?

- Everyone (1)
- Only Māori (2)
- Prefer not to say (3)
- Other (please specify) (4) _____

RM_21 Who do you think should be able to access rongoā Māori knowledge?

- Everyone (1)
- Only Māori (2)
- Prefer not to say (3)
- Other (please specify) (4) _____

RM_22 Rongoā Māori services are currently:

- Easily Accessible (1)
- Somewhat Accessible (2)
- Neither Accessible nor Inaccessible (3)
- Somewhat Inaccessible (4)
- Very Inaccessible (5)

RM_23 How do you think your engagement in rongoā Māori contributes to your well-being? (For example, your physical, mental, social or spiritual well-being).

RM_inf Please indicate the level of importance of the following statements regarding your personal engagement in rongoā Māori tikanga and practices.

RM_24 Saying a karakia to call upon tūpuna and/or atua for aid with healing

- Very Important (1)
- Somewhat Important (2)
- Neither Important nor Unimportant (3)
- Somewhat Unimportant (4)
- Very Unimportant (5)

RM_25 Saying a karakia and being respectful and thankful to the rākau being gathered from

- Very Important (1)
- Somewhat Important (2)
- Neither Important nor Unimportant (3)
- Somewhat Unimportant (4)
- Very Unimportant (5)

RM_26 Taking an offering to the plants you are gathering from

- Very Important (1)
- Somewhat Important (2)
- Neither Important nor Unimportant (3)
- Somewhat Unimportant (4)
- Very Unimportant (5)

RM_27 Returning any leftover plant matter with thanks and respect to the rākau they were taken from; or, if not practical, to the garden or some place, they can be returned to Papatūānuku in their own time.

- Very Important (1)
- Somewhat Important (2)
- Neither Important nor Unimportant (3)
- Somewhat Unimportant (4)
- Very Unimportant (5)

HCS_hdr **Section 3: Health care services**
**The next few questions are interested in your engagement with health care services.** Please answer as honestly as you can. There are no right or wrong answers.

HCS_1 What is your 'go to' or preferred health care service when you or your whānau are experiencing ill health? (*Select all that apply*).

- Rongoā Māori (1)
- General Practitioner (GP) (2)
- Naturopathy (3)
- Acupuncture (4)
- Hypnotherapy (5)
- Other (6)
- Prefer not to say (7)

HCS_1_other If "Other" selected, please specify the type of service(s) rather than the names of service(s)

_____

_____

_____

HCS_2 What health or "complementary and alternative" services do you utilise? (*Select all the apply).*

- Acupressure (1)
- Acupuncture (2)
- Aromatherapy (3)
- Chiropractor (4)
- Colour therapy (5)
- Counselling (6)
- Crystal healing (7)
- Faith healing (8)
- Fofo (9)
- Homeopathy (10)
- Hypnotherapy (11)
- Kinesiology (12)

- Massage (13)
- Meditation (14)
- Mindfulness (15)
- Osteopathy (16)
- Physiotherapy (17)
- Reflexology (18)
- Reiki (19)
- Romiromi/Mirimiri (20)
- Rongoā Māori (21)
- Supplements/vitamins/probiotics (22)
- Traditional Chinese Medicine (23)
- Other (24)
- Prefer not to say (25)

HCS_2_other If "Other" selected, please specify the type of service(s) rather than the names of service(s)

_____

_____

_____

HCS_3 If you engage in rongoā Māori, are you open about this engagement with your other health care providers from other fields, such as your General Practitioner?

- Yes (1)
- No (2)

SRM_hdr **Section 4: Sustainability of rongoā Māori**
**The following questions are based around the sustainability of rongoā Māori.** Please answer as honestly as you can. There are no right or wrong answers.

SRM_1 Have you heard of Myrtle Rust?

- Yes (1)
- No (2)

SRM_2 Have you heard of Kauri Dieback?

- Yes (1)
- No (2)

SRM_3 What do you think causes these types of risks to our taonga species?

_____

_____

_____

SRM_4 Are you concerned about risks such as Kauri Dieback or Myrtle Rust on rongoā Māori?

- Yes (1)
- No (2)
- Not sure (3)

SRM_4_text Please elaborate about these concerns.

_____

_____

SRM_5 Do you think that rongoā Māori based tools could be used to help mitigate risks such as Kauri Dieback or Myrtle Rust?

- Yes (1)
- No (2)
- Not sure (3)

SRM_5_text Please elaborate.

_____

_____

_____

SRM_6 Are you concerned about the sustainability of rongoā Māori knowledge or practice?

- Yes (1)
- No (2)
- Not sure (3)

SRM_6_text Please elaborate.

_____

_____

_____

SRM_7 What are your aspirations for rongoā use in the future?

_____

_____

WB_hdr **Section 5: Wellbeing**
**The following series of questions are interested in your psychological well-being.** Please answer as honestly as you can. There are no right or wrong answers.
WB Please indicate your agreement or disagreement with each of the following statements using the scale below.

| | Strongly Disagree (1) | Disagree (2) | Neither Agree nor Disagree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| My life has a clear sense of purpose (WB_1) | ○ | ○ | ○ | ○ | ○ |
| I am optimistic about my future (WB_2) | ○ | ○ | ○ | ○ | ○ |
| My life is going well (WB_3) | ○ | ○ | ○ | ○ | ○ |
| I feel good most of the time (WB_4) | ○ | ○ | ○ | ○ | ○ |
| What I do in life is valuable and worthwhile (WB_5) | ○ | ○ | ○ | ○ | ○ |
| I can succeed if I put my mind to it (WB_6) | ○ | ○ | ○ | ○ | ○ |
| I am achieving most of my goals (WB_7) | ○ | ○ | ○ | ○ | ○ |
| In most activities I do, I feel energised (WB_8) | ○ | ○ | ○ | ○ | ○ |
| There are people who appreciate me as a person (WB_9) | ○ | ○ | ○ | ○ | ○ |

GH_hdr **Section 6: General health**
**This section is interested in your general health and well-being.** Please answer as honestly as you can. There are no right or wrong answers.

GH_1 In general, would you say your health is:

- ○ Excellent (1)
- ○ Very good (2)
- ○ Good (3)

- Fair (4)
- Poor (5)

GHa The following two questions are about activities you might do during a typical day. Does your health limit you in these activities? If so, how much?

| | Yes, limited a lot (1) | Yes, limited a little (2) | No, not limited at all (3) |
|---|---|---|---|
| Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf: (GH_2) | ○ | ○ | ○ |
| Climbing several flights of stairs: (GH_3) | ○ | ○ | ○ |

GHb During the past four weeks, have you had any of the following problems with your work or other regular activities as a result of your physical health?

| | Yes (1) | No (2) |
|---|---|---|
| Accomplished less than you would like: (GH_4) | ○ | ○ |
| Were limited in the kind of work or other activities: (GH_5) | ○ | ○ |

GHc During the past four weeks, were you limited in the kind of work you do or other regular activities as a result of any emotional problems (such as feeling depressed or anxious)?

| | Yes (1) | No (2) |
|---|---|---|
| Accomplished less than you would like: (GH_6) | ○ | ○ |
| Didn't do work or other activities as carefully as usual: (GH_7) | ○ | ○ |

GH_8 During the past four weeks, how much did pain interfere with your normal work (including both work outside the home and housework)?

- Not at All (1)
- A Little Bit (2)
- Moderately (3)
- Quite A Bit (4)
- Extremely (5)

GHd The next three questions are about how you feel and how things have been during the past four weeks. For each question, please give the one answer that comes closest to the way you have been feeling.

How much of the time during the past four weeks …

| | All of the Time (1) | Most of the Time (2) | A Good Bit of the Time (3) | Some of the Time (4) | A Little of the Time (5) |
|---|---|---|---|---|---|
| Have you felt calm and peaceful? (GH_9) | ○ | ○ | ○ | ○ | ○ |
| Did you have a lot of energy? (GH_10) | ○ | ○ | ○ | ○ | ○ |
| Have you felt downhearted and blue? (GH_11) | ○ | ○ | ○ | ○ | ○ |

GH_12 During the past four weeks, how much of the time has your physical health OR emotional problems interfered with your social activities (like visiting friends, relatives, etc.)?

- ○ All of the Time (1)
- ○ Most of the Time (2)
- ○ A Good Bit of the Time (3)
- ○ Some of the Time (4)
- ○ A Little of the Time (5)

SWB_hdr **Section 7: Spiritual well-being**
**The following series of questions are interested in your spiritual well-being or te taha wairua.** Spirituality can be described as that which lies at the heart of a person being human. Spiritual health can be seen as a measure of how good you feel about yourself and how well you relate to those aspects of the world around you which are important to you.

SWB_a Please indicate how you feel the following statements describe your personal experience over the **last six months**.
Please answer as honestly as you can. There are no right or wrong answers.

| | Very Low (1) | Low (2) | Moderate (3) | High (4) | Very High (5) |
|---|---|---|---|---|---|
| Developing/feeling a love of other people. (SWB_1) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling a personal relationship with a greater force or higher power (e.g. God(s), Io, the Universe, Supreme Being). (SWB_2) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling forgiveness toward others. (SWB_3) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling a connection with nature. (SWB_4) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling a sense of identity. (SWB_5) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling respect for a greater force or higher power (e.g. God(s), Io, the Universe, Supreme Being) (SWB_6) | ○ | ○ | ○ | ○ | ○ |
| Feeling awe at a breath-taking view. (SWB_7) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling trust between individuals. (SWB_8) | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| Developing/feeling self-awareness. (SWB_9) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling oneness with nature. (SWB_10) | ○ | ○ | ○ | ○ | ○ |

SWB_b Please indicate <u>how you feel the following statements describe your personal experience over the **last six months**</u>.
Please answer as honestly as you can. There are no right or wrong answers.

| | Very Low (1) | Low (2) | Moderate (3) | High (4) | Very High (5) |
|---|---|---|---|---|---|
| Developing/feeling a oneness with a greater force or higher power (e.g. God(s), Io, the Universe, Supreme Being). (SWB_11) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling harmony with the environment. (SWB_12) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling peace with a greater force or higher power (e.g. God(s), Io, Supreme Being). (SWB_13) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling joy in life. (SWB_14) | ○ | ○ | ○ | ○ | ○ |
| Incorporating karakia or prayer in life. (SWB_15) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling inner peace. (SWB_16) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling respect for others. (SWB_17) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling meaning in life. (SWB_18) | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| Developing/feeling kindness towards other people. (SWB_19) | ○ | ○ | ○ | ○ | ○ |
| Developing/feeling a sense of "magic" in the environment. (SWB_20) | ○ | ○ | ○ | ○ | ○ |

SC_hdr **Section 8: Social connectedness**
**The following questions are interested in your social connectedness – your relationships with others and your community.**

SC Please indicate how much you agree or disagree with the following statements. Please answer honestly. There are no right or wrong answers.

| | Strongly Disagree (1) | Disagree (2) | Neither Agree nor Disagree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| I feel distant from people. (SC_1) | ○ | ○ | ○ | ○ | ○ |
| I don't feel related to most people. (SC_2) | ○ | ○ | ○ | ○ | ○ |
| I feel like an outsider. (SC_3) | ○ | ○ | ○ | ○ | ○ |
| I see myself as a loner. (SC_4) | ○ | ○ | ○ | ○ | ○ |
| I feel disconnected from the world around me. (SC_5) | ○ | ○ | ○ | ○ | ○ |
| I don't feel I participate with anyone or any group. (SC_6) | ○ | ○ | ○ | ○ | ○ |
| I feel close to people. (SC_7) | ○ | ○ | ○ | ○ | ○ |
| Even around people I know, I don't feel that I really belong. (SC_8) | ○ | ○ | ○ | ○ | ○ |

| | | | | | |
|---|---|---|---|---|---|
| I am able to relate to my peers. (SC_9) | ○ | ○ | ○ | ○ | ○ |
| I catch myself losing a sense of connectedness with society. (SC_10) | ○ | ○ | ○ | ○ | ○ |

SC Please indicate how much you agree or disagree with the following statements. Please answer honestly. There are no right or wrong answers.

| | Strongly Disagree (1) | Disagree (2) | Neither Agree nor Disagree (3) | Agree (4) | Strongly Agree (5) |
|---|---|---|---|---|---|
| I am able to connect with other people. (SC_11) | ○ | ○ | ○ | ○ | ○ |
| I feel understood by the people I know. (SC_12) | ○ | ○ | ○ | ○ | ○ |
| I see people as friendly and approachable. (SC_13) | ○ | ○ | ○ | ○ | ○ |
| I fit in well in new situations. (SC_14) | ○ | ○ | ○ | ○ | ○ |
| I have little sense of togetherness with my peers. (SC_15) | ○ | ○ | ○ | ○ | ○ |
| My friends feel like family. (SC_16) | ○ | ○ | ○ | ○ | ○ |
| I find myself actively involved in people's lives. (SC_17) | ○ | ○ | ○ | ○ | ○ |
| Even among friends, there is no sense of brother/sisterhood. (SC_18) | ○ | ○ | ○ | ○ | ○ |
| I am in tune with the world. (SC_19) | ○ | ○ | ○ | ○ | ○ |
| I feel comfortable in the presence of strangers. (SC_20) | ○ | ○ | ○ | ○ | ○ |

**Thank you for completing this questionnaire and participating in my research!**

If you would like to enter the prize draw to win one of ten rongoā-based gift packs, please click 'Submit' to be redirected to a page where you can enter your email address. The winners will be contacted via email at the end of my research. Please note that your email address will be both collected and stored separately from your responses to the questionnaire and will only be used for the prize draw.

**If you feel that this questionnaire has raised any issues or feelings of distress, please contact any of the following services:**

**Need to talk? 1737**
Free call or text any time 24/7 to talk to (or text with) a trained counsellor.
https://1737.org.nz/

**Lifeline**
0800 543 354 available 24/7
Text HELP (4357)
https://www.lifeline.org.nz/

**Piki**
https://piki.org.nz/contact-us
Piki empowers and supports rangatahi towards better health and well-being. Through specifically selected peers, professionals and technology, Piki aims to equip you with tools to help overcome adversity and strengthen your well-being.

**Anxiety New Zealand**
0800 ANXIETY (269 4389)
https://www.anxiety.org.nz/

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# Appendix D: Quoted Participant Demographics

| Participant Number | Age Range | Gender | Ethnicity | Iwi Affiliations |
|---|---|---|---|---|
| 1 | 26-35 | Male | NZ Māori | Ngāti Toa Rangatira, Ngāti Koata, Rangitāne, Ngāti Kahungunu |
| 2 | 36-45 | Female | NZ Māori | Ngāti Tamaterā, Ngāti Ranginui |
| 3 | 36-45 | Female | NZ Māori, Pākehā | Te Arawa, Ngā Puhi, Ngāti Porou |
| 4 | 18-25 | Female | NZ Māori, Cook Island Māori | Kāi Tahu, Ngāti Tūwharetoa, Ngāti Kuia, Ngāti Maniapoto, Rangitāne o Wairau, Ngāti Apa ki te Rā Tō |
| 5 | 46-55 | Female | Anglo-Luso Indian | |
| 6 | 26-35 | Female | NZ Māori, Pākehā | Unknown |
| 7 | 18-25 | Female | Cook Island Māori, NZ Māori, Pākehā | |
| 8 | 36-45 | Female | NZ Māori | |
| 9 | 56-65 | Female | Pākehā | |
| 10 | 26-35 | Female | NZ Māori | Ngāti Tūwharetoa, Te Arawa |
| 11 | 26-35 | Non-binary | NZ Māori | Ngāti Kuia, Ngāti Koata, Ngāti Mutunga, Te Aitanga a Māhaki |
| 12 | 46-55 | Male | Chinese, Māori, NZ European | Ngāti Pūkenga |
| 13 | 26-35 | Female | Māori | Ngā Puhi, Ngāti Kahu |
| 14 | 26-35 | Female | NZ Māori, Pākehā | Ngāti Tūwharetoa |
| 15 | 46-55 | Female | Pākehā | |
| 16 | 18-25 | Male | NZ Māori, Pākehā | Ngāti Kahungunu ki Wairarapa |
| 17 | 36-45 | Female | NZ Māori, Pākehā | Ngāti Hine, Ngāti Patuwai, Whakatōhea |
| 18 | 18-25 | Non-binary | NZ Māori, Pākehā | Ngāti Maniapoto, Waikato-Tainui |
| 19 | 56-65 | Female | NZ Māori, Pākehā | Ngā Puhi, Ngāti Porou, Te Arawa. Ngāti Pikiao |
| 20 | 36-45 | Female | Pākehā | |
| 21 | 26-35 | Female | NZ Māori, Pākehā | Ngaa Puhi |
| 22 | 36-45 | Female | NZ Māori | Ngā Puhi, Ngāti Raukawa |
| 23 | 36-45 | Female | British | |

| | | | | |
|---|---|---|---|---|
| 24 | 46-55 | Female | Pākehā | |
| 25 | 18-25 | Female | NZ Māori, Tokelauan | Ngā Puhi, Ngāti Wai, Ngāti Raukawa |
| 26 | 18-25 | Female | Cook Island Māori, NZ Māori | Ngāti Kahungunu, Tuhoe, Tainui |
| 27 | 36-45 | Female | NZ Māori | Tainui, Ngāti Porou |
| 28 | 18-25 | Female | NZ Māori, Pākehā | Taranaki/Te Atiawa |
| 29 | 18-25 | Female | Pākehā | |
| 30 | 26-35 | Female | German | |
| 31 | 26-35 | Female | Niuean, Hawaiian, Samoan, Tuvaluan | |
| 32 | 36-45 | Female | Pākehā | |
| 33 | 18-25 | Female | Pākehā | |
| 34 | 46-55 | Female | Pākehā | |