



TE WHARE WĀNANGA O
AWANUIĀRANGI

RONGO Ā PUKU

SALLY EDWINA RYE
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*A thesis presented to Te Whare Wānanga o Awanuiārangi in fulfilment of
the requirements for the degree of Doctor of Philosophy,
Te Whare Wānanga o Awanuiārangi*

Rongo ā Puku



Puku as a source of intelligence to inform well-being.

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Karakia (prayer)

Ko Ranginui e tū iho nei,
Ko Papatūānuku e takoto nei,

Nau mai e ngā hua

o te wao,

o te ngakina,

o te wai tai,

o te wai Māori.

Nā Tāne,

Nā Rongo,

Nā Tangaroa,

Nā Maru,

Tūturu o whiti ka whakamaua kia tina! TINA!

Haumi e, Hui e, TĀIKI E!

I acknowledge the sky father who is above me,
the earth mother who lies beneath me,

Welcome the gifts of food

from the sacred forests,

from the cultivated gardens,

from the sea,

from the fresh waters.

The food of Tāne,

of Rongo,

of Tangaroa,

of Maru.

Let this be our commitment to all!

Draw together! Affirm!

Dedication

Onamata

To our creator, beautiful landscapes, a masterpiece.

The struggles of our ancestors will not be in vain.

Inamata

Those who have shared with open hearts and faith to my curious investigation.

Those who patiently listened many times to my kaupapa.

Those who walked alongside me on this journey.

Anamata

For our mokopuna.



Rongo ā Puku design, by Cody Hollis.

The middle pātiki, and the outer shapes, use puhoro to describe the connection of the puku to the other aspects of hau (life's essence). In the kōwhaiwhai, are two koru which represent the duality of Tūmatauenga and Rongo-mā-Tāne. This idea is also reflected in the use of kōwhaiwhai being curved, versus the pātiki being crisp and sharp.

Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material that I have submitted towards the award of any other degree or diploma in any other university or other institution.

This thesis represents research I have undertaken. The findings and opinions in my thesis are mine and they are not necessarily those of Te Whare Wānanga o Awanuiārangi.

This thesis has been stored at Te Whare Wānanga o Awanuiārangi. It is therefore available for future students and researchers to read and reference.

Edwina Sally Rye

Signature: 

Date: 12th April 2024.

Abstract

Where colonial infrastructure, theoretical paradigms and western values dominate and continue to rule over Indigenous lands, airways and water, the health and well-being of Indigenous people will often suffer. Recent hauora (health and well-being) initiatives and notable cultural shifts across Indigenous communities in Aotearoa are deserving of more recognition. This is because western culture and ideologies related to kai (food) which were introduced during the colonisation of our lands, our environment, and our people, have had a major detrimental impact on Māori health and well-being.

Many Indigenous people share this experience and continue to be challenged by lifestyle choices, patterns, and behaviours related to kai and which often lead to chronic disease and debilitating life-style conditions. Additionally, it is clear that historical and current government policies here in Aotearoa do not always align with Indigenous values and principles that appropriately reflect Māori attitudes, practices and preferences related to kai. This doctoral research intends to critically interrogate these issues by addressing the key research question: How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples? In this regard it is important to articulate our own Indigenous solutions for our well-being; to exercise 'rangatiratanga'.

'Rongo ā Puku' is the methodological approach developed within a kaupapa Māori framework in this thesis. 'Rongo ā Puku' conceptualises Puku (gut) as a source of 'intelligence' to inform well-being and is an Indigenous approach to hauora Māori. I employ both Māori and western approaches in my research including a comprehensive literature review; the collation of pūrākau; individual and focus group interviews; online surveys; hau kōrero, and an analysis of kōrero tawhito.

This thesis is of particular relevance at a time when Māori are developing increasing emphasis on self-development strategies and the recognition of solutions informed by Indigenous knowledge. This work will argue how 'kai ora and puku ora' might be normalised as an Indigenous approach to well-being. In doing so, it seeks to contribute to the reclamation of our own 'hauora' knowledge, practices, and values. Finally, it will

make an important contribution to whānau understandings of our capacity to engage in our own well-being solutions. This in turn, will contribute to improving the health of our communities, contribute to protecting our culture and ultimately, contribute to the long-term survival of Māori people.

Acknowledgements

Io Matua

Ihu Karaiti

Te Taiao

Ko ōku tūpuna

Ko ōku mātua

ko ōku tamariki, ko āku mokopuna

Ko tāku hoa tane

Ko tōku whānau

Ko ōku hoa haere, ōku hoa tūturu

Ko ōku iwi ko Ngāti Kahungunu, ko Ngāti Porou, ko Te Arawa

Ko tōku hāpori, tōku ūkaipō, tōku kāinga, ko Maraenui

Ko te whānau o Toi Matarua me Te Wānanga o Aotearoa

Ko ngā Rangatira o Te Whare Wānanga o Awanuiārangi.



Image vii. Rye/Gerard whānau, Mums 80th birthday celebrations, 17th October 2022.

Photo credit: Andrew Strickland.

Prologue | How to read this thesis.

This thesis provides an interesting and innovative approach towards exploring puku (gut) as a source of intelligence to inform well-being. It affords the reader with insights into the multiple and diverse layers of hauora (health and well-being) through the lens of our tūpuna (ancestors). It suggests that the current state of unwellness can potentially be reversed by considering traditional whakaaro (thinking), tikanga (protocols), kawa (rules) and tukanga (methods and interactions) surrounding kai (food).

The Indigenous lens and primary scope of this study is located within mātauranga Māori. It is acknowledged that Indigenous well-being and healing system that focus on kai and puku (specifically the digestive tract) are successfully being practiced globally in places such as India (the Ayurveda system) and America (Native American food sovereignty movement). This investigation however largely leans into both traditional and contemporary Māori knowledge systems and insights. The study raises some critical pedagogical points that have relevance across Indigenous people and could be used as a Tūāpapa for other Indigenous researchers to build from.

My research design 'E whitu ngā pou o Hau Ora/the 7 tenets of Hau Ora', was developed as a framework to converse a wide spectrum of personal experiences, traditional stories, arguments, and readings shared in this study. It was important to write this thesis in a style that affirmed and validated a range of Indigenous articulations of well-being. The intention being that People from diverse backgrounds and experiences could relate and connect to the findings.

The following prologue provides a snapshot of what to expect in this dissertation. It attempts to guide the reader through the thesis progression, chapter by chapter. It will further discuss how each of the chapters contribute towards answering the main research question; How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples? Each chapter has been placed in an arrangement that scaffolds towards final kōrero (discussions). Kōrero that highlights some of the current thinking, practices, and aspirations surrounding kai in a modern context.

Chapter one introduces the thesis. It argues the credibility, and potentiality of this inquiry to impact favourable health outcomes for Indigenous People. This chapter intends to set the scene of the research providing the background, context, and wider scope of the study. The purpose of this chapter is to explain the positioning and background of this study whilst highlighting how lived experiences may be used to answer the research question.

This significance of chapter two is to describe the methodological underpinnings and methods engaged in this research. It shows how these align to kaupapa Māori theory and Indigenous ways of data collection, handling, and use. It covers a range of tools to support the research design and process.

Chapter three introduces hau kōrero, a concept used to explain the many conversations that have transpired over the years and that have helped shape the pedagogical points presented in this thesis. E whitu ngā pou o Hau Ora/the 7 tenets of Hau Ora are introduced providing an argument that optimal hauora can be achieved when all seven tenets of hau are considered. The tenets of Hau Ora include hau Aio, hau puku, hau hinengaro, hau tangata, hau wāhi, hau kāinga and hau maramataka. This chapter is important as it provides a pathway into the literature review chapters which discuss past and current interpretations of hauora. The literature review serves to uplift and support this study, the key focus areas include: Mātauranga Māori, Kai Sovereignty, Kai Science, and Kāi (nga).

Chapter four of the literature review provides a discussion on Mātauranga Māori. It covers ancient knowledge systems and practices that have been developed over generations to inform well-being. The primary focus of this chapter is to highlight the impact that colonisation, urbanisation, and government policies has had on Indigenous culture and constructs. It describes how this disruption has manipulated the way that many Indigenous People think, do, and behave around kai in a modern context.

Chapter five discusses literature pertaining to Kai Sovereignty, Kai Sustainability and Kai Security. This chapter discusses how the disruption of colonisation was further used as a process to disposition, displace and disconnect Indigenous People from their sovereignty over kai. The importance of this chapter is to expose the impact that the urban migration (whānau moving away from traditional lands to urban settings) has had on access to traditional knowledge systems, methods and practices surrounding kai. It further reveals how this interference influences how kai is currently sourced, processed, cooked, consumed, and stored/preserved.

Chapter six considers the alignment of western science, philosophy, and praxis against Indigenous centric approaches towards puku ora (gut health) highlighting the similarities and differences. This chapter provides examples of Indigenous principles, protocols and practices concerning kai. Prior to western intrusion, these supported the potential for optimal well-being alongside ensuring the sustainability and well-being of te taiao.

Chapter seven speaks to Kāi (nga). For Indigenous People, kāinga (home) represents connections to whakapapa (genealogy linkages), tāngata whenua (people of the land), mana whenua (territorial rights) and te taiao (the natural environment). This connection keeps Indigenous People accountable to the principle of kaitiakitanga (guardianship) over whenua (land) wai(water) and mokopuna (future generations). This chapter suggests that kāinga is the source of foundational knowledge surrounding kai whakaaro, tikanga, kawa and tukanga. The importance of this chapter is to bring attention to the significant role that physical and metaphysical places have in terms of holding spaces for cultural norms and practices. These factors are considered when determining how we access, source, and consume kai.

Chapter eight provides five examples of the application of the E whitu ngā pou o Hau Ora/ 7 pillars of Hau Ora. The significance of this chapter is to amplify the participant voice and experiences during this study. This showcase of an Indigenous approach to well-being provides the reader with an insight into how the framework can be applied across diverse ages, groups, genders, and settings.

Chapter nine discusses the findings of this investigation which are ordered by the questions discussed during the data collection process. Seven key themes are presented. A traditional Pā (village setting) including the whare karakia, te pātaka, te whare tūpuna, te tari o te ora and te whānau kāinga are used as the framework to present the recommendations. The purpose of using this approach was to assert that it takes a Pā to sustain the well-being of the People.

Chapter 10 provides some final thoughts towards this research journey. The intention is to offer some final words of encouragement to the reader. The key messages presented in this study are further affirmed in this chapter using the E whitu ngā pou o Hau Ora/ 7 pillars of Hau Ora Framework.

Chapter 11 offers an Epilogue which outlines the way the researcher has gone about answering the research question and discusses how this study contributes to new knowledge. It summarises the limitations of this study, research findings and the manifestation and transforming outcomes that are intended from this mahi.

Preface

He kākano ki muri, He kākano ki mua.

A seed was sown in the past, to bloom in the future. (Harlem-Cruz Ihaia, 2023)



Image 1. Tōku Māmā, Waka Tahuri Gerard-Rye, captured in 1972, at 32 years.

Photo credit: Unknown.

[He kākano ki muri.](#)

I wanted to start here with this wahine, ko tēnei tōku Māmā, ko Waka Tahuri Gerard-Rye tōna ingoa. It is fitting that I begin with this auspicious wahine. This is my mother Waka, the first person who brought me out of the darkness and into the light. She is undeniably my hauora hero. She epitomises the three core characteristics that I embraced and leaned into throughout this research journey. These being courage, tenacity, and determination.

Mum was born and raised immersed in Te Ao Māori. At the age of five, however, she was forced into a condition of suppressing her language and culture. Despite this traumatic change to life as she knew it, Mum had the courage to mau tonu (hold tight) to her Indigenous way of knowing and being. At 17 years old, Mum left her home in Kuratau, a small village near Ruatoria on the East Coast of Aotearoa seeking work in the city. Māori refer to this period as the Urban Migration. (Derby, 2011). It was in Hastings that Mum met her first husband Alamein, a Māori/Samoan man from Ruahapia. Their

marriage was short lived. When my tuakana Christine was three years old, Mum left Alamein and moved to Napier.

My mother soon met my father, a dashing young English-born man residing in Napier. They fell in love and together they had four more children. Once married to my father, Mum found herself located in an urban setting surrounded by a western culture. Although fully immersed in a foreign way of life, she quickly adapted, unconsciously Indigenising her space. It was her tenacious spirit that made her determined to remember the inherent and child-experienced teachings of her tūpuna (ancestors). Reviving, re-claiming, and re-practicing the principles of kai sovereignty and rongoā Māori. Like many homes in the 1970s, our kāinga was placed on an 1/8-acre section, perfect for creating a māra kai (food garden).

I was raised in an environment where our backyard was our supermarket and chemist. Mum was always using plants and karakia to heal, cleanse or build our immunity. When I began my hauora journey, I asked Mum why she would use western plants and herbs such as comfrey instead of native plants for medicinal purposes. I was curious to understand why she would use foreign flora rather than traditional medicinal plants that she was familiar with from her childhood.

I was expecting a philosophical rationale with deep cultural tones. Instead, Mum provided a response that was practical and logistically made sense. Basically, Mum was resourceful, adapting to her surroundings by using plants that were local and already on our whānau property. Her explanation was however more profoundly noted. In her words, “Ko koe te rongoā, you are the medicine” she explained.

Mum clarified the process which involved connecting with the mauri of the plant using karakia and kōrero. To truly activate the medicine in the plant, we needed to be fully focused on what we were doing. The kairongoā (medicinal practitioner) needed to have a clear mind, intent, and heart to avoid transferring any negativity on to the plant. Or as Mum would say “pass on the kino jujus.”

She would say, “all living things have a mauri and a purpose.” With absolute resolve she would tell me that the plants and our environment are our tuakana and that we can learn from them. We did this through observing, noticing, listening, and recording their behaviours. This helps us to understand the attributes and benefits of each plant. It

astonishes me how mum was so in tune with plants, even the foreign ones she encountered as an adult. It was through my Mum that I gained a deeper awareness of the hononga (connection) between tangata (man) and Papatūānuku (Earth Mother). Mum's teachings were also the beginning of understanding how we can change the mauri or state of a plant through kōrero (conversations) and karakia (incantations). The key however is the connection, being in tune with our surroundings and honouring a reciprocal relationship.

We do not just take from our environment; we undergo a relationship process of 'koha mai koha atu'. Although I had lost the connection for a short period of time, I was able to relocate my childhood experiences through the process of maumahara (remembering) and whakaaro (reflecting). In recent times, lessons have re-surfaced and re-sparked a yearning for self-discovery and connection. The *Hākari* methodology has been born from this ideology that will be discussed in upcoming chapters.

Mum also had an influence on my dad, changing his western beliefs on kai (food). When Dad was not working, he was always in the mārā kai. I have fond memories of Dad tending to our organic vegetables whilst Mum was fermenting kai or preserving hua rākau for the colder months. Us kids were right there planting, weeding, harvesting, peeling peaches, and preparing food.

An avid reader, Dad learnt everything he knew about mahinga kai, māra kai and gardening from books. He would try different ways of planting before mastering the best way to grow sustainable and productive crops. He showed us how to create organic compost, turn the soil and plant in a way that allows for maximizing growth and soil regeneration. He even involved us in the process of fermenting grapes into wine. I still hold vivid memories of stomping on the fruit alongside my siblings with our bare feet, while Dad's Marty Robins and Dr Hook records were playing in the background.

It was my father who inspired my inquisitive mind. When we were tamariki (children), he would read poetry and stories to us and encourage us to use our imagination. Dad continues to read every day and is still the most intelligent person I know. I am grateful for my upbringing. It was rich in culture, traditions and values that have evolved over the years, yet still provide the tūāpapa of where I stand in my knowing today.

Growing up I was also exposed to the idea that certain kai had a purpose and a *hoa haere*. However, it was not until I began my research journey that I discovered how combinations of different plants can have powerful functions. When used together plants can strengthen our immunity and promote what is known today as gut health and a healthy microbiome. When planted together they can maximise soil productivity, growth, and the quality of the crops.

My parents intuitively knew what kai was for sustenance and which kai had the role of helping with digestion. Our meals were well balanced with greens, root vegetables and small portions of meat. Fruit and berries were plentiful. I recall lining up behind my siblings every Sunday evening for my spoonful of malt which I later learnt was infused with cod liver oil, which is a great source of Omega 3, vitamin D and excellent for cognitive functioning.

As a *tamaiti* (child), I would screw my face at Mum's *kānga pirau* (rotten corn) not realising the medicinal benefits this fermented food had to offer. In learning about fermentation as part of my research journey, I realised how much I had taken for granted as a child. Both my parents were intentional about what we ate, when we ate, and how we ate.

I was oblivious to it at the time, but my parents were creating rituals, traditions and practices involving kai that was optimising our potential to be well and stay well. It was in these moments that the seeds of *mātauranga* were sown relating to kai sovereignty and *tikanga* surrounding kai.

When I had my children, Mum would remind me once again, that I was the *rongoā*. When my babies became unsettled, she taught me how I could calm and sooth them through the vibrations of my voice, the rhythm of my heart and my skin against theirs as I lay my hand on their *puku*. It was often all the *rongoā* that they needed to bring them back to being *mauri tau*, - in a settled state.

Another important lesson from my mother was to trust your *puku*, "if it doesn't sit right in your *puku* then it is probably not *tika*". This *kōrero* from Mum has inspired the title of this thesis '*Rongo ā Puku*'.

[He *kākano mua*, the seed blooms in the future.](#)

In November 2021, my mum was presenting with symptoms of dementia. At the time, I was living in Tauranga Moana and travelled home every weekend to check in on her. The weeks leading into 2022 were tough as we witnessed Mum quickly deteriorate. She went in and out of hospital for multiple surgeries due to falls or forgetting to eat. It was heartbreaking to see our once vibrant, tenacious, and energetic Māmā shrink to a tiny frame, bound to a bed and struggling to remember faces and places. My niece Hana was carrying the bulk of the responsibility whilst navigating my dad's health at the same time. Although she showed massive kaha (strength) and managing it all, I could sense the heaviness weighing her down.

I made the decision to return home in late January 2022 and mum was diagnosed in February. The doctors advised us that her dementia was progressive, and that she would go quickly. I moved in with Mum and immediately changed her food patterns. I started by stripping back all the fats, sugars, and salt that she had been conveniently eating due to living alone. We made a shift back to the kai she was raised on, pumping her tinana (body) with probiotics, prebiotics and kai that feeds the hinengaro (mind). I reintroduced her to wai rākau (medicinal drink) and kawa kawa tī (tea made from leaves of the New Zealand pepper tree). Our daily routine included a kapu tī (cup of tea) and a kōrero (yarn). Following her tī, we would pull out the foot bath, and place plants from her māra in, essential oils and magnesium salts.

We put our whānau (family) on a schedule for visits. Rather than everyone turning up in one day, visits were spread out during the week. When I was at mahi (work), whānau took turns to be with mum. She was kept active with her mokopuna (grandchildren) taking her shopping, to kid's events, or to the moana (ocean) to put her feet in the water. This was against the doctors' orders which advised to keep her home and comfortable. However, we noticed her spirit awaken, unlocking her memories that had been lying dormant.

Sometimes whānau would just come to her kāinga (home) with the mokopuna and just sit with her to watch her favourite television shows. At night we would waiata (sing) with her, karakia (pray), and kōrero (talk) about the old days. On the weekends we would take her to the ngahere (native forests) or into the mārā and ask her to recall her teachings

as a child and once again share with us her mātauranga (knowledge) about the plants and rongoā.

Initially, we were attempting to make Mum more comfortable as instructed by the Pākehā Doctors. However, when I decided to intervene and change her daily routine, kai and rongoā intake, and a whānau support timetable, it only took a few weeks when we observed huge changes. Mum was transitioning back to her authentic playful, witty self. In early April, a few months after our whānau intervention, Mum began walking again without support. In May 2022, she was back behind the wheel and proudly roaming around visiting her mokopuna. In October 2022, we celebrated her 80th birthday and she is currently living independently.

Changing Mum's kai patterns was a significant part of her recovery. On reflection, however, I believe the turning point stems from re-remembering Mum's teachings. Mum had taught me an important lesson when I first became a mother, 'ko koe te rongoā, you are the medicine'. And as I remembered, the subtle whispers of my ancestors, hokia ki te kāinga, confirmed that it was time for me to return home and apply her teachings. This time, as a daughter. I needed to be close enough that Mum could hear the vibrations of my voice, the rhythm of my heart, the warmth of my breath and the sensation of my touch as it met her skin. I believe that this was the rongoā Mum needed and what brought her hau (vital essence) back to ora (wellness).

My research shows how we can learn from some of the teachings of my mother and the lifestyle patterns of our tūpuna. Mum must have intuitively known that the mātauranga Māori passed on from our ancestors was the key to optimising the well-being her whānau and later in life herself. Despite being challenged to suppress her Māori heritage; mum's tenacious spirit was persistent. As a young wife and mother, she challenged western foods and medicines by claiming sovereignty over kai spaces. With my dad they worked together establishing our māra kai by weaving the tools and mātauranga of ancestral knowledge into a daily practice.

Mums' courage to hold fast to ancestral knowledge surrounding kai has kept the mātauranga alive in our whānau for future generations. She has paved the way for my hauora journey and inspired my research, *"How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the*

health and well-being of Māori and Indigenous Peoples?” My research reflects the seeds my parents planted throughout my life. It is my hope that the fruits of these seeds will be a koha to other Indigenous People once my work is published.

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Chapter One | Introduction

Te manu kai miro, nōna te ngahere

Te manu kai mātauranga, nōna te ao.

The bird that eats the miro berries, theirs is the forest.

The bird that consumes knowledge, the world is theirs. Elder (2020)

The health and well-being of Indigenous People continues to be under threat across Nations. Despite significant resources, attention and energy invested in this space, struggles and challenges to be well and stay well, exist. This study argues that the antidote to unwellness for all cultures, lives in mātauranga Māori (Māori knowledge), our pūrākau(stories), and our maramataka (time systems). It is here that we will find the approaches, patterns and behaviours surrounding kai (food) that are conducive to optimising well-being for Indigenous People.

What does this mean, the antidote to unwellness? How can solutions be found, unpacked, and then repacked, making learnings from our ancestors relevant today? Why is this approach important, effective, and more conducive to the needs of Indigenous People to optimising well-being? This study will provide the foundational responses surrounding these pātai. It is with intention that I will provide the reader with an insight into various threads of this research, setting the scene for what lies ahead.

This chapter provides the tūāpapa (foundation) to this thesis. The first part provides some context to the study. The positioning of the researcher is articulated using lived experiences. The second part introduces the methodology, methods and approach used in the investigation and the final part provides a snapshot of the key topics and areas of mātauranga that have been investigated and interrogated.

Within the context of Māori health, well-being extends before and beyond recovery and considers prevention and sustaining well-being. Head of Indigenous studies at Te Whare Wānanga o Awanuiārangi, Professor Mera Penehira (2011) urges us to “address the issues

of being well and staying well” (p. 2). Further pointing out that Māori “die earlier when compared to non-Māori” (p. 2). This thesis is motivated by an urgency to expose, discuss, and speak to the issues that are impeding opportunities for Indigenous People to achieve and maintain wellness.

This investigation has drawn ideas from the work of Indigenous academics to further frame and articulate what well-being looks and feels like for Indigenous People. It is somewhat challenging to define well-being as a collective aspiration, as it means different things to different people. For this study the focus of well-being investigates spiritual, cognitive, emotional, physical, and social balance. It is suggested that within a balanced state of well-being, an Indigenous person is better equipped to connect, contribute, and participate confidently within their traditional societal constructs. For Aotearoa New Zealand (Aotearoa), pre-colonisation it was whānau, hapū, iwi with te taiao personified as the tuakana (older sibling). Post-colonisation Māori have added hapori (communities) to its societal construct, this was influenced by the urbanisation migration between 1936-1986 and the establishment of Māori communities in the urban cities. (Derby, 2011)

Within the parameters of this study, optimal well-being further refers to the autonomy and sovereignty over being well and remaining well. This research suggests that it involves having the tools, knowledge, and access to resources enabling one to live a full and quality life free of disease, or a life that exists without limiting or restricting conditions.

Overall deaths by chronic disease in Aotearoa has reduced from 1996–98 to 2012–14 for Māori. An improvement worth celebrating. Yet, compared to other New Zealanders, Māori are up to four times more likely to suffer death from preventable diseases. The cause and effect of this state of well-being can be attributed to many factors. However, they are typically linked to poor nutrition, inadequate activity, low mobility, and high stress levels (Ministry of Health, 2020).

Recent evidence (Health Coalition Aotearoa, 2023) further shows that in Aotearoa the biggest contributor of health loss in (17.5%) is directly linked to overweight/obesity and unhealthy diets. Westernisation promotes a culture of convenience, laziness and overindulgence surrounding kai. Marketing and sponsorships drive fast foods and the

cheaper options of overly processed foods high in sugar, fats, and salt flood our food environments. Health education is heavily controlled by colonial constructs or based on what is trending on social media. Alarming evidence reports that children are exposed to on average eight advertisements for unhealthy food per hour during their peak television viewing time. It is not surprising how difficult it can be for individuals to discern what is science and what is marketing.

A major contributor to the confusion is the conflicting information flooding the internet. It creates all types of mental, physical, spiritual, and emotional fatigue which often results in people defaulting back on what they know. According to Health Coalition Aotearoa (2023) and Lee, Banda and Alexandra (2011) obesogenic or unhealthy food environments enable and promote cheap, low nutrient foods. Lee et al., (2011) further argues “if the environment doesn’t help support healthy lifestyles, the change will be next to impossible to sustain” (p. 4). In the absence of food policies that promote better access to healthy kai we see individuals fall victim to addictive life choices introduced by colonisation. These choices appear to be linked to current state of unwellness our people are experiencing.

This research has sought to unpack and interrogate a diverse range of data that has contributed knowledge towards informing my research question: How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples?” It further questions, “how do we re-indigenise spaces and places within colonial constructs to foster well-being”. Finally, this study investigates how government policies and approaches have disrupted Indigenous ideology, methods, and practices that historically informed Indigenous well-being and lifestyle patterns.

Professor Durie (2004), Professor Penehira (2011) and Milburn (2004) suggest that prior to the disruption and influences of the western world, Indigenous People were thriving and surviving in traditional social constructs. Collectives were effectively governed, led, and managed by systems, processes, and procedures that were underpinned by Indigenous values and principles. These elements are what guided the people towards ensuring the

maintenance, preservation, and sustainability of physical, spiritual, economic, and environmental resources.

Indigenous writers Professor Durie (2004), Professor Penehira (2011), Milburn (2004) and Vyas (2019) concur that the abrupt and invasive way Indigenous People were assimilated into the western world have disrupted the well-being of the People. This interruption has caused physical and spiritual disconnection to lands, culture, language, and heritage. The true impact of this disruption continues to be exposed by Indigenous writers as stories are told and retold using pūrākau methodology. These narratives are progressively being captured, analysed, and presented through an Indigenous lens, informing solutions by, and for, the people of Indigenous communities.

The disturbances, trauma, and damages of the past cannot be undone. However, they can inform a pathway towards optimal physical, spiritual, cognitive, and emotional performance for Indigenous People. This research supports that when Indigenous principles of well-being are applied in practice, optimal physical, cognitive, spiritual, and environmental performance can be achieved. It further uncovers how the impacts of colonial disruption and disconnection continue to exist and manifest today. This research will highlight how western food cultures and values have perpetuated the lifestyles of many Indigenous families – lifestyles that have created patterns and behaviours surrounding kai that are linked to unwellness. Although very different from the ways of our tūpuna, these ways of being are now embedded and considered ‘normal’ for many whānau.

This research is relevant and relatable to Indigenous communities with similar struggles including how kai is sourced, accessed, processed, consumed, and cooked. It has captured the truths, values, perspectives, relationships, rituals, and traditions of modern whānau who affiliate to Ngāti Kahungunu (the tribe of Kahungunu a prominent Māori ancestor). It will contribute towards the increasing literature and activity that affirms and validates Māori and Indigenous solutions as central to addressing serious health and well-being concerns across Nations.

This study has actively engaged with individuals and families impacted by colonised ways of thinking and doing surrounding kai. It shares pūrākau from whānau that continually struggle to be well and stay well within modern realities. Exploring the 'why' through the lens of the Māori construct, whānau, hapū, iwi, hapori, their behaviours and experiences surrounding kai, it provides an authentic Māori voice behind the current challenges linked to hauora.

The approach to this research has been designed, articulated, and presented in a manner that aspires to reach diverse audiences, families, and communities. It aims to be used for multiple purposes as a resource to promote optimal well-being for Māori and Indigenous communities. Methods, tools, and resources are offered as guides and prompts for hauora journeys supporting various intervention points. I have further used pūrākau, whakatauākī, karakia, and oriori as tools to keep whānau engaged in an attempt that they may see themselves in the key messages.

Dr Jenny Lee-Morgan (Lee, 2009) reminds us that “storytelling has always been one of the keyway types of knowledge was sustained and protected within Indigenous communities” (p. 2). Documenting these stories of strength, courage and recovery is important in breaking cycles of unwellness. It speaks hope to those who have been disempowered and reliant on western medicines and treatments. It provides the pathways for individuals and families to formulate their own truth and unravel their own solutions.

Everyone has a story to tell, I have many. When it comes to my personal hauora journey, there have been episodes of joy, suspense, and action-packed drama! For over 50 years I have reached both ends of the spectrum. Experiencing both optimal well-being as well as being trapped in a life-threatening condition. My hauora pūrākau is a never-ending one. It has however become much more predictable since understanding mātauranga Māori perspectives and applying, testing, and practicing Indigenous models of hauora.

I was fortunate to grow up with organic vegetables, herbs and plants included in my daily diet. My parents were proactive in getting us involved in the various stages of planting, growth, and harvesting. Unfortunately, when I moved away from home, I was quick to opt for the convenience of western foods. My behaviours and habits involving sourcing and

consuming kai were insidious and created havoc to say the least on my well-being. I could not see the unwellness, but I witnessed the impact it had on my tinana.

How easy it was for me to create a destructive lifestyle. How quickly I had forgotten and disconnected from the medicinal value and benefits of plants that were embedded in my childhood. It wasn't until I developed chronic heart disease at the young age of 44 years and was forced into a conundrum of live or die. It was the wake up that I needed.



Image 1.1. Photos taken in 2016, at the beginning of my hauora journey a few months after being told by the heart specialist that I had chronic cardiovascular disease and that I would be on medication for the rest of my life, photo credit: Charlizza Matehe.

The whakataukī (proverb) below is a reminder that there is a whakapapa (genealogy) to our hau-mate (breath of unwellness) and hau-ora (breath of wellness). When we are busy striving forward to reach goals and aspirations, we can become distracted and take our eyes of the source of our mātauranga (knowledge) and our māramatanga (understanding).

Kia whakatōmuri te haere whakamua

I walk backwards into the future with my eyes fixed on the past. Rameka (2017).

I decided to look back on my journey to unwellness. I engaged in noho puku, which in this context means that I began an intentional process of reflecting on my upbringing, recalling learnings, and really paying attention to my hauora. The next step I took was to enter a state of haere puku. This process allowed me to transcend cognitively back to the critical point in my life leading up to this season of unwellness. It was there that I was able to pinpoint the

moment in time when structures, routine and rituals were disrupted, and replaced with chaos and unsettlement. Moving away from my ūkaipō, my source of sustenance, knowing, and living was the turning point. This interruption triggered a series of poor life choices that sat with me for over a time span of 25 years.

The current state of my well-being is optimal by my own standards and measures. Although at its peak, I am in a constant state of awareness, reflection, and critique. A quick measure is the '7 tenets of hau-ora' (that will be discussed in upcoming chapters). When considered daily, my optimal physical, cognitive, spiritual, and environmental performance is achieved. Paying attention to the state of my hau keeps me consciously accountable, alert, in tune, reflective, and responsive to my ora needs and aspirations.



Image 1.2. Left (2017) one year into my journey. Photo credit: Nik Edwards. Middle (2022), five years into my journey. Photo credit: Trish Thomas. Right (2023) six years into my journey (Pattaya, Thailand). Photo credit: Vorachayapat Asawajaraspat. Reaching health goals is a ride, sustaining well-being is the journey.

Albeit the struggle has been real, I received many moments of re-enlightenment during my trial-and-error experiences that eventually transcended me to a place of being well and staying well. I am grateful for the seeds of mātauranga Māori that my parents had sown in me at an early age. With intentional and purposeful effort, I was able to locate these seeds and tend to them with the tools I had gathered in my journey.

I have shared my learnings with friends and whānau and walked them through the following process:

1. *Remembering* the critical point that led to the season of unwellness.
2. *Reclaim* Indigenous principles of well-being.
3. *Recall* childhood experiences and feelings surrounding kai.
4. *Recover* from the disruption or disconnect that brought you to a lifestyle that is not conducive to being well and staying well.
5. *Refocus*, shifting your mindset from the colonised and western ways surrounding kai towards traditional ideology and practices that are inherently within us.
6. *Restructure*, shifting current choices, behaviours and experiences surrounding kai.
7. *Reset* lifestyle patterns and behaviours.
8. *Reconnect* to self and surroundings.

A well-known statement from Hippocrates claims that "all disease starts with the gut". For generations, Indigenous People have intuitively known the link between our puku and sustaining overall well-being. The current trends around plant-based diets, intermittent fasting and fermentation are not new concepts within Indigenous worlds. These approaches to hauora were grounded in mātauranga Māori and practiced by our tūpuna long before we were exposed to western food.

This study probes early accounts that confirm how ancient ways that Indigenous systems of being, doing and living uplifted and held the well-being of collectives. It discusses first impressions of the physical status of the Māori which suggests healthy practices surrounding kai.

In the journals of Abel Tasman (Savage, 1966), the Māori people are described as being "the most athletic, fit and healthy people" he had ever encountered. In 1907, during his travels around Aotearoa, British Surgeon John Savage was in awe of the physique and psyche of Māori people. He described them as of "very superior order, both in point of personal appearance and intellectual endowments". He made special mention of the male physique

reporting that they were “five feet eight inches to six feet in height; well-proportioned and exhibit evident marks of great strength” (p. 16).

The following image is John Savages depiction of a chief he encountered in the early 1800s.



Image 1.3. TIARRAH, a Chief of the Bay of Islands, New Zealand.

Drawn by J. Savage, Engraved by G. Cooke. London, published by Murray, Fleet Street, 1807.

Today, Māori & Pasifika people feature across 80% of the chronic diseases reported in Aotearoa. (Ministry of Health, 2020). Just as concerning, Health New Zealand |Te Whatu Ora (2024) reports that “Māori have the highest blood pressure and rates of smoking, atrial fibrillation, heart failure and prior cardiovascular disease, while Pacific people have the highest rates of obesity and, together with Indian people, the highest prevalence of diabetes in Aotearoa” (p.111). The report further states that “70% of the burden of CVD is attributed to modifiable risk factors and is preventable through living in a healthy

community, living a healthy life and manageable with healthy life changes, early intervention and effective management” (p. 110). This is problematic for Māori who experience inequities across a range of social determinants, over and above socio-economic status (Health New Zealand |Te Whatu Ora, 2024).

According to Greggor and Stone (2017), Ornish and Ornish (2019) and Hill (2021), the science is clear, our moods, behaviour, skin issues such as eczema and psoriasis, autoimmunity, liver health, hormone imbalances and other health issues are now being linked to aspects of our gut health. This study provides evidence and discussions linking current science to ancient Indigenous knowledge systems, tools, and practices. mātauranga that is still relevant today. Reviewing mātauranga Māori whilst interrogating existing western theory and activity surrounding kai. These are discussed under the following topics: Mātauranga Māori, Kai Sovereignty, and Kāi (ngā).

Workshops and wānanga have been facilitated with individuals, whānau, and groups to determine how the principles of hauora discussed in this study can be applied and practiced at home, in workplaces, and communities.

During this investigation an invitation to enlist on the Rongo ā Puku (RāP) programme were offered to participants as a koha for their contributions. The RāP programme was a seven-week challenge that involved: exploring, testing, and reflecting on sourcing kai; the science behind kai; behaviours surrounding kai; gut health; and the hauora benefits of kai using Indigenous ideology, methods, and practices. The programme concluded with a three-day ‘WĀ Hine’ wānanga hosted at Waimarama beach. The following images provide snapshots of the wānanga.



Image 1.4. Te Wānanga ō Aotearoa, 'Wā Hine' RāP challenge (April – July 2023) at Waimarama Beach June 2023. Photo credit: Sally Rye.

The RāP programme worked to guide and empower whānau in building an inner hauora powerhouse. The focus was on raising consciousness around how we source, access, harvest, cook, consume, store, and process kai. Science behind kai nutrition was offered as well as science that explained the *hoa haere* of plants, seeds, and nuts. Knowledge was shared on how certain plants stimulate hormones that impact our moods and behaviours such as serotonin, dopamine, oxytocin, and melatonin.

Wellness tools, resources, and approaches were provided to participants as they unpacked the challenges and barriers to creating a sustainable whānau well-being strategy. Participants were then supported as they repacked their hauora kete using an interactive journal specifically designed for this rangahau.

The results for participants were transformative by their own goals and measures. What this means is that everyone was asked to design their own plans, targets, and measures. Participants in some cases were able to reverse diagnosed health conditions and release themselves from medication that they had developed dependencies on. Testimonies on

reversing the behaviours associated to dementia in kaumātua, removing pain relief reliance caused by endometriosis, and controlling triggers that activate anxiety and depression were gathered. These personal experiences are discussed and shared in this thesis using pūrākau methodology.

Indigenous principles and values that support Indigenous ideology and practices that promote well-being were normalised and woven into the fabric of the community. Members of the tribe intuitively and consciously understood the tikanga surrounding kai. This was managed and monitored by the awareness and application of tapu (sacred), noa (free, without restrictions) and rāhui (ritual prohibition). These are discussed in upcoming chapters along with other Indigenous knowledge, systems and tools that foster well-being of people, place, and space.



Image 1.5. Wā Hine RāP challenge (July – Nov 2022). Photo credit: Sally Rye.

1.1 Background to the study

This research seeks to review, discuss, and re-present Indigenous ideologies and behaviours concerning hauora. It aims to remember, recover, and regenerate traditional approaches to reaching, maintaining, and sustaining optimal well-being for Indigenous People. Within

Indigenous traditions exist rich knowledge, practical tools and effective techniques that are available to better understand experiences.

This study further aims to decode science and traditional knowledge and re-present it in a manner that is relatable and relevant to current conditions concerning health and well-being. The pūrākau that provides the tūāpapa of this study begins with me. The journey of decoding phenomena was conducive to my personal experiences using the mātauranga Māori embedded in my childhood.

I te timatanga (in the beginning), my hauora journey was about my own recovery. I was determined to release myself from the chains of unwellness and set out to go deep into unearthing my truth. I needed to understand the root of my condition, how I got here, and how I was going to get out. I sought to unlock the mystery of why it had been so easy to get to a place of haumate, and how I was going to get back to hauora and stay there.

When I finally ‘cracked the code’ of being well and staying well, my errors and faults were exposed. I had been looking for the answers to mastering my wellness in someone else’s whare (house) of knowledge. Rather than looking within, I was continuously seeking the answers outward in western diets, programmes, and schemes. The short-term results were easy to achieve, however sustaining wellness was where I struggled.

I had remembered the words of my mother “ko koe te rongoa” and my research journey was set in motion. I became excited, and I could feel a fire within my puku which must have permeated through my hau. My friends and whānau caught it and became excited from the passion I had from this epiphany. They began to lean in and resonated with my discovery. They understood. They saw themselves in my pūrākau.

As my confidence grew in my mohiotanga (understanding), my theory and ideas evolved. I felt impressed to share my learnings wider. In 2020, a few weeks before COVID-19 swept the world, my tamāhine Charlizza approached me and asked me to join her in a Professional Doctorate Programme with Te Whare Wānanga o Awanuiarangi. Her focus was on addressing whakamomori amongst rangatahi Māori. Together we signed up with her investigating Taha Hinengaro (mental well-being), and I, Taha Tinana (physical well-being).

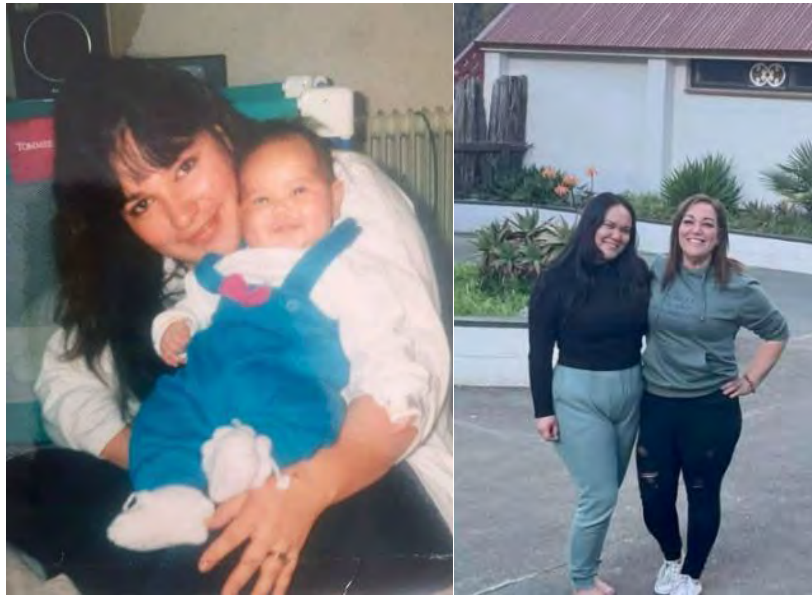


Image 1.6. Tāku tamāhine me tāku hoa haere, (left) six- months and (right) taken at Tangoio marae 2022. My daughter and I have always been in sync with each other and kaupapa. She has always been my biggest inspiration and teacher. Photo credit: Price Harris (left), TJ Tupai (right).

As we progressed through our research journey, it became more evident how intertwined our topics were across our focus areas as well as across taha wairua (spiritual well-being) and taha whānau (social well-being). Reviewing Sir Mason Durie’s ‘Te Whare Tapa Wha’ model (Durie, 1994), Taina Pohatu’s ‘Ngā Nohoanga Tuakiritanga/Sites of the Inner Being’ framework (Pohatu, 2013), Dr Hurangi Waikerepuru’s ‘Mana Kaitiakitanga’ framework (Smith & Pihama, 2023), and Dr Rangimārie Te Turuki Arikirangi Rose Pere’s ‘Te Wheke Model’ (Pere, 1997), we identified where our studies intercepted. This connection allowed my daughter and I to collaborate on projects during the data collection stages. It also led to inspiring our own unique mother–daughter philosophies, models, and frameworks, finding spaces within intergenerational research approaches.

Our hoa haere relationship allowed us to hold space in areas that we are both passionate about sharing mātauranga through the lens of whānau, hāpu, iwi, hapori that we connect and mahi with. This dissertation would not have manifested in the way it has, had either of us taken this journey on our own. We hold each other accountable, reminding each other the importance of our mahi to ourselves, our whānau, and our positioning as wāhine Māori.

My aspirations to share my research with other Indigenous Nations stems from personal experiences of feeling ‘excluded’ or ‘judged’ based on my lifestyle choices. The current food environment is dominated by clever marketing and industry driven research. People can be forgiven for not being in a position of discerning science from marketing or truth from opinion. These external forces that are influencing individuals’ decision-making processes are creating unhealthy conditions. According to Lee et al., (2011) these obesogenic conditions “represent environmental and social forces that tend to encourage overeating, consumption of unhealthy foods, and physical inactivity, thus promoting weight gain” (p. 4).

Midway through my research, I attended a three-day Indigenous studies wānanga hosted by a Māori educational institute. When I registered my attendance, under dietary requirements I requested plant-based kai. The response from the wānanga coordinator was that I needed to supply my own kai. The explanation was that kai provision was a token of manaakitanga and they couldn’t cater for my dietary needs.

This response blew me away on multiple levels. Firstly, manaakitanga from my experiences was always about making people feel included, valued, and respected. Tā (Sir) Hirini Moko Mead (KNZM) also known as Sidney Moko Mead is a New Zealand anthropologist, historian, artist, teacher, writer, and prominent Māori leader. He explains the importance and value of manaakitanga within the realms of tikanga Māori. Mead (2016) states that “aroha is an essential part of manaakitanga and is an expected dimension of whanaungatanga. It cannot be stressed enough that manaakitanga is always important no matter what the circumstances might be” (p. 32).

Linguistics scholar, Cleve Barlow (1943–2008; Ngāpuhi) discusses the concept of manaaki further. He states that it is to “express love and hospitality towards people”. He goes on to say that “the most important attribute for the hosts is to provide an abundance of food” (Barlow, 1991, p. 63). The whakamā that I had to experience through bringing my own kai to the table was unsettling. I felt disrespectful as I was unable to explain to the ringawera (cooks) why I had done this. It was notable and companions at my table made comments. I

did not choose to be segregated from the rest of the rōpū, however the lack of awareness around kai sovereignty exists, even within Māori organisations.

Secondly, I was asking for less not more. Surely it was not difficult to remove a potato from the bowl before applying mayo? Or setting aside a salad before all the dressings added? Finally, this was a kaupapa (event) in which I had paid to participate in, the same contribution made as others in attendance.

I have kept that email response as a reminder of how well western ideology has infiltrated our Māori constructs and organisations. I have no issue supplying my own food. It is my choice to follow the food patterns of my tūpuna. The challenge for me is the perception of others. Bringing food into a space where kai is provided can be seen as disrespectful or ungrateful within an Indigenous setting. In some instances, it can also disturb tikanga more specifically when shifting from a state of tapu to noa.

The interesting thing is that when plant-based options are supplied, it is fascinating to see whānau gravitate towards that kai as their preference. What this informs me is that intuitively we are drawn to more natural unprocessed kai. Society however has a way of convincing ngā ringawera (food preparers') that heavy meats, wheat-based food, salt, sugar, and fat is preferred.

We can all contribute towards raising this awareness around kai ora (well-being food) and make cultural shifts in the spaces we interact with. According to Lee et al., (2011) however, "it will take a coordinated responses from all levels to reverse our obesogenic environments in order to curb the obesity epidemic and achieve sustained good health for all" (p. 6). A structural change to support this approach is required. This would require an investigation into built environments and how these constructs are contributing to unwellness.

This research probes the status of hauora in Aotearoa. With a particular focus on the three biggest causes of death in Aotearoa. The Ministry of Health (2019) report these as heart related disease, cancer (with alarming rates of bowel cancer) and Type 2 diabetes (one-quarter of a million people in Aotearoa diagnosed).

This research shows the links between preventable diseases and behaviours and patterns surrounding kai. Despite the decline in cancer, diabetes, and heart disease related deaths in Aotearoa from 1996–98 to 2012–14, Māori rates continue to be higher than non-Māori. The ‘Wai 2575 Māori Health Trends Report’ also shows that Māori are also more likely to suffer death from respiratory issues than non-Māori (Ministry of Health, 2019).

The current science around gut health is discussed in this study and aligned to traditional methods surrounding kai. Recent research shows the clear links between building gut health and the impact this has on our bodies to become more ready, resilient, and equipped to deal with nasty viruses and other bugs. This study provides evidence that describes the food patterns of our ancestors. These include plant-based kai; kai free from wheat; free from refined sugar; free from heavy meat; fermented kai; and diverse food options.

Indigenous entrepreneur, Monique Fiso is taking Māori cuisine to the global table. An internationally recognised chef, she is the creator and innovator behind ‘Hiakai’, an award-winning restaurant based in Wellington. Her publication, also titled ‘Hiakai’, brings together history, tradition, tikanga and Māori kai. When discussing food diversity, Fiso (2020), shares that prior to colonisation “Māori had names for 50 types of soil, over 100 birds, 60 types of earthworms and more than 300 plants. There are estimated to be at least 190 edible plants in Aotearoa and Māori used most of them, their roots, leaves, berries and even the trunks of tress provided kai” (p. 27).

This study argues that the evolution of kai continues to impact Indigenous People, place, and space in devastating ways. The movement has contributed to the poor state of Indigenous health and the costs to our environment. The integrity of our soil, the condition of our air, and state of our waterways are suffering from industrial greed and economic aspirations. Urgent attention and interventions are required.

1.2 Aim and research questions.

“Let food be thy medicine and medicine be thy food” (Smith, 2004)

Ko te kai te rongoā, ko te rongoā te kai is a translation of Hippocrates famous quote above. Hippocrates was a famous ancient Greek physician who lived during Greece's Classical period and is traditionally regarded as the father of medicine. It was his belief that food could either harm or heal and that nutrition was the key to optimal well-being.

A major focus of this research was to interrogate and discuss the 'why' behind ko ahau (individuals), whānau (families) and hāpori(communities) choices, behaviours and experiences surrounding kai. This study provides responses to the following research questions:

1. How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples?
2. How have colonial constructs contributed to the decline of well-being of Indigenous People?
3. How can whānau experiences of well-being be documented and shared as a resource for whānau and communities?
4. How can we access puku as a source of intelligence to inform well-being?

As expected, the emerging themes point towards political, social, cultural, spiritual, and economic factors.

1.3 Significance of the study

This study adds to the existing literature and activity centred around Māori and Indigenous approaches to well-being. It aims to validate, reclaim, and re-present relevant and relatable Indigenous ways of being well, and staying well. It adds to and contributes towards existing evidence-based solutions that inform Government responses to critical health concerns. It provides relevant tools, methods, techniques, and resources that have been developed throughout this research journey to support Indigenous well-being approaches.

1.4 Overview of methodology

Hākari as methodology

The Hākari experience is relatable to the Indigenous principles of kai tahi or coming together to share kōrero, kaupapa, and kai. As described by Barlow (1991), “in the past when people gathered together for a particular function, they would draw it to a conclusion with a great feast” (p. 17). As methodology, Hākari can open spaces for whānau to come together across multiple generations to engage in a process surrounding kai. Members can interact and contribute towards the planning, sourcing, gathering, preparation, cooking, and consumption of kai. It also enables opportunities for active participation in the kōrero that will transpire throughout the various stages of the Hākari process.

As methodology, Hākari introduces a framework as a guide to raise awareness and understanding surrounding the seven critical stages that lead to a feast. Using analogies at each stage, the framework discusses the connection, relationship and interaction man has with te taiao and kai.

Pūrākau as methodology

When my hauora journey begun, I was grasping any piece of information that I could find to inform a better state of well-being. My focus was on losing weight rather than lifestyle change. I would learn something new and straight away skip to the outcome or conclusion without taking time to sit, noho puku, process, and wānanga on the information. Basically, I assumed that someone else’s testimony, was going to be the solution to all my health struggles.

The risk of this approach was that I was seeking ora in the absence of my hau. Looking at well-being in isolation of my unique vital essence and composition of being was an incomplete method. Rather than establishing a firm tūāpapa and placing myself at the centre, I immediately leaned into someone else’s truth. In the absence of doing my own investigation and considering my own needs, I was setting myself up to fail.

The critical question I neglected to begin with was 'ko wai ahau? Who am I?' What does well-being look, feel and sound like for an Indigenous wahine(woman) within a modern context? Pūrākau as methodology, enabled a space for me to explore these pātai more intimately. I gathered my inner voice and shaped it into pedagogical points. The voices were key to gathering a deeper meaning to what is beyond what I could see happening externally.

Dr Jenny Lee-Morgan (Waikato, Te Ahiwaru, Ngāti Mahuta) is a senior Indigenous researcher and Director of Pūrangakura, a Māori Research Centre based in Tāmaki Makaurau. Providing a comprehensive insight into pūrākau methodology, Lee, Hoskins and Doherty(2005) suggest that pūrākau is a Kaupapa Māori approach to enquiry. It employs collaborative narratives from diverse individuals to inform an investigation. The concept is not new and traditionally used to underpin the transference of knowledge under the principle of ako. This process was reciprocal between student and teacher under the guidance and supervision of kaumātua.

Rongo ā Puku Framework

The RāP framework has been developed to articulate an ancient approach to well-being using the maramataka. It crosses over other conceptual and practical frameworks that provide insights into Indigenous perceptions of hauora. Aligning to the maramataka, it proposes time and space to engage in 'Puku Mahi' (doing), 'Noho Puku' (being), and 'Haere Puku' (seeing).

This study reveals that a major challenge to being well and staying well is time. We live in a generation that is 'busy doing.' Lifestyle choices are normally centred around 'fast, convenient, quick and easy'. This is to compensate with long hours applied to 'doing' and commitments that get in the way of 'being' and 'seeing.' This creates a state of imbalance and causes us to go a little wīwī wāwā (all over the place).

RāP brings back from the past a traditional way of living that can be applied today within modern conditions. 'Puku Mahi' in this context refers to the 'doing', being active, hardworking productivity and task/output focussed. The best time to engage in this is

during the moon phases that are high energy. Some of these are Rākaunui, Tangaroa, and Māwharu.

‘Noho Puku’ refers to ‘being’ and opening spaces where we can be still, sit, and deliberate. It is a time to reflect on what we have done and what we have learnt. Some activities to practice ‘Noho Puku’ include mauri tau (practicing mindfulness, settling mind and spirit), meditation (active and passive), and aro (reflection). Some tribes suggest that when the moon is sitting in Korokore Tuatahi, Orongonui, and Ariroa it is the best time to ‘Noho Puku’. These activities and moon phases are discussed in upcoming chapters.

The term ‘haere puku’ is described in Te Aka online dictionary as “going silently” of “without taking food, fasting - used to indicate abstinence” (Moorfield, 2011). Tuhi Stationery Ltd provides stationery, planners, and education on Ngā Mata o Te Marama (the faces of the moon). In this resource, haere puku is referred to as a time for fasting (Tuhi, 2023). In the context of this study haere puku relates to ‘going silently’ or transcending to a spiritual place where you can find insights, clarity, and revelations. This idea has been discussed with kaumatua (personal conversation, Tiwana Aranui, October 2023) and maramataka experts (personal conversation, Rikki Soloman, July 2023). The idea of transcending is not new and was practiced by tohunga. It is understood that best times for practicing haere puku are when the moon phase are in low energy, such as Mutuwhenua and Whiro. ‘Haere Puku’ within the RaP Framework suggests a time to engage in ‘seeing’ and raising your consciousness to a higher level. Many of us do this without even realising. As a mother, I often had to shift my mind from a problem and raise it to a place of resolution. Often that required visualising or seeing a solution amid crisis and chaos.

This study discusses fasting or abstaining from kai to reach higher consciousness. It explores this from an Indigenous as well as a Christian perspective to highlight similarities and alignments. ‘Haere puku’ was a time for Tohunga to engage in fasting and entering a state of tapu to seek knowledge in celestial realms. Once in this state they would transcend in their minds, seeking answers from a higher place of knowing. Abstaining from kai would

allow their bodies to be in a spiritual state. Kai was used to ‘whakanoa’ and allow their bodies to return to a ‘flesh’ state of being.

Traditionally, various rituals were also associated to entering the spiritual realm of ‘seeing’ using the earths elements (earth, wind, fire, and water) and ngā karakia(incantations) o ngā atua(gods) to clear the way and open the celestial passage. Activities such as chanting, singing, and dancing were also used to transcend, connect, and plug into spiritual spaces. When the moon enters phases of Ōmutu, Mutuwhenua, Whiro, and Tamatea Āio, our spiritual connection with the moon’s energy is at its highest. These are the times to practice fasting.

1.4.1 Methods

This chapter describes the methods employed that included: online surveys; interviews; whānau focus groups; family rituals; pūrākau; and journaling. The methods in this research were designed and delivered to guide whānau in understanding their behaviours and patterns surrounding kai. This was achieved through raising awareness around Kai Sovereignty, Kai Science and Kāi (ngā) as approaches to, and systems of, well-being. Secondly, whānau rituals were explored as a method to endorse, achieve, and sustain intergenerational well-being. And lastly, journaling was used as a method and as a resource for whānau to create, discuss, and share strategies across generations to achieve whānau ora.

Section 2

1.5 Hau Kōrero

This rangahau has been influenced by many conversations over the years leading up to and during this study. These conversations and yarns have shaped my thinking and become the catalyst to my writing patterns. I share the impact of these experiences and ‘ako moments’ under what I have called ‘E whitu ngā pou o Hau Ora’ meaning ‘The 7 tenets of Hau Ora.’. This chapter provides some context to how the ‘7 tenets of Hau Ora’ were inspired by my

perspectives on well-being. This section provides a natural scaffold into the literature review chapters.

1.6 The literature review.

Findings from a review of the literature pertinent to supporting this study are discussed here under the following topics: Mātauranga Māori, Kai Sovereignty, Kai Sustainability and Kai Security, Kai Science and Kāi (nga).

1.7 E whitu ngā pou o Hau Ora | The 7 tenets of Hau Ora in action

This chapter provides five examples of the application of the E whitu ngā pou o Hau Ora | The 7 tenets of Hau Ora framework. The examples offer an insight into local well-being approaches and how the framework can be applied across diverse ages, groups, and genders. The participant voice and experiences during this study are woven into this chapter, providing a good tūāpapa for the data analysis and findings chapter that follows.

1.8 Data analysis and findings

This chapter discusses the findings which are ordered by the questions discussed during the data collection process. The data was analysed, and key themes extracted to present seven findings. The findings are discussed here.

1.9 Discussions and recommendations

This chapter presents a discussion on the findings. A traditional Pā including the whare karakia, te pātaka, te whare tūpuna, te tari o te ora and whānau kāinga are used as a framework to present the recommendations. These include. The ideology for this approach was to highlight that it takes a Pā/village to sustain the well-being of the People.

1.10 Final thoughts

The last part of this thesis provides some final thoughts surrounding my research journey. The intention is to offer some last words of encouragement whilst affirming the key messages presented in this study.

Chapter summary

This chapter introduced the research topic, approach and aims. The significance of this study was defended and the rationale behind the methodology presented. The positioning of the researcher was clearly articulated through sharing pūrākau - lived experiences. The scope of key topics that will be shared in upcoming chapters was discussed providing a snapshot of areas of mātauranga that have been investigated and interrogated. The next chapter discusses the methodology and methods that were employed in the data collection process.

Chapter Two | Methodology

*Hāpaitia te ara tika pūmau ai te rangatiratanga mō ngā uri whakatipu,
Foster the pathway of knowledge to strength, independence, and growth for future
generations.
(Atua Matua, 2023).*

This whakataukī describes the intentions of the researcher. The pathway to gather knowledge in an Indigenous way has been previously paved by architects and carvers of mātauranga Māori. This pathway allows emerging Indigenous academics to follow, adding sprinkles of innovative ideas and approaches along the way for future researchers to gather.

This research is concerned with understanding the conceptual and practical notion of *being well and staying well* using Indigenous knowledge, approaches, techniques, and tools. It seeks to gather, review, discuss, and re-present Indigenous ideologies and behaviours surrounding kai. The goal is to provide insights and new knowledge that will lead Indigenous People towards reaching, maintaining, and sustaining optimal well-being.

This chapter describes the methodological underpinnings and methods engaged in this research. In this chapter I discuss existing Kaupapa Māori conceptual and practical frameworks while introducing models developed during this investigation. The first part of this chapter discusses Kaupapa Māori Theory, pūrākau, hākari, kai sovereignty, kai science and kai-ngā. Following that, I speak about tikanga, data sovereignty and ethics and introduce the RāP framework. The last part of this chapter describes the quantitative and qualitative methods used to collect data throughout this investigation. The methodologies, methods, frameworks, and approaches discussed in this chapter are designed in anticipation that they will offer tools to guide future Indigenous research. The focus and intent of the design is centred on the cultural safety of the Indigenous researcher, those researched, and the research findings.

Mātauranga Māori is ever evolving as the mana (integrity) and hā (tone) of Indigenous inquiry continues to probe authenticity and truth in academic spaces. The role and

responsibility that comes with applying Kaupapa Māori theory and Indigenous approaches to research derives from a place of whakapapa. This positioning guides ngā hononga (connections) and directs how Kairangahau (Researchers) engage with tāngata, wāhi, ao, au, (people, place, space, and self) when investigating Indigenous kaupapa and communities. It has been a privilege to ground this study in Kaupapa Māori theory discussed in this chapter.

For a long time, it was a struggle to find tāku pūrākau, tāku wero me tāku wawata (my story, challenges, and my aspirations) in the published writings on nutrition and well-being. The shelves were stacked with books covering the topic. Credible authors with evidence based scientific research, yet for some unknown reason (at the time), I struggled to connect with the literature. I found myself on a roller coaster ride with highs and lows, twists and turns, flows, and life jerking jolts. I could reach health goals once I set my mind to it, sustaining wellness however was the pakanga (battle) and wero (challenge).

These ad hoc experiences with non-Indigenous health interventions alongside failed interpretations of western models of wellness, however, were not in vain. Essentially, they have inspired the data collection process that informs this study. The aim has been to gather, analyse and discuss narratives that affirm Indigenous approaches to well-being. The intention of this approach was to present a snapshot of well-being from an Indigenous lens that has currency, is authentic, reliable, and relatable.

I am under no illusion that the findings will be the solution for all Indigenous People, far from it. What I do anticipate is that my research will add to the continued development and articulation of Indigenous knowledge in this area of study. Ultimately, I hope that it will inspire further exploration of Indigenous well-being led by Indigenous researchers.

When selecting methodological approaches to use in this study, I am prompted to interrogate my personal aspirations around the intent of this study. What story do I want to tell? What factors will I build into my story and how? The response, I believe, exists in my own lived experiences and how I have unpacked, critically analysed, and then repacked the learnings of my own journey. Once I became grounded in understanding and articulating

what optimal well-being and peak performance means to me, I was confidently able to share the principles of well-being with my whānau and community.

The next step for me was to consider the research design. How do I create culturally safe and respectful ways to collect, handle, and disseminate the data I am entrusted with? What guides the research process and outcomes? Who has autonomy over data gathered, how it is used and by who? How do I navigate change, evolve, or pivot from the intent whilst still aligning to the fundamental principles of Kaupapa Māori theory?

Finally, I questioned the space that I would set aside in the research design to honour the mahi (work) of previously contributors to my area of study.

Of Ngāti Porou and Ngāti Kahungunu descent, Dr Moana Jackson CRSNZ (10 October 1945 – 31 March 2022) was an outstanding Indigenous academic and advocate for criminal justice reform and constitutional change. In his 2013 address to the ‘He Manawa Whenua Indigenous Research Conference’ (Kaupapa Rangahau, 2013), he refers to honouring the previous mahi of others as ‘whai whakaaro’ or ‘following the thought’.

Introducing a range of ethics including the ‘ethic of prior thought’, he explains that “if we are to research, if we are to make sense of who we are or what is happening to us, then we must be able to, and must have confidence to, reach back to the prior thought that has been left for us by our old people” (16:40). This idea goes beyond published/written works and is inclusive of knowledge that has been woven in whakapapa (genealogy), toi (arts), waiata (song), whakatauki (proverbs), kōrero tawhito (ancient discussions), moteatea (chants), haka (fierce dance), whakaari (plays) and pūrākau.

This idea of whai whakaaro is examined in this study. As the following pātai (questions) are explored, how then do we learn from the footsteps of our ancestors and be led by the ink-prints of Indigenous writers? How do we synthesise this knowing with the tohu (marks) of our own lived experiences? How then do we test this knowledge on ourselves and share ideas with our whānau and our hāpori while capturing and honouring their unique experiences? And finally, how do we then articulate learnings in a way that can be easily unpacked then repacked by our Indigenous brothers and sisters to grow and thrive in their

own understandings and articulations of well-being? These pātai have provided the foundational ideas presented in this chapter. They will be explored here under the following sub-headings:

1. Methodologies.

How the principles of Kaupapa Māori theory have been used in this research will be discussed. Pūrākau will be explained and how ideas have been generated to capture narratives from participants. Hākari as methodology is introduced as a relevant approach to engaging in this rangahau along with the key focus areas for this study which are Kai Sovereignty, Kai Science and Kai-ngā.

2. Research approach.

Tikanga surrounding data sovereignty and ethics are presented in regard to how they have guided the research design and implementation. The 'Kai, Kōrero and Koha' approach that underpinned the qualitative research undertaken is introduced. The function and purpose of Te Kāhui Tautoko (a collective of experts to support this study) is outlined here alongside a list of key informants and contributors to this study.

3. Conceptual and practical framework.

RāP is outlined as a framework that articulates conceptual and practical components of this study. It is described under three key ideas: 'Puku Mahi', 'Noho Puku', and 'Haere Puku.' These concepts suggest intentional times within the moon cycles to engage in well-being approaches and practices of doing, being, and seeing.

4. Methods.

The methods used to collect data are described here. Quantitative data was sourced through online surveys. The qualitative data was collected through participant interviews, personal conversations, focus groups, and journaling.

2.2 Methodologies

We cannot allow the ideologies of colonisation to become the story of our existence - as it is a discourse that continues to centre colonial relations of the power and privileged that hinders our ability to move forward by continuously reinforcing victimising constructs of reality (Smith, Tuck, & Yang, 2019, p. 31).

Kaupapa Māori Theory

Kaupapa Māori theoretical approaches enable Indigenous writers to insert our own ways of thinking and knowing within the Academy. It allows us to employ methods and approaches which are familiar, approaches and relevant to Indigenous People.

Linda Smith (CNZM) is a Distinguished Professor at Te Whare Wānanga o Awanuiārangi and major contributor towards building Indigenous research and decolonising methodologies within academia. According to Smith (2015), “Kaupapa Māori research is research by Māori, for Māori and with Māori. It is very different from other forms of research in which Māori may participate but over which we have no conceptual, design, methodological or interpretative control” (p. 48). Indigenous researcher, Dr Jo Mane (Mane, 2009) concurs describing Kaupapa Māori as an approach to research “that has been determined by Māori, it is important that understandings of kaupapa Māori are recognised as having originated from Māori concepts, views and values” (p. 3).

Professor Graham Hingangaroa Smith (Ngāti Apa, Ngāti Kahungunu, Te Aitanga a Hauiti, Kāti Māmoe) is a distinguished professor and champion of Indigenous knowledge. During an interview with Professor Leonie Pihama and Professor Linda Smith (Ngā Wai a Te Tūi, 2020), he explains the theory of transformation and the emergence of Kaupapa Māori Theory and its six foundational principles. Intrinsically involved in the development of Kōhanga Reo and Kura Kaupapa Māori during the early 1980’s from where the principles of Kaupapa Māori Theory were inspired, Smith is accredited to framing the origins of these principles. These principles are still relevant today and applied within multiple contexts.

- It is important to note that the key principles of Kaupapa Māori have evolved and expanded beyond the context of educational intervention. This is the result of groundbreaking research which can be attributed to Indigenous academics such as Professor Linda Smith (Smith, 2012), Dr Jenny Lee (Lee et al., 2005), Dr Moana Jackson (Kaupapa Rangahau, 2014), Professor Leonie Pihama (Pihama & Lee-Morgan, 2022), Professor Graham Hingangaroa Smith (Ngā Wai a Te Tūi, 2020), and

Taina Pohatu (Pohatu, 2013), to name just a few. The key elements or principle of Kaupapa Māori research are outlined below.

Tino Rangatiratanga – principle of self-determination

The principle of Tino Rangatiratanga is familiar to Māori communities as it underpins the way in which Māori aspire to act within schools, workplaces, and communities within Aotearoa. It relates to self-determination and independence allowing Māori to control their own culture, aspirations, and futures.

Indigenous writers provide a good platform to investigate and argue the importance of Indigenous People writing their own stories and creating their own solutions. The bias and preconceived ideology and beliefs that enter the process of gathering information from the 'outside in' can have detrimental impacts. When Māori have sovereignty over the research process, the mana and integrity of the people and community in which the research is for, is protected.

Dr Shawn Malia Kana'iaupuni is a Native Hawaiian demographer and sociologist from Pupukea, Oahu. Her research focuses on the status and well-being of Hawaiians. She provides a convincing argument (Kana'iaupuni, 2004) that urges Indigenous People to take control of how cultural stories are to be collated, used, and documented, arguing that Indigenous narratives hold space as an authentic and relevant method for providing a platform for native peoples' voices to be heard.

Ani Mikaere (Ngāti Raukawa, Ngāti Porou) is a barrister and solicitor and teaches Māori law and philosophy at Te Wānanga-o-Raukawa. Mikaere (2003) raises some critical arguments concerning the authenticity and reliability of data that has been collected and published by non-Indigenous researchers and writers. She suggests critically analysing the credibility of informants to determine authenticity and discern what influences are contributing to the version they present.

The reliability of non-Indigenous writers should therefore be examined carefully. European ethnographers Elsdon Best and Percy Smith became known as prolific writers of the Māori traditions as they produced material that would inform both Pākehā and Māori on Māori

culture. Mikaere (2003) questions the authenticity of the data used in the compilation of publications suggesting that there was an imbalance in terms of the those who participated in the process of sharing the detail of Māori origins.

He uri o Ngāti Maniapoto me Ngāpuhi, Wharehuia Hemara (1950 – 2023) was a Māori literature specialist, writer, and curator. In his publication, 'Māori Pedagogies: a view from the literature', he argues that the critical element that differentiate Māori from any other race, nationality or community is whakapapa. He states that whakapapa is “a proclamation of individuals’ and communities’ origins. Whakapapa can be used as a vehicle for scientific enquiry as well as a social agent that describes a full range of co-generational and inter-generational relationships” (Hemara, 2000, p. 33).

Having lived experience enables me to locate myself, my whānau, and my hapori within my rangahau. Positioning Kaupapa Māori theory at the forefront of this research has held me to account as a Māori writer. Through my whakapapa, I hold the birth right to contribute towards the health and well-being aspirations of Māori and Indigenous People.

A primary focus of this study is to claim sovereignty over kai as a pathway to self-determination over the well-being for ourselves, our whānau, and our hapori. The principle of tino rangatiratanga supports claims to autonomy over how kai is sourced, consumed, and sustained for future generations to access.

Taonga Tuku Iho – principle of cultural aspiration

This principle proclaims that te reo Māori (Māori language), tikanga (protocols) and mātauranga Māori are placed at the core of Te Ao Māori. Within the critical thought of Kaupapa Māori Theory, Māori approaches of knowing, behaving, and interpreting the world are considered credible and authentic. This creates spaces to investigate beyond the physical realm and considers metaphysical places that allows the aggregation of spiritual and cultural awareness as informants to the process of data accumulation and critique.

The narratives that have held the essence of culture, spirituality, history, and genealogy of Indigenous People have been stored for generations in a range of mediums that were

woven in everyday life and passed on amongst the people in a naturally occurring manner. According to Smith (2012), “Indigenous Peoples want to tell our own stories, write our own versions, in our own ways, for our purpose.” (p. 29). This idea is further supported by (Kana’iaupuni, 2004) who states that “by cementing our presence in the production of knowledge, we can be vigilant over how it is used and the power that knowledge confers” (p. 28).

Since the introduction of western ideas and practices, many Indigenous stories have been silenced, forgotten, watered down and even neglected as pākehā ideas surrounding well-being have dominated the minds of the people through colonised constructs such as schools, churches, and media. Where Indigenous stories are employed as a tūāpapa for well-being, Kaupapa are thriving, and sustainable outcomes are evident.

The power of the story sits with the storyteller and the world view or lens that is brought to the research process. The authenticity of the fibres that weave the various parts of the story together is determined by the process in which the parts were collected, analysed, understood, and presented. It is critical to me in my research that culturally safe practices are followed to ensure that new insights, interpretations, and perspectives are grounded in Kaupapa Māori theory, protecting the researcher, those researched, and the communities involved.

The knowledge systems that inform the key focus areas of this study come from a place of lived experienced and old and new traditional well-being practices. They have been woven throughout the chapters as a reminder that the source of mātauranga Māori has whakapapa and mana. The role of this research is to discern and critically think about how these ancient teachings can be embedded in modern contexts as a guide towards optimal well-being.

Ako Māori – principle of culturally preferred pedagogy

Ako Māori refers to educational philosophy, theory, and applied practice for teaching and learning. Ako is a culturally preferred pedagogy. It recognises a reciprocal responsibility and

obligation to learning between the kaiako (teacher), and the ākonga (learners). This involves sharing ideas, knowledge, and lived experience within time, space, and energy.

A descendent from the tribes of Ngāi Tūhoe, Ngāti Ruapani and Ngāti Kahungunu, Dr Rangimārie Te Turuki Arikirangi Rose Pere CBE (25 July 1937 – 13 December 2020) was recognised for her contributions towards education. She was a prominent Māori educationalist, academic and Indigenous spiritual leader.

Pere (1994) shares how she “slept, ate, played, worked and learnt alongside four generations, and was never excluded from anything her grandparents were involved in” (p. 3). She acknowledges her rich upbringing and the intergenerational environment that she was immersed in as an early age. It was through these observations and participation that her philosophical and pedagogical points of difference were nurtured and shaped. Throughout her career she often referred to these ako moments.



Image 2.2.1. Māori women and children around a food tray. Ref: 1/2-111718-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/22813781](#)

Ako is not new idea and has been used for generations by our ancestors to pass on knowledge significant to the protection, promotion and sustainability of culture,

whakapapa, whenua, and iwi aspirations. It has also been used as a tool to capture and record moments of time and seasons. These moments were then sculpted into mediums such as karakia, mōteatea, pūrākau waiata, haka, toi, and whakatauakī recorded and shared amongst the people for generations (personal conversation, Tiwana Aranui, 2023).

The processes and activities surrounding kai were a common space of ako moments to emerge. Knowledge and skills were transferred in a naturally occurring manner. Tamariki would learn from an early age the arts and science of hunting and fishing, kōhi kai (food gathering) and māra kai (food gardening) working with circadian rhythms, the natural environment and guided by Indigenous systems of knowledge. Everything from preparing the soil, setting traps and nets to kai preparation and cooking were learnt through listening, observing, kōrero, and participation.

Dr Melanie Riwai-Couch is a teacher, tumuaki, senior lecturer, iwi facilitator, senior advisor for the Ministry of Education, kaihautū Māori and education consultant. She has worked in the education system for over 25 years. According to Riwai-Couch (2021), “learning and knowledge-sharing took place through daily interactions, at home and in the community” (p. 24). She further states that “people of different generations lived together in close proximity, and so the language, interpersonal and behavioural skills necessary for success were passed through the generations within the context in which they were used” (p. 24), affirming that teaching and learning was based on the social interaction and lived experiences.

Bringing ancient ways of teaching into modern learning environments is an approach to reclaiming Indigenous approaches to passing on knowledge and skills. This idea is supported by Hemara (2000) who suggests that “using traditional, pre-European-contact behaviours and conventions as guides to current and future initiatives in education could be seen as an attempt to reinforce mana for Māori communities” (p. 79). The layers of interpretation and points of view from lived accounts over time provide a rich and authentic learning experience for the ākongā.

This study attempted, where appropriate, to weave ‘ako moments’ into the data collection process. The research design has fostered spaces for ako moments to naturally evolve

between the researcher and participants through using the Hākari framework and the RāP model (discussed later in this chapter). This was an attempt by the researcher to create opportunities for learning moments to be sustained post this study.

The way in which the findings are presented and shared within Indigenous communities is critical. This study aims to create knowledge, tools, and resources that are conducive to the principle of ako Māori.

Kia piki ake i ngā raruraru o te kāinga – principle of Socio-economic mediation

This principle upholds that a collective approach be applied to address and to uplift the socio-economic burdens impeding on the development and progression of hapori Māori. This suggests that initiatives that are relevant and authentic will derive from the heart of communities in which they impact and represent. Prior to a Pākehā imposed culture that was infiltrated with western ideology, beliefs and behaviours, Māori were thriving and surviving within traditional social constructs. These Indigenous structures were established to optimise holistic well-being and development within whānau and hapū. Essentially these provided Māori individuals with tikanga (ways of doing things) on how to conduct themselves from day to day whilst contributing effectively and efficiently to the maintenance, growth, and sustainability of the collective community.

The image below is a depiction of Te Pā o Kīngi Te Wherowhero from around the mid-1800s. The construct supports the notion of unity, coming together in the centre of the pā to kai tahi (eat together), mahi tahi (work together), or wānanga tahi (workshop together) on collective tribal matters. The design of this pā promotes a sense of kotahitanga (togetherness) and kaitiakitanga (guardianship) with the embracing and sacred Taupiri maunga (mountain) in the background as a marker of ūkaipō (origin), hau kāinga (true home) and moemoeā (vision) for the tribe.



Image 2.2.2 Kaitote, the pa of Te Wherowhero on the Waikato, Taupiri mountain in the distance.

Source: Ref: PUBL-0014-15. Alexander Turnbull Library, Wellington, New Zealand. [/records/22844562](#)

Discussing the relevance of the kaupapa Māori principles within modern environments, Professor Graham Hingangaroa Smith shares the ideology behind this principle using the recent rāhui activated by COVID-19 disruptions. Stating that “we have the confidence to do things, we have seen our ability to mobilise collectively and to share resources and to look after our kaumātua” (Ngā Wai a Te Tūi, 2020, 37:50), he highlights how “all of the elements are very much alive and pertinent in the contemporary context” (39:10). This was further witnessed during the 2023 floods as a result of two cyclones, Hale and Gabrielle, on the East Coast of the North Island where communities were mobilised within hours.

Unbeknown to me, I have been doing rangahau since a child. Under my mother’s pedagogical approach to teaching and learning, rangahau was naturally occurring throughout critical stages of my life. I was gathering knowledge, reflecting, and testing kai science every time I would find myself out of balance. My own story of recovery and reclamation has validated pūrākau as an effective methodology to engage in Indigenous research. This is discussed in the following section.

Pūrākau as methodology

We cannot allow the ideologies of colonisation to become the story of our existence - as it is a discourse that continues to centre colonial relations of the power and privileged that hinders our ability to move forward by continuously reinforcing victimising constructs of reality.

(Smith et al., 2019, p. 31).

The various accounts of earlier settlers describe Māori as a fit and healthy race with advanced systems of agriculture and resource management. This is contradictory to many of the publications that state that Māori were primitive, unhygienic and not capable of using their own minds. Convinced that Māori needed to become like the British, colonisation was considered by those imposing a western way of life as a gift to Māori. The assimilation of whānau Māori into the western world happened insidiously. The full extent of this traumatic process including the many untold stories of how this process impacted whānau are still yet to be shared.

Once Māori overcome the initial migration challenges of adapting to the new environment and conditions they began to grow in numbers. Durie (2003) discusses how Māori shifted from survival mode into thriving over time highlighting that “life had become highly organised” (p. 15). Prior to 1800 according to Durie (1994), “Māori recognised the importance of healthy communities, and a public health system evolved which was based on values that reflected the close and intimate relationship between people and the natural environment” (p. 7). These ideas still exist. What is lacking is the national infrastructure to support those traditional systems and beliefs.

Our history shows through pūrākau, waiata and toi that Māori were a strong and vibrant people. As recorded in Lange (2023) “early European visitors often described Māori as a fit and healthy people. They led active lives, and many of the infectious diseases common in other parts of the world were unknown to them” (p. 1). This investigation intends to penetrate through historical accounts including data recorded and data yet to be captured and provide critique to inform my enquiry.

Lee et al., (2005) describes pūrākau as a transformative methodology, worthy of collecting, reviewing, and retelling Indigenous stories in a way that holds the mana and essence of the people in which the story originated. The focus and intent of the pūrākau methodology is on the protection and advancement of mātauranga Māori and the Māori way of life by employing kaupapa Māori intent and approaches. According to Lee et al., (2005), “a pūrākau approach encourages Māori researchers to research in ways that not only takes into account cultural notions but also enables us to express our stories to convey our messages, embody our experiences and keeps our cultural notions intact” (p. 10). Pūrākau methodology further provides an opportunity to collect, transfer and present the knowledge using an Indigenous lens.

Indigenous People hold and carry the mana of their stories. They are rightfully the orchestrator of their truths, regulating the flow and rhythm. They determine how, where, and to whom the mana of the stories will reach and impact. Patterson (2014) describes this type of mana as “interlacing across narratives” (p. 11). This is the ‘ranga’ of hau or rangahau. Ranga meaning to weave, and hau representing vitality of life within and around us. The ideology of hau and hauora will be presented and discussed in upcoming chapters. The way in which narratives are collected, collated, and discussed, are guided by tikanga underpinned by Indigenous values, principles, and attributes.

These personal experiences have initiated the use of pūrākau methodology as an effective mechanism to facilitate the sharing and discussion of personal stories and practices throughout this study. Participants were provided whānau journals as a tool to express, articulate, and record their learning experience. These journals are intended to be used as an ongoing ako (teaching and learning) resource for participants, their whānau, and their hapori.

Hākari as methodology

Self-reflection, current positioning, and personal commitment to my research topic has become the tūāpapa to the development of Hākari as methodology. Hākari is an ideology that is endorsed by tino rangatiratanga. Hākari outlines a systematic approach to

community engagement that is underpinned by tikanga Māori principles and practices. It further informs a holistic practice that connects people, place, and land to kai sustainability and sovereignty.

Hākari is typically referred to within traditional and contemporary setting as a feast, normally involving a large gathering of people. Within the context of this research, Hākari uses māra kai or the planting, nurturing, harvesting, and kai preparation process as an analogy to discuss the seven stages that lead up to a united feast.

The image below provides a snapshot of how traditionally, the collective whānau was involved in all activities leading up to the feast. According to Ngāti Kahungunu kaumatua Tiwana Aranui, this included the harvesting, hunting, fishing, preparing, cooking, and serving kai. There was a role for everyone. Those who weren't a part of the kai prep would do the clean-up (personal conversation, 2023). In modern times whānau have become busy and distracted with careers, study, and other commitments that they enter the hākari process at the cooking stage. In many cases, whānau rely on others cooking meals as fast food and takeaway options suit busy families. The impact of these choices to the health and well-being of people, place, and space will be discuss in upcoming chapters.



Image 2.2.4. Group of men, women, and children, around a hangi.

Ref: 1/2-022240-G. Alexander Turnbull Library, Wellington, New Zealand. [/records/23057797](#)

It is the intention that Hākari as a framework be used to pinpoint critical pedagogical points for Indigenous People to engage with in order to optimise the well-being of; he tangata, he whenua me te taiao. Hākari promotes self-determination and independence allowing Indigenous People to claim control over their own well-being aspirations. Hākari further demonstrates autonomy over how we plant, grow, nurture, harvest, prepare and cook kai. Using the maramataka alongside the empirical data collected by our ancestors, it further informs ancient ways on how to maximise kai sovereignty, kai regeneration and kai sustainability.

This study presents the ‘7 Stages of Hākari’ and outlines a clear map guiding the engagement and interaction with the participants in a culturally safe and appropriate manner. The ‘7 stages of Hākari’ methodology and associated principles of practice are illustrated below.

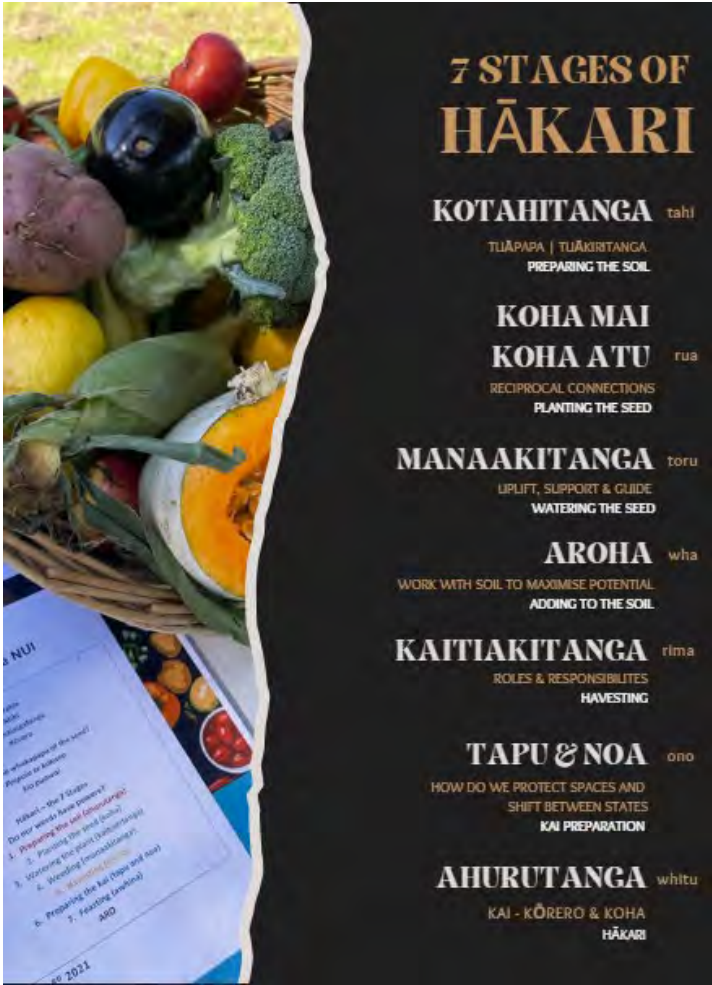


Image 2.2.5. The 7 stages of Hākari.

Like pūrākau, Hākari as methodology can be used an educational tool under the principle of Ako. The ‘7 stages of Hākari’ experience creates a space for whānau to come together across generations to contribute towards the sourcing, gathering, preparation, cooking, and consumption of kai as well as actively participate in the kōrero that will transpire and inspire.

The following table provides an overview of how the seven stages of Hākari can contribute towards research methodology and generating ako (teaching and learning) moments.

Takepū (Principles)	Mahi (stages)	Ako (teaching and learning moments)
<i>Kotahitanga</i>	<p>Whakawhanaungatanga (building relationships)</p> <p>Ehara tāku toa, he takitahi, he toa takitini.</p> <p><i>My success should not be bestowed onto me alone, as it was not individual success but success of a collective.</i></p> <p>Tūāpapa (foundation)</p> <p>Making connections, coming together to lay the tūāpapa. Laying the foundation of the research approach.</p> <p>Preparing the soil</p> <ul style="list-style-type: none"> • Kanohi ki te kanohi • Ihu ki te ihu • Ngākau ki te ngākau • Puku ki te puku. 	<p>Tuakiritanga (identity)</p> <p>From the papa (foundation) we blend the soil in the whenua (land) meaning we share unique individual experiences, identity, passions, aspirations, hopes, and dreams.</p> <p>Pepeha and whanaungatanga</p> <p>We find similarities in genealogy but also in shared values, passions, tears, and challenges. Together we build an unshakeable tūāpapa built on trust and understanding.</p> <p>Practicing whanaungatanga allows connections and understandings of what each member can bring to the whānau wellness plan.</p>

	<p>Soil represents the whenua; we are only responsible for what is under the feet. This is a metaphor to focus the research intervention on ko au (the individual or person that I engage with). It is interested in their truth and their lens.</p> <p>As a methodology, this stage in the research involves socialising the research topic, building relationships and trust. Providing the key information and gathering informed consent.</p> <p>It is important that the approach to kotahitanga is led with integrity and through ethical intent.</p>	<p>As a principle of wellness, kotahitanga suggests that the whānau move together as one, creating spaces and practices of wellness across the whānau.</p>
<p><i>Koha mai</i> <i>koha atu</i></p>	<p>Planting the seed</p> <p>He kakano ō muri. He putiputi ō mua.</p> <p><i>The seed was sown in the past.</i> <i>To bloom in the future.</i></p> <p>As methodology, ‘koha mai, koha atu’ relates to transparency about the purpose of the investigation and clearly articulating how the research will give back in an impactful and meaningful way</p>	<p>Mana</p> <p>The integrity of the seed depends on the whakapapa (source) of the seed and what conditions it has been exposed to.</p> <p>As a principle of wellness, this stage reminds us that through whakapapa, we can reach back, and grasp tools that maximise potential for growth and development.</p>

	<p>needs to be tika (right) and pono (authentic).</p> <p>It is critical that the researcher is grounded in their knowing (topic) as the integrity of the seed depends on the source of the seed.</p>	<p>Koha</p> <p>Building sustainability with integrity. How will the community benefit from the investigation? What is given in return for their participation? Gifting of the science and mātauranga that already exists in this area of study throughout the process. Using models and frameworks developed to help articulate and make sense of science using Indigenous tools and resources.</p>
<p>Manaakitanga</p>	<p>Watering the seed</p> <p>Poipoia te kakano kia puāwai. <i>Nurture the seed and it will blossom.</i></p> <p>What the seed is fed and the conditions it is exposed to determines the growth and quality of the harvest.</p> <p>It is important to understand and know what the needs of the seed is and what stage of growth it is in.</p> <p>As a methodology it refers to being present and in tune with what you are doing, how you are doing it and what impact your actions are</p>	<p>Mana</p> <p>Everyone is born with mana. This affirms that all members of the whānau can contribute regardless of age, positioning, or experiences.</p> <p>As a principle of wellness, this relates to the intentional provision and creation of spaces where the mana and contribution of all members of whānau can be uplifted, captured, discussed, and protected.</p> <p>It includes understanding what each member of the whānau can bring into collective spaces. This will be realised through the practice of</p>

	<p>having on others. It suggests that the discernment of approach appropriate to each participant is applied with intention and focus.</p>	<p>whanaungatanga and ongoing nurturing of relationships.</p>
Aroha	<p>Reinforce the tūāpapa (foundation)</p> <p>He aroha whakatō, he aroha puta mai. <i>If kindness is sown, then kindness you shall receive.</i></p> <p>Avoid taking or disrupting the soil. Strengthen the soil, work with the soil, add to the soil using Indigenous systems that protect integrity of seed. One does not have to take away from the tūāpapa but instead add to the soil using Indigenous systems of support to maximise potential.</p> <p>As a methodology, the intent is to add value to the communities involved rather than take away from them. It involves a process of working ‘with’ and ‘alongside’, maintaining communications and connections throughout the process.</p>	<p>Hā (breath)</p> <p>Breath life and love into the soil.</p> <p>As a principle of wellness this suggests that where possible, we should avoid removing physical and metaphysical mea (things) from our grounding places. It is a very western idea to uplift, disrupt and displace. Reinforcing and creating systems that strengthen and are sustainable are Indigenous approaches to protecting the growth and well-being of individuals and whānau collectives.</p> <p>Adding breath, life, and love to the situation using Indigenous tools, approaches and knowing to enrich and maximise the value of the soil can add to the growth and well-being of People.</p>
Kaitiakitanga	<p>Roles and responsibilities</p> <p>Harvesting</p>	<p>Tuakana/Teina relationships</p>

	<p>Whatungaro te tāngata, toitū te whenua.</p> <p><i>The people will go but the land remains.</i></p> <p>This principle speaks to succession through the understanding and application of roles and responsibilities.</p> <p>As methodology, understanding the roles and responsibilities that come with applying kaupapa Māori approaches. It relates to data sovereignty, ethics and a process that promotes an ongoing connection with key participants where exchange of information is transparent. Processes are in place to protect the integrity of the data, the people, and the communities being investigated.</p>	<p>Understand roles and responsibilities within the whānau so that all areas are covered in the growth and sustainability of the whānau.</p> <p>As a principle of wellness. Take only what is needed. Consider kai sovereignty, kai science, kai-ngā, transfer and exchange of Indigenous knowledge systems and sustainability. Protect te taiao (environmental) spaces so that future generations can swim and bathe in waiora (the healing waters) and source kai from the whenua (lands) and moana (sea).</p>
<p>Tapu and Noa</p>	<p>Harvesting and kai preparation</p> <p>Understanding how mauri shifts between states using karakia, kōrero, karanga, waiata, and dance. Recognising what state, you are in, allows discernment of how to shift from tapu and noa. Using tools such as karakia can release you from a state of tapu. At</p>	<p>Mauri and wairua</p> <p>Wairua is about connection, everyone has spirituality. Indigenous People through whakapapa (genealogy) include land, rivers, and oceans as part of who they are, and where they come from.</p>

	<p>times you do not voluntarily enter a state of tapu, having awareness of how to shift out of this is critical.</p> <p>As methodology, recognising and protecting the mauri of the research process, and safely moving in between states of tapu and noa.</p>	<p>Mauri is a presence of being and shifts in between states. It is influenced by people, place, and situations.</p> <p>As a principle of wellness, understanding that tapu precedes noa and noa precedes tapu. We can enter a state of tapu through an activity such as fasting from kai, we can then return to a state of noa once we consume food exiting the spiritual realm.</p>
<p>Ahurutanga</p>	<p>Feasting – hākari</p> <p>Kai kōrero koha.</p> <p>Hapaitia te ara tika pumau, ai te rangatiratanga, mo nga uri whakatipu.</p> <p><i>Foster the pathway of knowledge to strength, independence, and growth for future generations.</i></p> <p>This stage covers the process of coming together recognising whānau ceremonies, ritual, and patterns surrounding kai.</p> <p>As methodology, creating safe spaces for kōrero where contributors feel valued and, in a</p>	<p>Awhinatia</p> <p>Creating safe spaces for whānau to come together across generations, sharing and contributing. A place to connect and reflect.</p> <p>As a principle of wellness, creating spaces where everyone in the whānau can contribute to the seven stages.</p>

	position, to contribute in a meaningful way.	
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Rangahau focus areas – Kai sovereignty, Kai science, and Kāi (nga)

Along with investigating traditional lifestyles and ancient knowledge systems surrounding kai, this rangahau has focussed on three key areas to inform this study:

1 Kai sovereignty

I have drawn on literature, prior thought, experiences, and data collected through this study to discuss ‘Kai Sovereignty’. I have explored conceptual as well as evidence-based ways to re-Indigenise kai through re-claiming autonomy over how we source kai, consume kai, sustain, and regenerate kai systems.

I have investigated the disruptions to te taiao, social constructs and traditional food systems and how this has contributed to unwellness for te tāngata, te whenua me te taiao. Critical areas I have probed included access to kai, kai sources, harvesting kai, collecting kai, kai traps, hoa haere of kai/kai combinations, and Indigenous kai patterns.

A discussion on circadian rhythms, living by the moon, variations of the maramataka and how this informs planting, fishing, hunting, and well-being practices is provided. Noticing tohu and key messages from te taiao and how the trees, plants, flowers, and birds gather and inform us when to collect kai from the ocean is mentioned.

2 Kai science

In this area, I have examined western ‘Kai science’ and critically investigated how this knowledge aligns to mātauranga Māori and ancient Indigenous knowledge of kai patterns and systems.

Puku ora (gut health) is examined and how Indigenous lifestyles include practices surrounding kai promoted and maintained well-being. Indigenous systems of fermentation, kai as rongoā, feasting and fasting, and the hoa haere of plants is explored. Gut microbiome, plant-based kai, telomeres, and the gut-brain axis is also discussed providing an argument on how kai and lifestyles can optimise or disrupt puku ora.

As a comparative study, the vagal nerves and lymphatic system are explored in alignment to ancient rituals performed to find balance or unblock, restore, or strengthen well-being. The use of the earth's elements and karakia o ngā atua are discussed along with how kai or the abstinence of kai (fasting) was employed to reach higher consciousness and a deeper connection with the celestial or metaphysical realm.

3 Kāi (nga)

'Kāi (nga) is a play on the Māori term kāinga (home). It explores a range of ideas around what home means in a modern context, including the correlation between kai and a sense of home or 'homely feelings. The association between kai and Kāinga under the three headings of ū(kai)po, hau(kai)ngā and hokia ki te (kāi) nga is explored. Whānau rituals, routine, and structures surrounding kai are discussed in relation to how these practices can create a sense of belonging, unity, and security. Kāinga is also discussed as a platform to be nurtured and restored.

Kai can trigger memories and encounters that stimulate and spark 'feel good' and 'soul filling' moods. These kai correlations with people and place support the beliefs that kai is the centre of culture and religion. Kai experiences can be associated with activities leading up to, during, and following kai. This

could include mahi tahi (refer to Hākari framework), kōrero, pūrākau, toi, waiata, kēmū, and kanikani, to name a few.

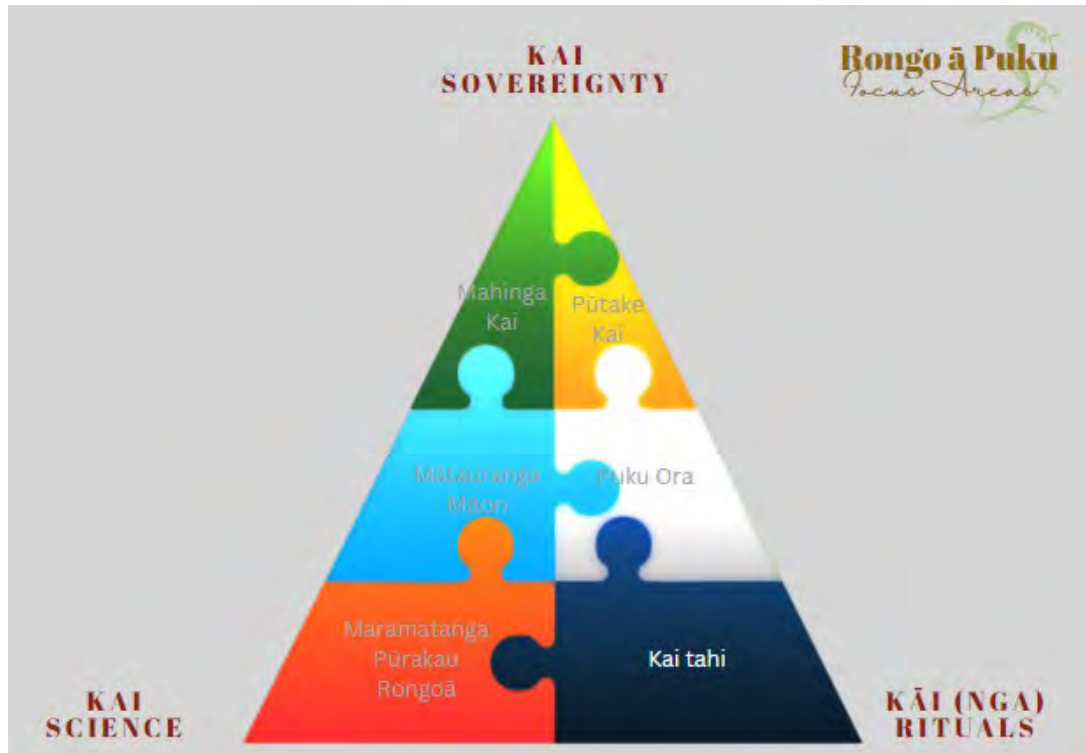


Image 2.2.6. Key focus areas, Kai Sovereignty, Kai Science and Kāi (nga), rituals. Rongo ā Puku resources

2.3 Conceptual and practical framework

Rongo ā Puku

The RāP framework has been used to facilitate conversations that inform the following research question: How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples?

RāP promotes ideology that Indigenous People are inherently intuitive with natural abilities allowing them to instinctively connect to all the earth's elements (fire, water, air, and earth) of their whole being (mind, body, spirit and social). Indigenous People (pre-colonial interference) had the ability to self-heal, build resilience, and achieve optimal well-being.

Disruption and interference with our natural circadian rhythms have shifted many of us out of balance.

The RāP framework works to bring us back into balance, recognising that there is a time for puku mahi (doing), noho puku (being) and haere puku (seeing) using the maramataka (cycles of the moon) as a marker of these times and transitions. The framework extends Professor Sir Mason Durie's 'Te Whare Tapa Wha' model as discussed in Durie (1994). 'Te Whare Tapa Wha' is a health assessment tool that exemplifies the four critical domains of well-being (wairua, hinengaro, tinana and whānau). According to Durie (2003), "taha wairua requires some exploration of cultural identity; taha hinengaro is about knowledge, information, and control of behaviour; taha tinana calls for attention to physical health; and taha whānau links the individual with family and with wider social and environmental institutions" (p. 51).

The RāP framework challenges individuals to 'tune in' or listen to the needs within these realms in order to self-assess their tinana, wairua, hinengaro and whānau needs, as a source for maintaining and sustaining well-being. The Framework identifies three stages of hauora interventions, these are: Puku Mahi; Noho Puku; and Haere Puku.

With information overload flooding social media and Google, it can be overwhelming to discern what sources are authentic, current, and credible. RāP advocates that each person can have direct access to knowing and understanding what they need and when they need it. Ultimately, understanding puku as a source of intelligence to inform well-being. These align to the principles of the maramataka (Māori moon cycles). Interventions suggest times and space to observe and notice, times to sit and reflect, times to plan and strategise, and times to mahi.

Puku Mahi is a time to be actively laying the foundations of knowledge, the tūāpapa. It is also a time to observe and notice any signs or behaviours in our tinana that could indicate that something is out of balance. Your eyes, tongue, skin, feet, your mimi (urine) or teko (human faeces) are all good indicators and health markers. Paying attention to your body can signal that may be lacking essential nutrients. One way to check if you have a blockage

in your digestive system is to eat corn and note how long it takes to pass through your system.

Noho Puku encourages engagement in activities that build and strengthen tuakiritanga, (uniqueness, identity, and skills) through a process of aro (reflection). It suggests time and space to meditate, sit, and reflect on new knowing, and blend with existing knowing, exposure, and experiences. This is a time to critically think about what you know, and now that you know, what you will do and how you will do it. It is about planting ideas and creating plans as you continue to build and develop your uniqueness.

Haere Puku refers to standing in the space of Tuarongo. Haere Puku offers time to heighten consciousness. Reaching optimal levels of cognitive and spiritual functioning and abilities, this is a time to be connected and plugged into a higher source of intelligence. It relates to traditional fasting, and how this was employed for reaching higher levels of cognitive and spiritual functioning. When we abstain from kai, we allow our bodies to be spiritually elevated as we enter a state of tapu (a supernatural condition). This allows us to connect to a higher energy level where we can seek clarity, deeper understanding, or guidance. In is in this space that we can really 'tune in' and connect, unblock, heal, and release any areas within that are putting us in a state of unwellness. When we consume kai, our bodies recognise that we have returned to our flesh, and we return to a state of noa (released from the state of tapu).

The RāP programmes have been designed around this framework and have been operating in Indigenous communities across Aotearoa for the past 12-months. During this period, over 70 participants have engaged in the principles and teachings of this hauora intervention structure. They have applied elements of the framework in their everyday lives, achieving transformative hauora (health and well-being) results.

The following image provides a snapshot of the RāP framework.



Image 2.3.1. Rongo ā Puku framework. Rongo ā Puku resources

2.4 Research approach

Building a principled based relationship with communities of interest was a critical step in introducing this research project. There were considerations made to explore if the community was a good fit for the project and whether the kaupapa (research topic) aligned to the vision, aspirations, and purpose of the community. Care and attention were invested in sustaining healthy relationships throughout the project. It was important that key contributors felt connected, consulted with, and informed at each step in the research process.

The tikanga and ethics developed for this study have guided approaches to building trust with individuals, groups, and communities that contributed to this study. Interactions and exchanges of information were transparent and open, guided by the following research ethical intent.

Research ethics.

1. *The ethic of meaningful relationships*

This ethic provided a marker for how I intended to engage with participants. It included building a reciprocal relationship of trust and respect through the provision of clear information. Space was given to individuals, the whānau, and hapori to understand the needs and aspirations they had relating to the research topic.

Taina Whakaatere Pohatu (Ngāti Porou, Rongowhakaata, Te Aitanga-a-Mahaki, Ngai Tāmanuhiri, Ngāti Kahungunu) is an Indigenous academic. The Āta framework was introduced by Pohatu as a tool to develop respectful relationships with whānau. In Pohatu (2004) he describes the art of listening which he refers to as ‘āta whakaronga’. The art of ‘āta whakarongo’ according to Pohatu (2013) is to “listen with reflective deliberation” (p. 15). The listener must observe with intention, leaning in to catch the gems that will flow throughout the kōrero. According to Pohatu (2013), this approach to listening provides “space to listen and communicate to the heart, mind and soul of the speaker, kaupapa and environment” (p. 15). This means being present in the moment and catching the kōrero with all senses of being.

2. *Ethic of reciprocation*

This ethic prompted how I acknowledged the contributions from participants. Koha was provided in the form of vouchers, gifts, resources, sponsored wānanga, journals, and personal health plans.

3. *The ethic of safe spaces for kōrero*

This ethic covered intentions to create spaces that set the scene for conversations to occur in a natural and authentic way. Ensuring the space was appropriate and comfortable, taking into consideration the individual preferences and diverse needs. Depending on the participator group, a range of settings were available including indoors spaces, online platforms, or out in te taiao – the natural environment.

4. Ethic of transparency

This ethic covered how I socialised the research intent including the bigger picture and its benefit to individuals, whānau and communities included in the study.

5. Ethic of power and responsibility

This ethic relates to data integrity and how I treated and handled the information received, analysed, reported, shared, and disseminated the findings.

Recent disruptions to individuals and communities caused by COVID-19 and Cyclone Gabrielle made it challenging to connect and engage *kanohi ki te kanohi* (face to face), *ihu ki te ihu* (breath to breath), *pokohiwi ki te pokohiwi* (shoulder to shoulder), *wairua ki te wairua* (spirit to spirit), and *puku ki te puku* (intuitively). Some of the groups and sessions were split or facilitated online to accommodate the availability of key contributors.

Data collection was therefore merely one part of the process. Building meaningful and sustainable relationships, providing clarity around the methods, approaches and frameworks as well as co-constructing authentic connections was at the forefront of the engagement, and a critical part of the data gathering process.

Time was invested into preparing documents that avoided heavy and overcomplicated terminology, and being intentional about presenting the research in a way that was easy to follow. Documents were reviewed by the 'Kāhui Tautoko' rūpū to check languaging style, pitch, and the depth of information and articulation of key points.

The whanaungatanga stage enabled me to draw on information that I could use throughout the investigation. During sessions I wove in *pūrākau* (stories) relevant to the individuals or groups so that they could make connections to the bigger intent of my research.

Tikanga (actualisation and embodiment of research ethics)

The Tikanga research approach was drawn against the values/ngā uara of Te Whare Wānanga o Awanuiārangi. (Te Whare Wānanga o Awanuiārangi, 2023).

These include:

1. Whanaungatanga.

Whanaungatanga empowers and connects people to each other and to the wider environment.

2. Manaakitanga

Manaakitanga acknowledges our responsibility to behave with generosity and respect, and in a manner that is consistent with enhancing the wairua and mana of past, present, and future.

3. Kaitiakitanga

Kaitiakitanga acknowledges in the first instance the unique obligations and responsibilities that Ngāti Awa have as kaitiaki of Te Whare Wānanga o Awanuiārangi.

4. Pūmautanga

Is to be steadfast and committed to doing the right thing, in the right way, in all that we do with and for Te Whare Wānanga o Awanuiārangi.

5. Tumu Whakaara.

Acknowledges that all staff at Te Whare Wānanga o Awanuiārangi are leaders, decision-makers, and the navigators of our journey. In doing so, we will be accountable, honest, and ethical in all aspects of our academic, administrative, and general responsibilities and work.

The table below outlines how I wove the Hākari Framework into these tikanga values and the ethical intention.

Methods and research approach

Hākari Principles	Ethical Intent Research approach	Tikanga (actualisation) Values of Te Awanuiarangi
Kotahitanga	The ethic of meaningful relationships.	<u>Whanaungatanga</u> Setting the tone from the first point of interaction. It was important that participants could understand and make sense of my kaupapa (topic) so the individual, whānau or community was better positioned to see how they saw themselves in the process.
Koha mai, Koha atu	The ethic of reciprocation.	<u>Manaakitanga</u> Koha was provided to participants, acknowledging their contributions to this research
Manaakitanga	The ethic of meaningful relationships.	<u>Manaakitanga</u> Research was conducted in whānau whare, community spaces, and marae. The following protocols were adhered to: <ul style="list-style-type: none"> • Karakia to begin and end session. • Kai provision during sessions. • Safe space provided to kōrero. • Clear details and information concerning this research process provided with participants were encouraged to seek clarification when required. • Breaks and time outs were provided. • Schedules and agenda followed to honour time.
Aroha	The ethic of transparency.	<u>Pūmautanga</u>

		Participants were provided with clear, transparent information. Time was invested into making the information as relatable and easy to follow as possible.
Kaitiakitanga	The ethic of power and responsibility.	<u>Kaitiakitanga</u> Roles and responsibilities were clear and kept within the parameters of the project. The position of privilege was understood. Clear boundaries were set and socialised to all participants.
Tapu and noa	The ethic of power and responsibility	<u>Tumu Whakaara</u> Karakia, kai, waiata and kōrero was employed to shift from states of tapu to noa.
Āhurutanga	The ethic of safe spaces for kōrero	<u>Kaitiakitanga</u> Spaces were created to allow kōrero to flow. Expectations and boundaries were set to ensure the integrity of the process and for participants to be protected in culturally safe ways.

Kai, kōrero and koha | Kotahitanga – collective knowing

Kotahitanga (collective knowing) was the theme of focus groups and interviews. This promoted the idea that everyone has a story to tell, and we could all strengthen our knowing by learning from each other’s journeys. This approach provides triangulation of knowledge and promotes the principle of koha mai, koha atu. This suggests that in the transference of knowledge, we all give, and we all receive.

Kai – relates to what we bring to the table/discussion.

Kōrero – describes the sharing of knowledge.

Koha –relates to the exchange, giving, sharing, and receiving of knowledge.

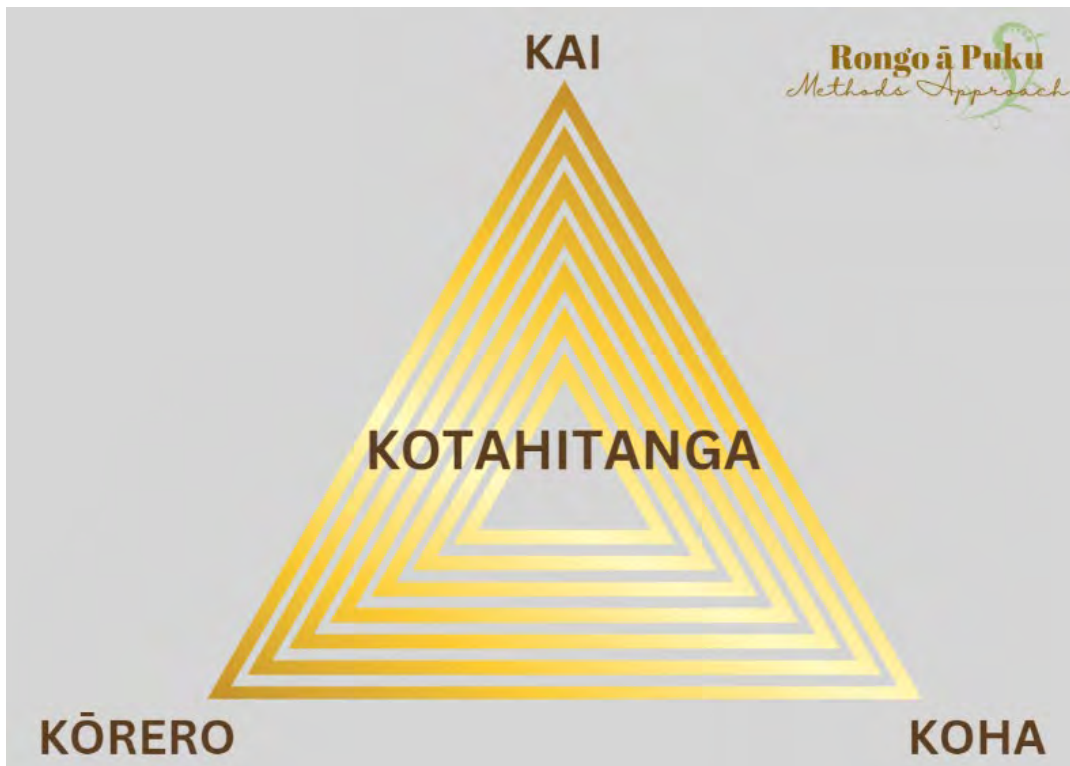


Image 2.4.1. Kotahitanga, research engagement | Koha, kai and kōrero.

Data collection process design | Three phases of intervention



Image 2.5.2. Data collection process.

The recruitment processes | Selecting participants for this study.

Over the years I have built a solid Tūāpapa of relationships across multiple sectors which provided access to a network of academics, professionals, emerging and established leaders, rangatahi and kaumātua. At the time of this study, I was further well positioned to engage with diverse groups of Indigenous People locally, nationally, and globally. Contributors selected to inform this study were mostly linked or connected to four key organisations, Toi Matarua, Te Wānanga o Aotearoa, Te Whare Wānanga o Te Awanuiārangi and Pukemokimoki Marae (located in Te Whanganui a Orotu).

The rationale for focussing on these groups was largely related to allowing space and place for this study to have a direct impact on a targeted group. All contributors were offered the opportunity to participate in workshops, wānanga and receive resources to support their hauora journey. It was logistically more manageable to provide this koha to participants under these groups.

The following provides discusses the different phases of data collection along with a brief description on the rationale for selection of participants for each method.

Phase 1 | Te Kāhui Tautoko engaged.

Planning and testing of methodologies, framework, and methods.

Indigenous scholars were approached to support phase one of the data collection process. The primary roles of the collective were to receive and discuss ethics and tikanga for data collection, data management and participant selection and process. All participants involved in this phase were of Indigenous ancestry. The intent of this phase was to affirm a Kaupapa Māori approach to collecting data and it was critical to receive feedback and critique from an Indigenous lens.

The original plan was to establish one Te Kāhui Tautoko comprising of five to seven adults ranging from 21 to 79 years of age. The intention was to bring the rōpū together twice throughout the data collection process. However, due to the disruptions of COVID-19, COVID recovery, cyclone (Gabrielle) floods, flood recovery, and other competing life challenges/priorities, it was difficult to coordinate time and space for all to come together kanohi ki te kanohi (face to face) or in a hui topa (zoom).

In response, I created four kanohi ki te kanohi as well as two hui topa options for the rōpū to contribute towards this phase of the research. One focus group was specifically for kaumātua ranging from 65 to 90 years of age. For members who were unable to attend collective hui, I arranged one-on-one hui to capture their kōrero and guidance. A total of 20 Māori leaders contributed to this space including rangatahi (16-24 years), pakeke (24 – 65 years), and kaumātua (65-90 years).

Te Kāhui Tautoko

Indigenous Scholars	Mahi	Field
Dr Paula Toko King	(Te Aupōuri, Te Rarawa, Ngāpuhi, Ngāti Whātua, Waikato-Tainui, Ngāti Maniapoto) works as a Public Health physician and Senior Research Fellow at Te Rōpū Rangahau Hauora a Eru Pōmare research centre at the University of Otago, Wellington	Science Research Tamariki well-being Data sovereignty
Rikki Soloman	Turiki Health, Auckland	Te Maramataka Mātauranga Māori Taonga puoro Tāne hauora

Charlizza Matehe (Harris)	Director, Toi Matarua, PhD scholar	Research Health and well-being Mental Health
Thul Tran	Senior Whānau Connect Leader for Child Cancer Foundation	Health and well-being
Hana Rye	Intense Response Social Worker, Oranga Tamariki	Social well-being
Catherine Ellis	Community and Justice Liaison Nurse, Mental Health and Addictions and Intellectual Disabilities Services	Mental health
Dale Corbet	Advisor, Māori New Zealand Qualifications Authority	Education
Cody Hollis	Haruru Arts	Ringa Toi
Pihitahi Russell	Te Wānanga ō Aotearoa, PhD Scholar, Auckland University	Education Mana wāhine
Rangatahi		
Harlem Ihaia	Director, Purotu Inc	Mātauranga Māori Māori mindfulness
Sarah Pihema	Rangatahi Researcher, Toi Matarua and master's student at Te Awanuiarangi	Toi Whakaari Te Taiao
Liam Temara - Benfell	Senior Advisor, Te Puni Kōkiri and master's student at Waikato University	Law Mātauranga Māori Māori development
Tuarea Ormsby - Simon	Rangatahi Researcher	Te Taiao
Kaumātua		
Waka Rye	Rongoā wairua	Mātauranga Māori Rongoā

Tiwana Aranui	Hawke's Bay District Health Board, Te Whatu Ora/Health New Zealand	Tikanga Kahungunu Te Reo Māori Tāne hauora
Whaea Arapera	He wāhine Māori, he Mareikura	Mātauranga Māori Rongoā Māori
Hinei Reti	Rongoā wairua	Mātauranga Māori Rongoā Māori
Marewa Reti	Rongoā wairua	Mātauranga Māori Rongoā Māori
Junior Hapuku	Rongoā wairua	Mātauranga Māori Rongoā Māori
Lexia Puna	Rongoā wairua	Mātauranga Māori Rongoā Māori

Presentations of Hākari methodologies, kai, kōrero and koha methods and the Rongo ā Puku framework

Toi Matarua Board of Trustees, Ngāti Kahungunu

Participants were five out of seven Board members representing multiple disciplines including health, education, business, social Work, voluntary Sector, Māori development, and justice. March 2023.

Toi Matarua Kāhui Kaumatua (Moko Boys kaupapa)

Members were kaumātua residing in Ngāti Kahungunu including koroua me kuia aged 70 years to 90 years young. For this presentation we had seven kuia and one koroua attend and provide critical feedback. May 2023.

Family Spirit Gathering, New Mexico

Presentation to the Family Spirit International gathering of 77 Indigenous leaders from Aotearoa, New Mexico, Arizona, First Nations Canada, and First Nations Australia, July 2023.

Rongoā Māori Level 4 class

Presentation to 12 ākonga and two kaiako in Napier cohort, July 2023.

Kōhine Movement Rōpu

Presentation to nine kōhine and two kaiako, November 2023.

Phase 2 | Key informants engaged.

Participants approached for this phase are making contributions of consequence within their fields of expertise. Leaders were carefully identified as holding mana in specific areas of this investigation. The intent was that their kōrero would strengthen certain areas of the study. Personal conversations occurred naturally throughout the investigation.

Māori Leaders Interviews

The following seven leaders were invited to share their experiences surrounding kai.

Leader	Area of Expertise
Dr Morehu McDonald	Mātauranga Māori, Te Tiriti o Waitangi
Dr Paula King	Tamariki, mokopuna well-being
Rikki Soloman	Te maramataka, taonga pūoro, tāne hauora
Sabre Puna	Rongoā Māori
Charlizza Matehe	Rangatahi Māori research
Shelley Hoani	Kai Rangahau
Cody Hollis	Haruru Arts, Ringa Toi

Personal conversations

Leader	Area of Expertise
Rauangi Ohia	Kaiako, Te Reo me ōnā Tikanga Māori
Eugene Temara	Kaiako, Te Reo me ōnā Tikanga Māori
Yvonne Aranui	Kuia, Maraenui
Arapera Rikki	Kuia, Ahuriri

Tiwana Aranui	Kaumātua, Maraenui
Jessica McGregor	Rongoā Kaiako
Waka Rye	Kuia, Te Whanganui a Orotū
Marama Furlong	Kuia, Tauranga Moana
Dr Rebecca Kiddle	Director, Te Manawahoukura Rangahau Centre, Te Wānanga o Aotearoa
Moana-Lee Raihania	Kapa haka, Marae Fit, physical activity as Māori
Kiwi Rameka	Caterer, Ōrongomai Marae
Colonial Michael Wingate	Educator, Moanalua High School, Honolulu, Hawai'i

Toi Matarua kaimahi, associates and volunteers | Wā Hine Puku Ora Group 1

Participants were 17 wāhine Māori leaders based in Napier, Hastings, Wellington, Auckland, Mahia, and Paki Paki.

Contributor	Mahi	Iwi affiliations
Arapera	Rongoā wairua	Ngāti Kahungunu
Harlem	Director, Purotu Inc	Ngāti Kahungunu
Kosha Joy	Rongomaiwahine Iwi Manager	Rongomaiwahine, Ngāti Kahungunu
Soraya	Te Paepae Arahi	Rongomaiwahine, Ngāti Kahungunu
Tracey	WIT – addictions	Ngāti Kahungunu
Sharon	Teacher	Ngāti Kahungunu
Hana R	Intense Response Social Worker	Ngāti Kahungunu, Ngāti Porou
Thul-Lena	Manager	Ngāti Kahungunu
Evon	Social Worker	Ngāti Kahungunu
Char	Director, Toi Matarua	Ngāti Kahungunu, Ngāti Porou
Catherine	Community and Justice Liaison Nurse	Tainui
Sarah	Rangatahi Researcher, Toi Matarua	Ngāpuhi, Ngāti Kahungunu
Patricia	Manager Customs	Tainui

Helena	Community leader	Rongomaiwahine, Ngāti Kahungunu
Chloe	Bio science	Ngāti Kahungunu
Xiena	Researcher	Ngāti Kahungunu
Sandy	Kaiako	Ngāti Kahungunu

Te Wānanga o Aotearoa (workplace based rōpū) | Wāhine Puku Ora Group

Participants were 10 wāhine Māori leaders based in Tainui, Tauranga Moana, Gisborne, and Ngāti Kahungunu.

Contributor	Mahi	Iwi affiliations
Heeni	Ako Manager	Tūhoe, Te Arawa
Hana K	Ako Kaiwhakarite	Te Arawa
Cyndi	Ako Manager	Tūhoe
Pihitahi	Ako Manager	Tainui, Ngāti Awa
Lina	Kaiako	Ngāpuhi
Reona	Ako Manager & Kaiako	Ngāti Ruanui
Toni	Ako Kaiwhakarite	Tainui
Shakayla	Community leader	Ngāti Kahungunu
Ruth	Iwi Communications Manager	Ngāti Kahungunu
Tracey	Kaiako	Ngāti Ruanui

Whānau focus groups.

The following focus groups were held over a period of seven weeks.

Ormsby – Matehe whānau | Whānau living in urban setting.

Contributor	Role in whānau	Iwi affiliations
Charlizza	Whāngai Mum/sister-in-law/ringawera	Ngāti Kahungunu, Ngāti Porou

Wiari	Whāngai Dad/brother	Tainui, Ngāti Porou
Tuarea	Whāngai son/brother	Tainui
Hirini	Whāngai son/brother	Tainui

Brady-Kamau whānau | Whānau living on papa kāinga.

Contributor	Role in whānau	Iwi affiliations
Tina	Mother	Rongomaiwahine, Ngāti Kahungunu
Rangi	Dad	Rongomaiwahine, Ngāti Kahungunu
Soraya	Daughter	Rongomaiwahine, Ngāti Kahungunu
Kosha Joy	Daughter	Rongomaiwahine, Ngāti Kahungunu

Ellis/Thomas whānau | Intergenerational wāhine group

Contributor	Role in whānau	Cultural background
Trish	Mother	Māori, Pākehā
Catherine	Daughter	Māori, Pākehā, Rarotongan
Julia	Granddaughter	Rarotongan, South African, Pākehā, Māori

Matakitaki, Wā Hine and Te Uekaha Journals | Participant interviews

Contributor	Area of focus
Tuarea	Kāhui Tautoko, Rangatahi academic
Charlizza	Ormsby-Matehe whānau focus group
Sarah	Wā Hine focus group
Trish	Intergenerational Wāhine Focus Group

KEY INFORMANTS			TE KAHUI TAUTOKO	
QUANTITATIVE DATA <u>Outreach</u> Māori and Pasifika whānau			DATA COLLECTION	KAUPAPA GROUP Toi Matarua Board of Trustees
QUALITATIVE DATA <u>Interviews</u> Dr Paula King Dr Morehu McDonald Rikki Solomon Shelley Hoani Sabre Puna Cody Hollis Jackie Tamaki		ONLINE SURVEYS (113)	ACADEMICS Dr Paula King, Rikki Solomon Charlizza Matehe (Harris) Thul Tran Hana Rye Catherine Ellis Dale Corbet Cody Hollis Pihitahi Russell	
<u>Personal Conversations</u> Rauangi Ohia Eugene Temara Arapera Riki Yvonne Aranui Tiwana Aranui Jessica Mcgreggor Waka Rye Marama Furlong Moana Lee Raihanua Dr Rebecca Kiddle Kivi Rameka		INTERVIEWS (7) Māori Leaders	RANGATAHI ACADEMICS Liam Temara-Benfell Sarah Pihema and Harlem-Criz Ihaja Tuarea Ormsby-Simon	
<u>Whānau Focus Groups</u> Te Wānanga ō Aotearoa (workplace) Toi Matarua (kaupapa) Ormsby-Matehe (urban) Brady/Kamāu (Māori community) Ellis/Thomas (Wāhine intergenerational)		FOCUS GROUPS (5) Māori workplace Kaupapa Māori group Urban Māori whānau Māori community whānau Intergenerational whānau	KAUMATUA Tiwana Aranui Junior Hapuku Arapera Riki Waka Rye Hinei Reti Marewa Reti Lexia Puna	
		JOURNALS (4) Matauranga Māori in action		

Image 2.4.2 A snapshot of participants involved in data collection process.

2.5 Methods

This section describes the methods used to inform this study. Methods include online surveys, interviews, whānau focus groups, and whānau journaling. Hākari was a method used to provide structure and process to the data collection process. Ahurutanga was created, providing a safe space for pūrākau to be shared. Whānau were able to document experiences surrounding kai in whānau journals.

Dr Anneli Sarvimäki is a Finland-based senior researcher who specialises in healthy ageing, ethics, and quality of life in elder care. According to Sarvimäki (2015), narrative method “can be described as the study of stories and storytelling” (p. 58). Everyone has a story to tell and the ability to put into words or pictures their lived experiences to create meaning around where they are now, and where they aspire to be.

Kai is universal and everyone within whānau regardless of age, culture, religion, or background can relate to it. Professor Ria Smit is a senior research fellow of the Department

of Sociology at the University of Johannesburg. According to Smit (2011), “food does not only form an important part of many celebratory family rituals but is also a core component of numerous routinised patterned family interactions” (p. 360). The feast tends to be the focus that brings people together as they join in a meal. There are, however, learning opportunities that exist at the various stages prior to the feast that are often missed. These can include planting, growing, harvesting, or sourcing, gathering, preparing, and cooking food.

Interviews, focus groups, family rituals, narrative theory and journaling are arguably viewed as western approaches to research. The approach to these methods employed Indigenous ideology that wove in Kaupapa Māori Theory, Tikanga Māori, and pūrākau. Indigenous values and principles were positioned at the forefront of participant engagement.

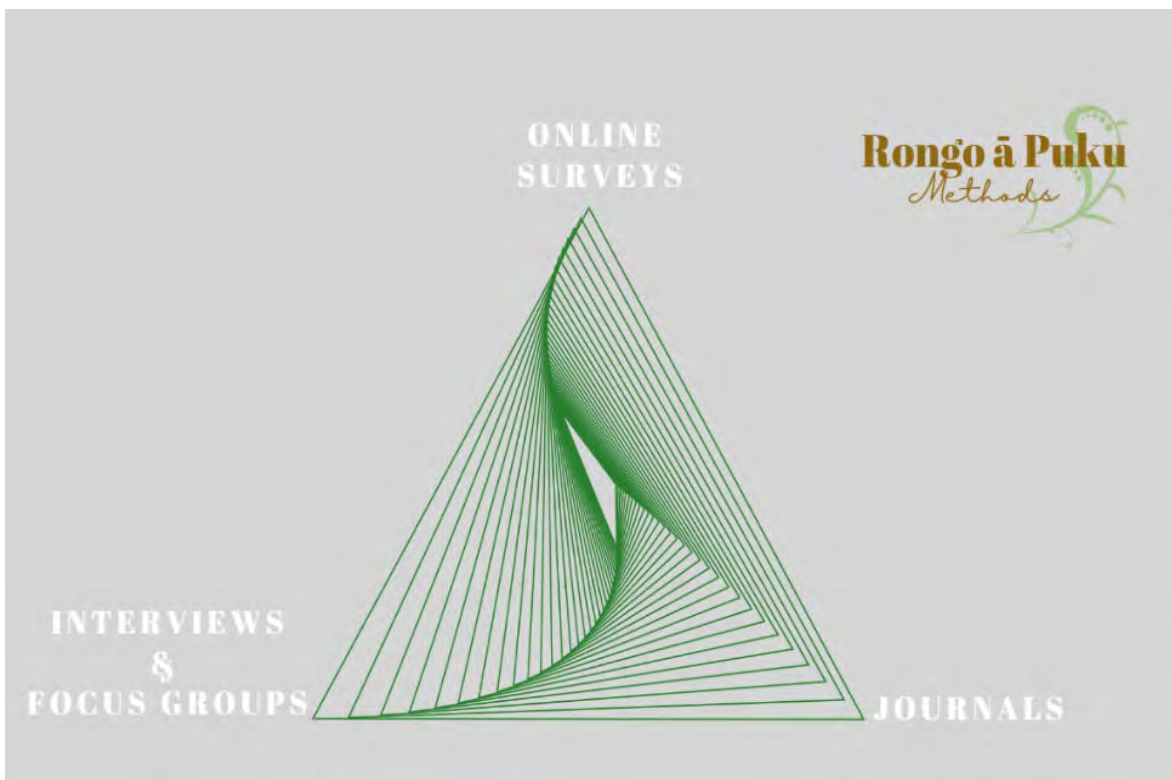


Image 2.5.3, Methods.

Phase 3 | Data collection process

Quantitative data collection | Online surveys

The online survey was completed by 113 individuals across Māori and Pasifika whānau throughout Aotearoa (Tamaki Makaurau, Te Whanganui a Tara, Tainui, Tauranga Moana, Te Arawa, Ngāti Kahungunu), and Australia (Brisbane and Sydney).

Key pātai explored:

1. How do you rate your overall well-being?

Range: poor, average, good, optimal.

2. What area of health are you most concerned about? Please choose more than one if relevant.

Range: Mental, physical, spiritual, emotional, financial, cognitive, social, other.

3. What is the best way for you to learn about well-being?

Range: at home, workplace of course, church/sports club/community group or marae, community events, whānau/community wānanga, 1:1 mentoring or support, complete a programme or weekly challenge, social media, documentary or other.

4. Where do you normally source kai from?

Prompts: Gardens/farmers market, supermarket, butchers, takeaways, whānau/friends farms or gardens, hunting and fishing or other.

5. What influences your kai decisions?

Prompts: Access to kai, time, nutritional knowledge/preferences/allergies/dietary choices, cost of kai, convenience, skills in cooking/tools and facilities to cook.

6. Do you sit down and eat meals with your whānau?

What gets in the way of you regularly sitting down and eating meals as a whānau?

Scope: whānau schedules, kai preferences – diets, allergies, no suitable place to sit and share kai, lack of set routines or structure, not seen as important, other priorities, other?

7. When making choices around kai, do you look at the science or are you influenced by marketing/advertising?
8. Do you practice fasting?
9. How many meals do you have per day?
10. Are you aware/in tune of what foods make you feel a certain way?
11. How often do you consume alcohol per week?
12. Are you aware of how alcohol impacts gut health?

Māori leaders' interviews

Interviews provided opportunities to go deeper, probing key pātai offered in online surveys. Sessions were designed to invite leaders to share their experiences with kai beginning with sharing a story about what they remembered growing up around kai.

Using the tools, frameworks and methodologies, participants engaged in whakawhiti kōrero (exchange of conversations) covering the following pātai.

1. How do you rate your well-being?
2. What is best way to learn about well-being?
3. Where do you source kai?
4. What influences kai decisions?
5. Do you eat kai as a whānau, what does your kitchen table look like?
6. Do you follow science vs marketing?
7. Are you in tune with what you eat?
8. Does alcohol impact your gut health?

Whānau Focus Groups

Focus groups were held over a period of seven weeks using the Hākari model and the RāP framework. Whānau journals were provided as tools to develop whānau well-being plans. The following groups were engaged in these sessions.

Te Wānanga o Aotearoa (workplace based rōpū)

Participants were 10 wāhine Māori leaders based in Tainui, Tauranga Moana, Gisborne and Ngāti Kahungunu.

Toi Matarua kaimahi, associates and volunteers

Group consisted of 16 wāhine and one kuia. At the time of the interviews, participants were residing in Wellington, Mahia, Napier, Flaxmere, Paki Paki, Maraenui, and Auckland. All sessions were held in Napier.

Matehe | Whānau living in urban setting.

A whānau of two adults and two teenage boys. The Matehe whānau home is located in Maraenui, Napier and considered local kāinga or 'second home' for many young Māori boys.

Brady-Kamau | Whānau living on papa kāinga.

Whānau living in Mahia, Mum, Dad, 3 sisters and partner of one of the sisters.

Generation Wāhine group – pūrākau

Wāhine representing three generations including grandmother, mother, and daughter.

Journaling

Narrative method further allows the participants (inclusive of storytellers and the listeners) to make sense of experiences and extract themes and connections across multiple narratives/stories contributing to the research process. This approach involves a process of privileging the participants' voices rather than that of the researcher.

Journals are a method used to record memories and recollections during the research process. Participants were introduced to journaling and provided with journals specifically designed for this study. This approach to re-membering can further be used to inform future critique of the journals once analysed by the researcher.

Dr Hōkūlani K. Aikau is of Kanaka ʻŌiwi (Native Hawaiian) descent. She is a professor of Indigenous governance at the University of Victoria. Her research covers contemporary Native Hawaiian identity and politics; Indigenous resurgence and climate change in the Pacific; Indigenous environmental justice; Native feminist theory; American race relations, and food sovereignty. According to Aikau (2016), “the context of the telling of a story is as important as the story itself” (p. 502).

The setting, environment, mood, and participants in the space all contribute to how the story is told and received. These factors were considered and explained to participants during the first point of contact. Āhurutanga was the principle applied to create a space where all contributors felt safe and valued.

The Hākari experience presents numerous opportunities for conversations to occur across diverse ages, genders, and roles within the community. Because kai is involved, the mood is likely to promote a vibe of kotahitanga (unity) and whakawhanaungatanga (connectivity, solidarity, and fellowship).

Intergenerational representatives from the same whānau groupings were a highlight in the data gathering process. The different vibrations that each member of the whānau brought added a fuller representation of perspectives including young and old. Journaling proved an effective tool as it was found to be of relevance and suitability across diverse ages and genders. The journals further provided a range of ways to interpret experiences using the following media:

1. Written words including formal and informal pieces, stories, poems, raps, and spoken word.
2. Visual arts including drawings, photographs, paintings, carvings, and weaving.

Journaling further provided an avenue for participants to reflect and articulate their experiences and new learnings in a way that felt familiar and was natural to them. By

utilising this approach, the themes and understandings represented across generations provided a deeper and richer pool of knowledge to inform this research.

Journal entries were made by participants over a period of 30 days. The method of journaling provided options for family members to contribute in ways that best suited their skills for interpreting and discussing their experiences. They were able to share their reflections on the lessons, as well as contribute towards kōrero around striving towards a more sustainable future.

Key pātai explored:

1. What is one ne word that describes what hauora (well-being) looks like to you.
2. What area of hauora do you struggle most with?
3. Do you know what kai makes you feel good energy or low energy?
4. How many meals do you normally have a day?
5. How many glasses of water do you have per day?
6. How many hours do you sleep each night?
7. Do you know how to draw energy from te taiao – the natural environment? Please give one example.
8. What activity do you do with your whānau that uplifts your hauora?
9. Where do you think is best place to learn about hauora? And from whom?

Four participants were randomly selected to share their journaling experiences. These were Tuarea Simon (Kāhui Tautoko, Rangatahi academic), Charlizza Matehe (Ormsby-Matehe whānau focus group), Sarah Pihema (Wā Hine focus group) and Trish Thomas (Intergenerational Wāhine Focus Group).



TE RĀ MĀTAKITAKI

Daily Observations

<p>TE RĀ (DAY) _____</p> <p>NGĀ HIRINGA O TE MARAMA _____</p> <p>WAI (WATER) ◊◊◊◊◊◊◊ _____</p> <p>HOW MANY HOURS SLEEP DID YOU GET LAST NIGHT? DID YOU SLEEP WELL? _____</p> <p>KAI (FOOD) TODAY - HOW MANY MEALS DID YOU HAVE? _____</p>	<p>TE MARAMA (MOON PHASE) _____</p> <p>PUKU MAHI (ACTIVITY TODAY) _____</p> <p>TE WAIRUA (MOOD) ☹️ 😐 😊 😄 _____</p> <p>TE HIRINGA (ENERGY) 🌍 💧 🚗 🔥 _____</p>
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<p>ARO - THREE OBSERVATIONS TODAY</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>	<p>AKO - THREE LESSONS FROM TODAY</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>
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NOHO PUKŪ - THOUGHTS AND REFELCTIONS _____

Instead of following the movement of the sun throughout the year, Māori communities in history noted the movements of the moon over a typical month and year. Each phase of the moon was named and each typical year was marked by the passage of 12 or 13 lunar months (depending on the location throughout the country). The Māori calendar begins in Pipiri (June/July) with the reappearance of the Matariki star cluster signalling the New Year

Image 2.5.3 & 4. Mātakitaki Journals.



Image 2.5.5. Te Uekaha Journals.

Image 2.5.6. Wā Hine Journals.

2.6 Chapter summary

This chapter discussed and described the methodology, frameworks, approaches, and methods that supported the data collection process. It covered a range of existing and new

tools developed to support the research design and process. Tikanga, ethics and data sovereignty were discussed as a prompt to ensure culturally safe practices. The purpose and function of Te Kāhui Tautoko was mentioned here as well as the diverse range of expertise of the contributors to this space. Key participants who contributed to various stages of the data collection were also identified including mahi and iwi affiliations.

Section Two

This section has been organised into five parts. Firstly, chapter three provides some discussion around hauora within the context of this study. Hau kōrero is the terminology used to explain the influence people, place and space has had on the shaping of ideology and pedagogical points presented in this study.

The second part includes the literature review, chapter four discusses mātauranga Māori, chapter five covers Kai Sovereignty, chapter six converses Kai Science, and chapter seven speaks to Kāi (nga). The next part presents chapter eight which offers five examples that illustrate and discuss the Ngā Whitu o Hau Ora framework in action. The fourth part includes chapter nine which provides the data analysis and findings from this study and chapter ten which presents the recommendations from this study. The final part offers some final thoughts in chapter 11 to close this thesis.

Chapter Three | Hau kōrero

*Tuia ki te rangi,
Tuia ki te whenua,
Tuia ki te moana.
E rongō te pō, E rongō te ao.*

*It is written in the heavens,
Upon the land, and the ocean.
And balanced between night and day.*

Rereata Makiha, a maramataka tohunga and kaitiaki of mātauranga Māori, uses the above whakataukī to describe the intrinsic connection people have to nature. He states that “we are tuned in, we are part of the environment, we're not separate from it” (RNZ, 2021). Mahika further reminds us that the traditional knowledge our ancestors have left us. This mātauranga was designed to be used as tools to assist new generations to decode and unpack phenomena. Understanding this allows us to move, pivot and respond to the natural movements and rhythms of the heaven, sky, sun, moon, stars, and the earth’s elements. We are further guided by pedagogy of land, ocean, air, trees, plants, birds, tides, and sea life.

Ancestral teachings for Māori can be found in kōrero tawhito, tauparapara (type of incantation at the beginning of a speech), whakapapa, pūrakau, waiata, haka, and toi, to name a few. Reflecting on my personal hauora journey, I noticed that I have drawn on the kōrero of my tūpuna, kaumātua, and whānau to guide me back towards balance in my well-being in order to help inform this study. In my life’s journey, I have been blessed to cross paths, exchange thoughts and share ideas with many wise and insightful people. I refer to these open and honest conversations and interactions as ‘hau kōrero’. Broadly hau within the context of ‘hau kōrero’ relates to the impact another person’s life force, essence or vitality has had on my hau. This influence has been instrumental in shaping the ideology and pedagogical points presented in this study.

In Mead (2016), Professor Sidney Moko Mead states that “Hau is a common word meaning wind”. He further states that hau “is a component of another common word, hauora, meaning ‘spirit of life, health, vigour’, or ‘healthy, fresh, well’” and concludes with defining hauoratanga as meaning ‘health’ and ‘whakahauora’ as meaning to revive or refresh. He therefore affirms that hau “is associated with well-being and being in a healthy state” (p. 53). Hau is a major feeder of ora, there is no hauora without considering the elements of hau.



Image 3.1. The Rangahau team based at Te Wānanga ō Aotearoa at the launch of Te Manawahoukura, 1st August 2023, Mahurehure Marae, Auckland. Pictured from the left, myself, Dina Fuli, Dr Sharon Toi, Rereata Makiha, Dr Joni Angeli-Gordon, Dr Rebecca Kiddle, Jo Hohaia, and Shelley Hoani. Photo credit: Erica Sinclair

Rangahau is an Indigenous practice that seeks to engage in bodies of knowledge that inform Indigenous ways of knowing, doing, and being. Dr Shireen Maged is the Pou Whakahaere Ako, Deputy Chief Executive (Teaching & Learning) at Te Wānanga ō Aotearoa. She describes rangahau as uniquely different to research and standing out as an approach to inquiry that is “grounded in a cultural perspective which is tikanga me āhuetanga Māori. It

is an indigenous perspective with different experiences, different truths” (Te Wānanga o Aotearoa, 2023).

Te Manawahoukura is the recently established centre of rangahau within Te Wānanga o Aotearoa. It exists to champion Indigenous-led interdisciplinary rangahau. According to Kaiwhakahaere Rangahau, Shelley Hoani, rangahau needs to start with ‘ko wai au’ (personal conversation, August 2023). Immersed in the rangahau space at Te Wānanga o Aotearoa for 20 years, Shelley believes that prior to looking outwards to explore the world around, one must first self-examine or ‘rangahau self’. This approach to enquiry suggests that rangahau is not so much about discovery of the new, however more about re-discovery, re-connection, and re-claiming knowledge both from an intrinsic as well as external source of being and seeing.

The word ‘rangahau’ can be scrutinised in two parts regarding ‘ranga’ and ‘hau.’ ‘Ranga’ meaning to weave or bringing together and ‘hau’ to describe breath (an extension of mauri), life’s vitality or essence. The experiences of being in one’s hau during conversations can extend beyond physical interactions meaning that the energies of hau can linger. This suggests that one can catch hau kōrero and hau experiences before or after the physical connection has taken place.

Based on recent kōrero from Rereata Makiha, hau is something that we cannot see. However, we can see it exists by the impact that hau has on people, place, and space. Using Tāwhirimātea as an analogy, he explains that although wind cannot be seen, the mahi of Tāwhirimātea can be detected in the rustling of the leaves as they swirl beneath our feet, or the branches of trees as they dance in the wind (Te Ao, 2021). Quoting Tukaki Waititi, a prominent Māori leader, Rereata Makiha further describes the notion of matangaro, affirming that “nothing was ever created or emerged to live in isolation, even a hidden face can be detected by its impact on something” (Solomon & Peach, 2020). This is a reminder that hau is influenced by many interconnecting factors, those that are seen and unseen.

Dr Rose Pere concurs that nothing stands in isolation, everything is merged into each other. She states, “the university of ancient Hawaiki is the universe” (p. 5). Her holistic model of wellness, ‘Te Wheke Kamaatu’, the octopus of great wisdom (Pere, 1997), continues to be widely utilised across educational and social contexts. Pere uses te wheke as a metaphor to explore the various tenets of well-being. Te Wheke is a character that is also featured in an ancient pūrākau that explains how the prominent ancestor and ocean navigator, Kupe discovered Aotearoa. As the story goes, Kupe chased the octopus, Te Wheke a Muturangi from Hawaiki it was his wife Kurumārōtini who spotted a large land mass shrouded by clouds, it was then she cried out, “He aotea, he aotea, he Aotearoa” (white clouds, white clouds, land of the long white clouds). It was here that the legendary Polynesian explorer Kupu was able to trap and slay the octopus near the shores of Te Whanganui a Tara (Wellington).

Kupe returned to Hawaiki and shared his adventures of discovery and triumph with his people. According to Grace (2023), Kupe shared “stories of giant trees, mountain ranges, rivers full of fish and greenstone, and forests full of birds, some standing taller than a man”. It is believed that “this was the beginning of the migration of the Māori people from Hawaiki and was made possible because Kupe had chased the giant wheke across Te Moana-nui-a-Kiwa (the Pacific Ocean) and discovered a new and wonderful land that his wahine called Aotearoa” (p. 1). I share this pūrākau to illustrate the interconnectedness of events, characters, and places that span across time finding relevance and purpose. As Dr Rose Pere has shared her pūrākau and model ‘Te Wheke’, aspiring academics may find inspiration to embark on new journeys of discovery.

The image of ‘Te Aorangi’ model below illustrates the reach of ‘Te Wheke’, illustrating the interconnectivity of all the elements of one’s being. This model is applied within an educational context to demonstrate how educational institutions merge to stand in unity (Pere, 1997). It is also relatable across multiple sectors and contexts.

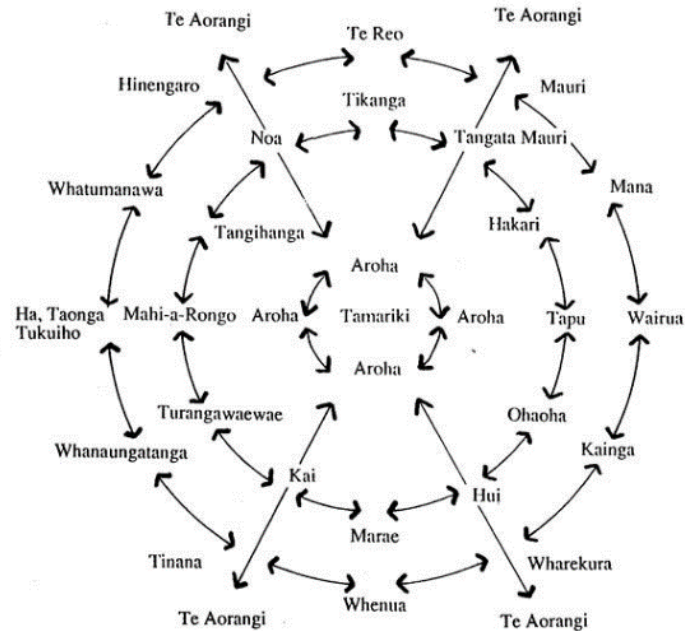


Image 3.2. Dr Rangimarie Turuki Pere – Te Aorangi model. (Pere, 1997).

The ‘Mana Kaitiakitanga’ framework was developed in 1997 by Dr Huirangi Waikerepuru alongside a collective of ākonga including Professor Mera Penehira (Penehira, 2011). The framework illustrated below covers seven key elements of Māori well-being. Included are hau ora (holistic well-being), hau āio (breath of life), hau whenua (breath of land), hau moana (breath of sea), and hau tangata (human). Alongside these hau elements are wairua (spirituality) and mauri ora (life force). The model further speaks to five states of well-being being tapu (sacred), tika (correct), pono (truth), hē/hara (wrong) and noa (normal).

These are framed by four Māori concepts of education, health, environment, and law/tikanga. This comprehensive framework has provided a clear footprint for Indigenous health and well-being and has been a great model to build the underpinning ideas of well-being for this investigation.

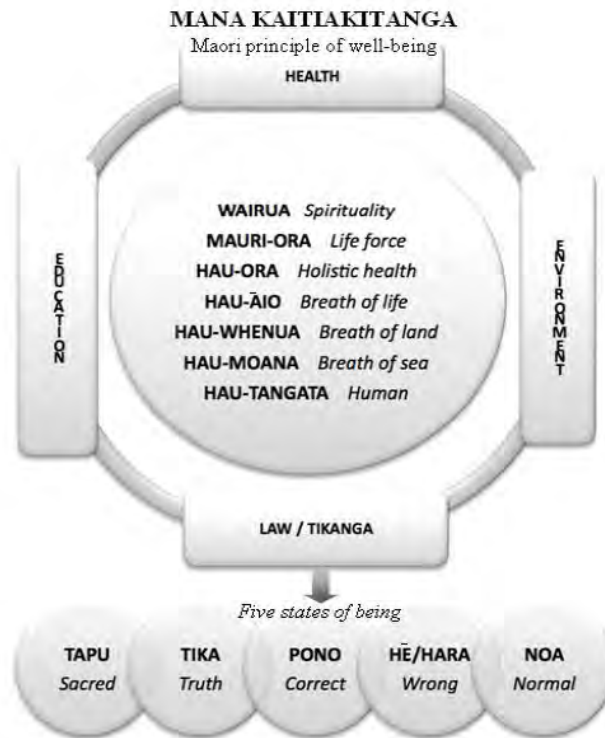


Image 3.3. Mana Kaitiakitanga Framework, a comprehensive framework of Māori concepts, elements, and principles of well-being.

The hauora philosophy and praxis that underpins this study has been greatly influenced by yarns and conversations that transpired before and during this investigation. The unique hau of each individual as well as the combined hau within collectives, has captured and held my attention throughout this investigation like a magnetic pull.

Knowledge shared has evolved my thinking during this study. I have experienced serendipity, synchronism, and 'aha moments' as I listened, observed, spoke, and felt the presence, words, or actions of the people I engaged with. Their hau contributions have become the ora to my hauora framework and have provided the tūāpapa of the RāP principles of hauora discussed below. Each contributor mentioned has provided consent and support to have their whakaaro reflected in the upcoming chapters.

The Rongo ā Puku 7 tenets of Hau Ora – ‘E whitu ngā pou ō Hau Ora’

RāP examines how puku can be a source of intelligence to inform well-being. Weighing in on Dr Moana Jackson’s “ethic of prior thought” (Kaupapa Rangahau, 2014), the 7 tenets of Hau Ora have been designed to support the articulation of well-being during this study. Derived, modified, and inspired by prior thought that is woven into pūrākau, kōrero tawhito, rongoā practices, and hau kōrero, these principles represent a combination of old as well as new whakaaro.

Exploring the state of my personal hau, I have drawn from my interpretation of the kupu ‘hau’. To me it represents ‘hā ū’, ‘hā’ being the vitality of breath and of life, and ‘ū’ referring to nourish or feed. In this exploration of hau, I begin with ko wai a(hau), understanding what nourishes every aspect of my hau to achieve hauora. Seven areas of hau have been identified as pou, markers or tenets of hauora for this study, these are:

1. Hau Aio.
2. Hau puku.
3. Hau hinengaro.
4. Hau tangata.
5. Hau wāhi.
6. Hau kāinga.
7. Hau maramataka



Image 3.4. *E whitu ngā pou ō Hau Ora (The 7 tenets of Hau Ora), Rongo ā Puku resources.*

In the quest of knowing and understanding more about my personal hauora, I engaged in an internal rangahau journey. With intention I unpacked each of the 7 tenets of Hau Ora, analysing and assessing the state of each hau. I accepted that my hau(ora) can be as vibrant as I wanted it to be. The state or condition was dependant on the investment I was willing to make into each area of my well-being.

Over time as I gained confidence in my mātauranga surrounding my hau-ora as I came to a place of balance. I was then able to repack each of the 7 tenets and accept what holistic hau(ora) meant for me. As I wove together each hau, I could see wholeness in my ora. I understood that I would not always operate in wholeness of hau, what was important was that I knew what it looked like and what it felt like. I became more aware and in tune with how to get back to hau(ora) when one of the tenets was out of balance.

The following hau kōrero provides narratives on what each hau means to me. This articulation of hau from my perspective is offered to others as a tūāpapa to rangahau on their personal and unique hau tenets.

Hau Aio

He atua, he tangata, every one of us is both divine and beautifully human.

Dr Rangimarie Turuki Arikirangi Rose Pere, Pere (2019, 3:47).

Dr Rose Pere was affectionately known to many as Whaea Rose. She was an eminent holder of spiritual teachings and ancient wisdom within academia and Te Ao Māori. I had the privilege of being in the intimate company of Whaea Rose on three occasions as an early career Social Worker 30 years ago. Her dynamic and vibrant presence will forever be etched in my memory as I recall my experiences with her. One particular affirmation reached the core of my puku, resonating and stirring my inherent knowledge systems.

“He atua, he tangata!” in this simple yet powerful statement lies the belief that has carried me through many uncertain seasons. It has affirmed and reminded me that the source of celestial connection, capacity and capability exists within me. This notion of duality, operating in the spaces of Tūmatauenga and Rongo-mā-Tāne is within our control. We have a direct link to Io Matua and can connect to this source of power through the intentional nurturing of hau ā lo, or hau Aio.



Image 3.4. Photo from my bedroom window, Marine Parade, Napier. Photo credit: Sally Rye.

The struggle that many of my friends and whānau have in accepting that we hold the divine spirit within us relates to not seeing ‘physical’ evidence that there is a higher spiritual power. The best way that I can explain my truth that God exists is that I see the impact of His presence every day. Referring to Rereata Makiha’s description of matangaro ‘the hidden face’, I see divinity manifest in multiple ways within people, places, and spaces. Each morning at 6am, I set my eyes to the east and witness Tama-nui-te-rā (the great son of the Sun) rise above the horizon and the impact touches everything around and within me. I am blessed by the magnificent and divine ihi that bursts from the core of te rā filling my puku with love and light.

Each night we see the changing face of the marama (moon) and the impact and pull it has on all living things. We are reminded as the day turns into night that we are an integral part of the nature around us. If we are in tune and aligned to our circadian rhythms and the moon cycles, we will notice the secretion of our melatonin hormones as the night sets in, preparing us for moe. Growing up I recall the words of my Māmā as the day closed and nighttime crept in, “e hoki ki te moe” meaning *return to your sleep*. In recent times I have heard parents say to their children “haere ki te moe” meaning *go to sleep*. I found this interesting, so I raised it with our local kaumātua. His response was that when we say “e hoki ki te moe” we are instructing someone to return to a spiritual state. In ancient times, tohunga would receive messages from the celestial realm while they slept. When they returned from sleep, they would be able to solve challenges and issues that they couldn’t figure out in their ‘tangata’ state (Tiwana Aranui, personal conversations, 2023). This is discussed later in the section on brain waves.

Hau Puku

Ko koe te rongoā, you are the medicine.

Waka Tahuri Rye (personal conversations, 1972–2020).

A natural progression from hau Aio, is to discuss hau puku. My mothers’ teachings, ko koe te rongoā have guided me from a place of being stuck in dark spaces of unwellness back towards a place of enlightenment and hauora balance. Knowing that the healing power of

Io can be found within has also been the mantra to affirming that I am the medicine, for myself, my whānau, and my hapori.

Traditionally the symbols of time were not restricted to clocks, calendars, bells, or whistles. Time was informed by *tohu* (external signs informed by star systems, moon cycles, tides, and the environment), and *rongo* (internal signs intuition informed by senses). *Hau puku* can be seen as a tool or mechanism to tap into and interpret external and internal *tohu*. Signs that change is about to occur and shifts and movements to follow.

The different faces of the moon each day were aligned to patterns and energies. These were observed by our ancestors and guided the tribes in different activities (Tawhai, 2013). These patterns can be applied today as we carve out time to *puku mahi* – actively seek work and play, learning, *noho puku* – allowing a time and space to be still, reflect and process knowledge, and *haere puku* – a time to tap into spiritual energies and heighten our consciousness to a level of celestial awareness. This idea is discussed further in upcoming chapters.



Image 3.5. Ngā hiringa o te Marama. Rongo ā Puku resources

Recently, I took my Māmā out on an excursion with my Te Wānanga ō Aotearoa Rongoā class. As we explored the *ngahere* I observed my Mum as she remember the vibrations of the plants that she was familiar with as a child. Although the names of the plants did not come back to her as quickly, her *puku* was stirred as she recognised the energy of each one. She was able to describe what the plant was used for and how to harvest and prepare the plant for medicinal purposes. Although her mind was still processing and struggling to remember the details, intuitively she was plugged in and connected.

Dudley, Menzies, Elder, Nathan, Garrett, and Wilson (2019) found when investigating Māori experiences of dementia, the link between *ngā rongoā* (protective factors) and participation in Te Ao Māori. Studies showed that critical protective factors that contribute towards

slowing the symptoms and behaviours associated to mate wareware (dementia) include activities that stimulate taha wairua (spirituality). These findings suggest engaging in activities such as te reo Māori, waiata, taonga Māori, and mahi Māori such as kaikōrero (orator), Kaikaranga (female caller), kairaranga, (weaver) and kairongoā (medicinal practitioner) is protective. This could explain the awakening I witnessed in my Māmā as her hau puku leaped towards the hau rākau within the ngahere reigniting in joy.



Image 3.6. Tōku Māmā remembering rākau during a Rongoā Māori field trip 2023. Photo credit: Sally Rye.

There are multiple ways in which rākau has been used throughout generations to awaken the vibrations of hau. Brian Flintoff is the author of ‘Taonga Puoro – singing treasures’, a stunning publication that promotes the revitalisation of traditional Māori musical instruments alongside other renowned artists, Hirini Melbourne and Richard Nunns (Flintoff, Melbourne & Nunns, 2004).

Flintoff (2014) states that puoro are “used for both spiritual and physical purposes – for instance, a kōauau (flute) can be used to summon spirits for healing, or to make people laugh”. He adds that “music was seen as vital to the welfare of the community” and affirms

“taonga puoro were, and still are, used for healing, sending messages, marking the stages of life and for other ceremonies” (p. 1). Sounds trigger memories and emotions. It is no wonder why many of our kōrero tawhito, oriori, haka and waiata have been preserved in vibrations of beats and rhythms.

For Mum, her spirit never forgot the vibration of rongoā rākau (medicinal bark). Although it had been many years since their last encounter, it was etched in her manawa (heart) from her childhood. When she revisited the ngahere, she re-remembered, re-connected and rejoiced in the company of her tuakana.



Image 3.7. Rikki Soloman demonstrates the healing vibrations of taonga pūoro to Toi Matarua rangatahi during 2023 Matariki wānanga at Te Poho o Tangianui Marae in Napier. Photo credit: Sally Rye.

During an oriori workshop with Toi Matarua Te Pūtiki Wharanui rangatahi leadership group, Rikki Soloman demonstrated how the vibrations of puoro can be used to sooth and calm the mind as an intervention for anxiety. He is pictured above with one of the rangatahi involved in the programme.

Hau Hinengaro

As we think we live, and how we live is a pretty good indication of how we think.

Rev Māori Marsden, Royal (2003, p. 27).

A descendant of Ngāi Takoto, Ahipara, and Ngāti Warara, Rev Māori Marsden (10 August 1924 – 18 June 1993) was an author, an ordained Anglican minister, a graduate of Te Whare Wānanga of Te Aupouri and tohunga (expert) on Māori philosophy. Edited by Te Ahukaramū Charles Royal, 'The Woven Universe' holds a collection of his writings, expressing his thoughts and views on key concepts in the Māori worldview.

Rev Māori Marsden discusses metaphysics and how this determines how one directs their lives (Royal, 2003). The way we think plays a critical part in manifesting and sustaining hauora. Our thoughts are shaped by our core ideas, beliefs, values, and principles. For Indigenous People these systems of knowing stem from a rich history of lived experiences and conditions. These have been held in cultural procedures, protocols, customs, lore, methods, practices, and approaches.

Within Te Ao Māori, approaches to knowing, behaving, and interpreting the world are informed by tikanga (protocols), kawa (rules), and ngā ture (laws). Within a modern context, these are implemented consistently within Māori constructs such as marae, Te Kura Kaupapa, Te Whare Kura, Te Whare Wānanga, and Māori organisations.

Dr Caroline Leaf has worked in the field of cognitive neuroscience since 1985. She is a leading communicator, pathologist, and audiologist. Leaf (2013) suggests that ancient teaching that correlates the way we think with how our thoughts and choices impact our physical brain and body, our mental health, and our spiritual development can be found in bible scriptures such as Deut. 30:19, Ps. 34:11, Prov.3:7–8. These scriptures teach the messages of God which relate to balance and choice. Throughout life we will be presented with decisions that can result in a blessing or a curse. See below scripture, Deuteronomy 30:19.

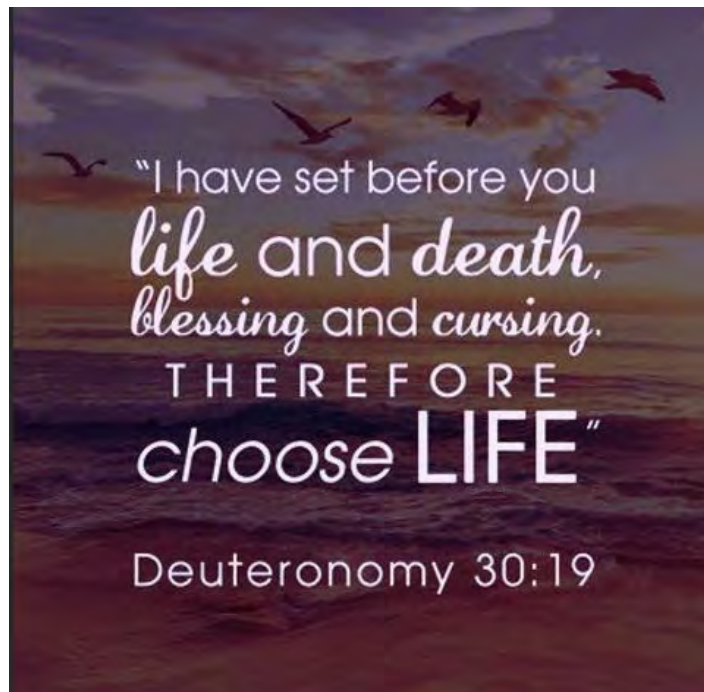


Image 3.7. Deuteronomy 30:19. Rongo ā Puku resources

Dr Rose Pere (1997) discusses how wairua represents two waters. She states that “there are both the positive and negative streams for one to consider”, adding that “everything has wairua, for example, water can give or take life” (p. 16). Aligning this to the mahi of Dr Leaf (2013), we must make our choices wisely considering that our thoughts can create positive or negative outcomes for ourselves and our loved ones. She discusses the science around epigenetics and how “choices will impact your own spirit, soul and body, as well as the people you have relationships with”, highlighting that “your choices may even impact the generation that follow” (p. 56). In a physical sense, the most obvious example is how we choose to engage with Te Taiao. Everything we do will impact future generations.

Another consideration to be aware of is how we choose our kai. Milburn (2004) Greggor et al., (2017), Vyas (2019), and Ornish et al., (2019) inform us that kai can have the power to heal or to harm. The science is clear and points to western behaviours and practices surrounding kai, and how these can be passed on to future generations.

The latest science on epigenetics, reveals that our thought patterns can be passed on through sperm and ova via DNA to the next four generations. The good news however,

according to Leaf (2013), is that “your patterns of genetic experience don’t determine what you are, you do”.(p. 72) She explains that our neurochemical makeup is designed by “how you live, the cultural environment you live in, whatever you immerse yourself in, your beliefs and the beliefs of those around you, how you interact with those people, your faith and how you grow it, what you expose yourself to”. What this suggests is that how we react or respond to what we are presented with in life, is critical to how we will live. You can choose to dwell in negativity and despair or feed and grow good thoughts.

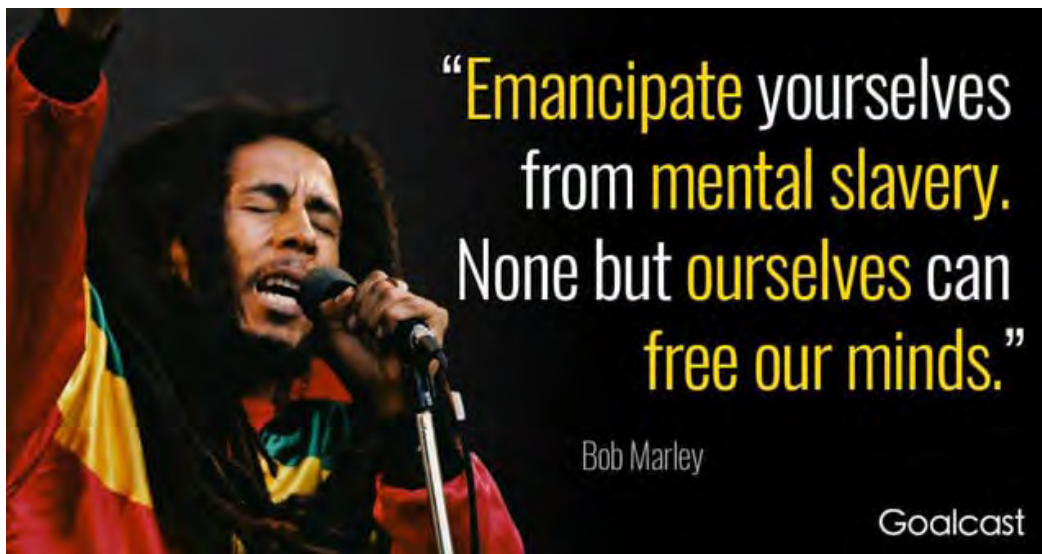


Image 3.8. Well known lyrics from legendary artist Bob Marley. Source ["emancipate yourselves from mental slavery none but ourselves can free our minds" - bob marley \[1200 x 630\] : r/QuotesPorn \(reddit.com\)](#)

The process of rewiring your brain is called neuroplasticity, and everyone has the ability to tap into renewing your mind for positivity and prosperity. To tautoko (support) the infamous words of Bob Marley, “Emancipate yourself from mental slavery, none but ourselves can free our minds”. Leaf (2013) affirms that “getting your thoughts disciplined and under control is one of the first steps to freeing yourself from the burdens of the world” (p. 72). She further suggests that “when you make a conscious decision to focus and direct your attention correctly, you change your physical matter-your body changes in a healthy way” (pg. 73).

Hau Tangata

Tuhia ki te ngākau, write it in your heart.

Tiwana Aranui (personal conversations, 2023).

Matua Tiwana (Chop) Aranui (QSM) descends from Ngāti Pahauwera, Ngāti Kahungunu me Ngāti Porou. A respected kāumatua and rangatira based in Ngāti Kahungunu, he was recognised recently with the Queens Service Medal for his contribution towards education, health, and well-being. Currently, he is chairman of Pukemokimoki Marae and Pou Ahurea for the Hawke's Bay District Health Board.



Image 3.9. Tiwana and I at Bishop Museum, Honolulu 2023. Photo credit: Kosha Joy Brady

Whilst sharing pūrākau to illustrate ancient food cycles relating to Ngati Kahungunu, I had asked Matua Tiwana if these stories were published. His response was “tuhia ki te ngākau”. He had chosen this kīwaha (saying) to express the importance of engaging in experiences with tangata, kanohi ki te kanohi, ihi ki te ihu, ngākau ki te ngākau, puku ki te puku. I had greatly appreciated this reminder. It was a lesson to me as a Kairangahau writing about hau, to pause and look around, to be in the moment and to be a part of the vibrations of stories.

Indigenous People thrive when the lives of intergenerational whānau are naturally intertwined in every aspect of doing, being, and seeing. The celestial vibrations of hau that existed within physical spaces are a powerful tool for learning, growing, and healing. A modern paradigm where the power of learning, growing, and healing through engagement exists is within Kapa Haka wānanga. As campaigns begin for Matatini (National Kapa Haka Competitions) the whole whānau, hāpu and hapori gather at the marae or community spaces to uplift the hau of the team as they prepare for competition.

There are multiple roles within wānanga. Whether you are a kaiako, kaihaka, kaikaranga, kaikōrero, ringawera, or kaituhi (writer), kaitito (composer) or kaikarakia (reciter of prayer), there is a place for all generations to contribute. Even the pēpi (baby's) and tamariki have roles as they observe and soak in all the mātauranga shared. Their innocent celestial vibrations that they bring into wānanga spaces opens the gateway for ancestral vibrations to be present. The essence of ngā taonga tuku iho (treasures handed down from ancestors) is magnified when intergenerational energies come together (Tiwana Aranui, personal conversations, 2023). These energies carry on to the stage where ihi is exchanged between performers and wehi (response of awe in reaction to ihi) is caught by those in the audience. This interaction of ihi and wehi excites wana igniting passion and pride to be connected and a part of a collective mahi Charlizza Matehe (personal conversations, 2023).

Toi Matarua is a rangatahi research company based in Ngāti Kahungunu. Their mission is to “to unearth the numerous truths of Indigenous knowledge and use it for the healing and advancement of tamariki, rangatahi and whānau” (Toi Matarua, 2023). ‘Moko Boys’ is an initiative created in response to research around COVID-19 and its negative mental health impacts on our rangatahi and kaumātua. With local marae converting into testing stations and civil defence centres, the programme holds spaces in urban settings for intergenerational whānau to intersect and interact in impactful ways.

In response to Cyclone Gabrielle that hit the East Coast of the North Island in February 2023, Toi Matarua employed six rangatahi as ‘Moko Boys’ employees (two girls and four boys). Whānau who were devastated by the floods were whakamā (shy) to accept help, so the

programme offered resources/wages to come back into the whānau through employment opportunities for rangatahi whilst serving a need in the community.

The 'Moko Boys' offers a range of services including lawn mowing, gardening, mārā kai, cleaning, and technical support. However, the biggest contribution they are making is spending time with our kaumātua. According to kuia Arapera Rikki, "our whānau are so busy and working overseas, what these rangatahi bring is rongoā, their energy is uplifting to us kaumatua" (personal conversation, 2023).



Image 3.10. Moko boys programme, Julia Ellis and nanny Waka (left), Tuarea Ormsby Simon and nanny Chrissy (right). Photo credit: Sally Rye (left image) and Charlizza Matehe (right image).

In October 2023, Toi Matarua coordinated a haerenga to Oahu and Maui involving ten rangatahi, five pakeke and two kaumātua. The journey involved sharing culture and resources aimed at building resilience and hope during natural disasters and global challenges. One thing that stood out was the powerful hau connection between the groups of Indigenous rangatahi. Like my mother's puku hau had leaped for joy in the ngahere, we witnessed the hau tangata exchange between our rangatahi Māori and ngā rangatahi o Hawaii. Not only did the rangatahi look physical similar, but you could also sense the metaphysical familiarity present in the space as ihi was sparked and wehi ignited.

The following picture was captured during one of the workshops which involved over 100 Hawaiian students throughout the day at Moanalua High School in Honolulu. Once the local ākonga had learnt the game, they started to lead and share it with their peers. The ihi from the participants was magnetic and drew in ākonga who initially didn't sign up to the workshops. This is the power and influence of hau tangata and wānanga.



Image 3.11. Toi Mataura ambassadors teaching the pūkana to students at Moanalua High School in Honolulu, Hawaii, 2023. Photo credit: Sally Rye.

Hau wāhi

Come for the kai, stay for the kōrero (Little Miss Ringawera Tik Tok Influencer).

Charlizza Matehe (personal conversations, 2023).



Image 3.12. Lil Miss Ringawera preparing to feed the multitudes: Photo credit: Sally Rye.

With over 100, 000 followers on Tik Tok, ‘Lil Miss Ringawera’ is no stranger to using social media platforms to create a safe space to kōrero about anxiety, depression, and suicide. The platform draws a diverse audience of loyal followers across the world. Strangers who lean in and feed off the uplifting words of encouragement and enlightenment. For some reason they find familiarity and connection as Charlizza shares hauora kōrero as she cooks for her whānau and community. One follower stated, “I feel so safe on here” and another “I feel like you are talking directly to me when I watch your videos”. This is an example of the power of hau, it can travel in all spaces where energy exists, including Wi-Fi.

The catch phrase for Lil Miss Ringawera is “come for the kai and stay for the kōrero” stemming from her whānau values surrounding the kitchen table. This is a space in her kāinga for people to come for physical, emotional, and spiritual sustenance. Using the analogy of a boxing match, and the corner being a safe space for a fighter to take a breath from the fight. Here he/she will receive physical attention (ice, water, and medical supplies) emotional and cognitive guidance (prep talk, strategy from the trainers sharing what the

fighter can't see) and spiritual support (prayers and encouragement).



Image 3.13. Nelly Robinson and her son Heath, regular visitors to Charlizza and Wiari's kai table.

Photo credit: Charlizza Matehe.

This is typically how Charlizza, and her husband Wiari Matehe treat their kitchen table, reminding people “we are in your corner” when they come to share kai with them. Being in a corner can be viewed negatively and associated with being ‘boxed in’. Creating a safe space/corner however can often be what is needed for people to recover, replenish, and refocus before returning to the fight or challenges of life. Bringing someone in the corner provides safe boundaries, which is often needed when adrenaline and emotions are running high amid chaos.



Image 3.14. Lil Miss Ringawera sharing kai with her extended whānau. Photo credit: Sally Rye.

This idea of creating spaces for kai and kōrero is a major part of this rangahau. With the disruption to traditional social constructs and the continual rise of unhealthy and obesogenic environments, there is an urgent call for Indigenous spaces and models of wellness. Corners provided where Indigenous People who are struggling in their fight for wellness can come and be supported, inspired, and uplifted within our own Indigenous paradigms of hauora.

Hau kāinga

Hoki atu ki tōu maunga kia purea ai e koe ki ngā hau o Tāwhirimātea.

Return to your mountain to be cleansed by the winds of Tāwhirimātea.

Whakataukī, Māori proverb.

Where Indigenous People have been displaced from their marae, ūkaipō or papa kāinga (original home), opportunities to engage in activities and events that strengthen identity and culture are often missed. This whakataukī is a reminder to return home to the place of your ancestors to be replenished and rejuvenated by the vibrations of people and place and space.

Maunga are prominent tohu for the Māori people. It is the first landmark you see when returning home. According to Dr Moana Jackson “a notion of home necessarily has to be related to the mountain that determines who you are; the mountain that sits at the centre of your identity; the mountain that you can look up to in times of triumph and trouble; the mountain that sets the heights to which mokopuna should aspire” (Jackson, 2022, p. 52). This suggests that maunga extends beyond the ideal of a physical landmark and into metaphysical ideas of identity.

A person who has whakapapa Māori, will typically begin by introducing their maunga. This is normally followed by their awa, waka, Rangatira, marae, hapū and iwi. There are many variations and styles in which individuals choose to share their pepeha and identity. What seems to be a common in Te Ao Māori is the mountain is mentioned first.

Dr Rebecca Kiddle has a background in urban design. Her work focuses on Māori identity and placemaking/place-keeping in Aotearoa urban settings and the nexus between community creation, social processes, and urban design. She is currently the Director of the Te Manawahoukura Rangahau Centre at Te Wānanga ō Aotearoa.

According to Dr Kiddle, cities or settlements are historically organised around a significant landmark. This aligns to mātauranga Māori strategies for centring tribal settlements around a maunga (personal conversations, 2023). Kiddle (2020) emphasises the intrinsic relationship between Indigenous People and place stating that “Indigenous communities around the world have thought about, responded to, embedded themselves in and enacted sustainable practice with respect to the physical environments from mai rānō (long ago)” (p. 204). This suggests that kāinga is more than place, it represents a range of ideas around mātauranga that connect people to place.

Durie (2004) describes the initial stages of inquiry when Māori arrived in Aotearoa. Tribes adapted and pivoted their knowledge systems as they familiarised themselves to the new environment. This involved intense observations, trials, and tests before shifting from states of survival to prosperity. Pedagogy of kāinga was woven into the exciting tribal curriculum

as the mātauranga evolved to become more relevant in the new taiao. Kāinga naturally transforms into a space of ako and aro for all matters concerning being, living, and seeing.

The illustration below was drawn by artist Robert Kent Thomas around 1877. It shows Kikopiri Pā at the side of Lake Horowhenua. Along with the maunga or significant landmark being central to the settlement, access to wai (water) and kai were other key factors.



Image 3.15. A traditional Māori Pa. Source: Ref: PUBL-0016-02-4. Alexander Turnbull Library, Wellington, New Zealand. [/records/22834515](#)

As a child, I was taught by my kaumātua that the maunga represents aspirations. In Ngāti Kahungunu we have a whakataukī, “Whāia te iti Kahurangi, ki te tuohu koe me he maunga teitei”. This proverb represents endurance and perseverance and translates to “seek the treasures you desire, if you fall let it be to a lofty mountain”. A proverbial message to whānau encouraging them to not give in to small obstacles.

For myself, the ocean is what inspires me to dream beyond my reality or situation. As a young child, I would walk along the Marine Parade in Napier and imagine all the places that lay on the other side of the Pacific Ocean. Since I have been on my hau(ora) journey I have had the opportunity to explore many beautiful places and cultures around the world. Wherever I go, I am always pulled to the ocean and the vibrations of the sun as it glistens on the water.

Although I have been blessed to see what lies beyond my kāinga, I am always grateful to return home. Nothing can compare to Tama-nui-te-rā peeping over the horizon as my feet stand firmly planted on my home soil.



Image 3.16. Tōku kāinga, Marine parade Napier, across the road from my whare. Photo credit: Sally Rye.

Hau maramataka

Your star can shine as bright as you want to be in that moment.

Rikki Soloman (personal conversations, 2023).

The maramataka has been practiced by our ancestors for generations. Tūpuna used this ancient knowledge of the star system, moon cycles, tides, and the environment as a tool for kai sovereignty and sustainability. Each tribal area had their own unique system developed over generations, based on observations that were occurring in their part of the world. The maramataka was also used as a tool for well-being. This included the well-being of te taiao and natural resources, the well-being of kai sources, and the well-being of people.

Professor Rangī Matamua was awarded the New Zealander of the year in 2023 for his contribution to raising National and International awareness of Matariki and kōkōrangī,

Māori astronomy. Matamua (2017) informs us that astronomy is “the study of the cosmos”. He further adds that “since early times mankind has looked into the heavens seeking knowledge, understanding and inspiration”. For the Māori people according to Matamua, “astronomy was interwoven into all facets of life” (p. 1).

Rikki Solomon descends from Ngāti Kahungunu and Ngāti Kahu ki Whangaroa. He has over 25 years’ experience working in the tangihanga industry as a Kaimanaaki tūpāpaku (embalmer) and Kaiatawhai (funeral director). He is a dedicated Indigenous astronomer and considered an expert in the practical application of maramataka Māori.

In June 2023, Rikki facilitated workshops in Napier with rangatahi connected to Toi Matarua. The sessions were designed to raise awareness of Matariki and to provide rangatahi and their whānau with insights into the maramataka. According to Rikki, the maramataka extends beyond the following of the moon cycles. Instead, “it is about observing the heavens, stars, sun, land, ocean, birds, air simultaneously, this is the triangulation of Te Maramataka” (personal conversations, 2023). What this idea suggests is that when observing the movements and patterns of the moon, you direct your attention to the environment and notice what nature is saying and doing. Once you have this insight, you are better positioned to discern how this impacts the people.



Image 3.16. Napier Beach, Toi Matarua Matariki Celebrations 2023. Rikki Soloman teaches local rangatahi and their whānau about the rising of Matariki. Photo credit: Sally Rye.

Rikki believes that each person can shift within states of well-being once they learn how to connect in a positive way with the environment and people around them. He proclaims that, “your star can shine as bright as you want to be in that moment”. This idea is explored through tiro tiro (looking), whakarongo (listening) and kōrero between a wellness practitioner and whānau. It is designed to work with rangatahi to assess their own well-being. The Pātiki model below is a tool that Rikki uses when working with rangatahi to determine and measure their ora, focussing on their hinengaro, wairua, tinana, and ngākau (heartfelt affections). Whānau is placed at the centre.

Using the scales (1-10) to assess states of ora for each tenet, this model can gain a visual on how well someone is feeling in that moment. The goal is to unpack what is going on in each of the areas and to self-determine what to do about it using Maui’s hook (right) as an indicator of stability and anchorage. Before you make an assessment on yourself, you need to get grounded and look around at your surroundings. What are the things you notice around you, what other things are at play?

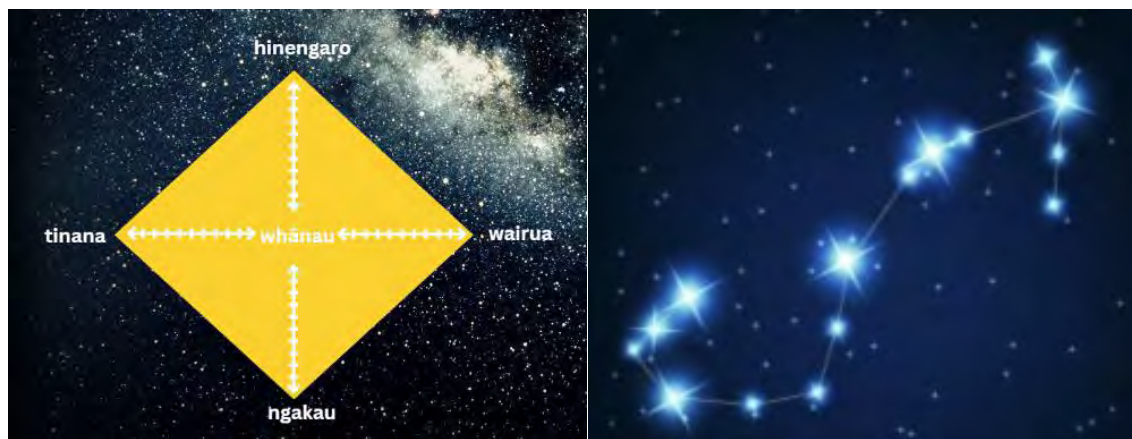


Image 3.17. Rikki Soloman Pātiki model of wellness Photo credit: Sally Rye.

Rikki then leads an interactive session to describe the movements of the moon. He describes the characteristics of each moon phase and provides the underlying message of well-being. The critical point here is that your energy can shift each day, awareness to what is happening around you is key to understanding the state of your well-being in that moment.



Image 3.18. Rikki with Te Aramoana Brady, demonstrating the cycles of the moon. Photo credit: Sally Rye.

In our busy everyday lives, we become so busy and distracted and this can cause distress and imbalance. Rikki advises whānau to “go for a walk in the park, smell the roses and look up to the skies” (personal conversations, 2023). There is much to learn from our landscapes, the waterways, and the skies. When people are feeling taumaha (heavy burdens), sometimes the best rongoā is to step out into te taiao and notice the surroundings.

Each iwi has their own variations of the maramataka and systems for implementing. Two variations of the Maramataka and names of the moon phases are shared below.



Image 3.19. The Maramataka. Source: Matamua, 2017, p. 52–53.

TE MARAMATAKA A TE WHĀNAU-Ā-ĀPANUI
The Māori Calendar of Te Whānau-ā-Apanui

1. Te Rākauāni:	The transcendent apex
2. Rākauātohi:	The evergreen spiritual acknowledgement
3. Takirau:	Multitudinous but miniature
4. Oke:	Obtrusiveness (unproductive)
5. Korekore Tuatahi:	Nothingness, emptiness
6. Korekore Rawea:	Nature is closed up
7. Korekore Whakapiri:	Insubstantial (merging into the meagre fertility of Tangaroa-a-mua)
8. Tangaroa-ā-mua:	Improving with the evening
9. Tangaroa-ā-roto:	Productiveness from within
10. Tangaroa Whakapau:	Widespread peak productiveness
11. Tangaroa Whiaki Kioiō:	Complete fulfilled productiveness
12. Otāne:	Blessings from Tāne (god of creation)
13. Ōrongonui:	All-pervading positiveness, empowered by Rongo (god of growth)
14. Ōmātu:	Closure approaching
15. Mutuwēhenua:	Land's end. The termination

At this point, if there are thirty-one days in a lunar month, Te Whānau-ā-Apanui adds an extra night called Takatakāpūtea as number thirty-one. No doubt other tribes have their own ways of dealing with the month with thirty-one days. Te Whānau-ā-Apanui uses this simple method of holding an extra night in reserve to use as required.

16. Whiro:	Be aware. Whiro lurks, peering over the horizon
17. Tīrea:	Expanding radiance from the horizon
18. Hoata:	Reaching, rising upwards
19. Ōwemuka:	Rainbow bright
20. Okoro:	Intentions defined (pathways ahead are clear). Take heed of nature's unpredictable moods
21. Tamatea Aio:	Tamatea is unsettled
22. Tamatea a Ngāna:	Tamatea is threatening, dangerous
23. Tamatea Kai-āriki:	Tamatea is in a devouring mood
24. Tamatea Tuhāhā:	Tamatea is in a destructive mood
25. Ariroa:	Nature wears a disguise
26. Huna:	All is hidden away
27. Mawharu:	Everything is exposed, plentiful; take at will
28. Ōhau:	Time of pronouncement
29. Anu Whakahaehae:	The gods are in a fraternal mood
30. Tūne:	Calm and beauty approaches

Image 3.20, The Maramataka. Source: Tawhai, 2013, p. 16.

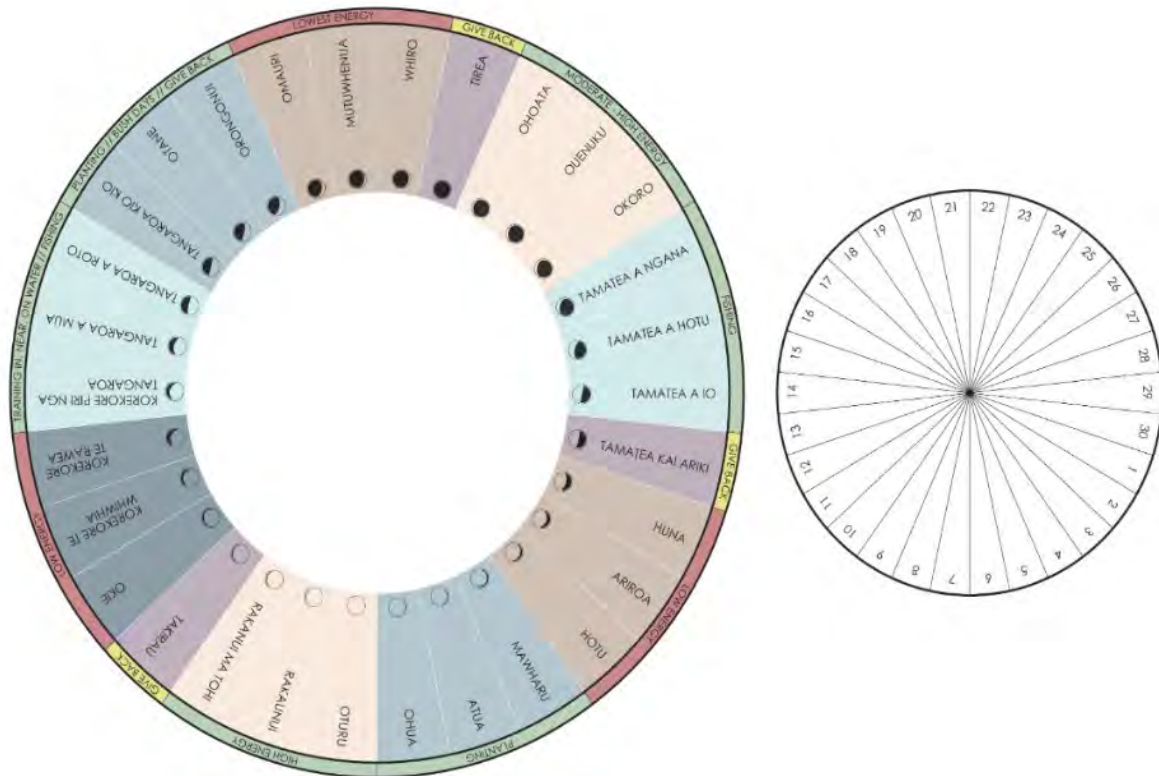


Image 3.21. The Maramataka (see explanation text below). Source: The Spinoff, 2018.

Te Maramataka (the moon cycles)

Oturu – high energy, good day to finalise big decisions

Rakaunui – high energy, schedule special occasions

Rakau a Tohi – high energy, good day for big meetings

Tangaroa a Mua – surging energy, complete your chores

Tangaroa a Roto – surging energy, make the most of your productive time

Tangaroa Kiokio – surging energy, try something new

Ohoata – building energy, do some exercise

Ouenuku – building energy, move your tinana

Okoro – building energy, a great motivation day

Tamatea a Ngana – unpredictable energy, avoid making big decisions or scheduling meetings

Tamatea a Hotu – unpredictable energy, have patience

Tamatea a Io – unpredictable energy, focus on yourself

Omauri – low energy, take it easy

Mutuwhenua – low energy, rest, relax and plan

Whiro – low energy, motivation is low, sit on the couch with a good book or movie

Tirea – low energy, a good day to plan and schedule

Tamatea Kai Ariki – low energy, time to reflect

Huna – low energy, meditate

Ariroa – rising energy, rest day

Hotu – rising energy, practice mindfulness

Oike – rising energy, have a break, have a KitKat

Korekore te Whiawhia – static energy, be mindful of what you say and do

Korekore te Rawea – static energy, be extra patient

Korekore Piri nga Tangaroa – static energy, start to reinvigorate

Using Rikki's Pātiki model of wellness and the idea that *your star can shine as bright as you want it to*, mentioned earlier, the 7 tenets of Hau Ora can be used as markers to investigate or assess where each hau element is at. Giving a rating of 1–10 to determine if each hau is in balance.

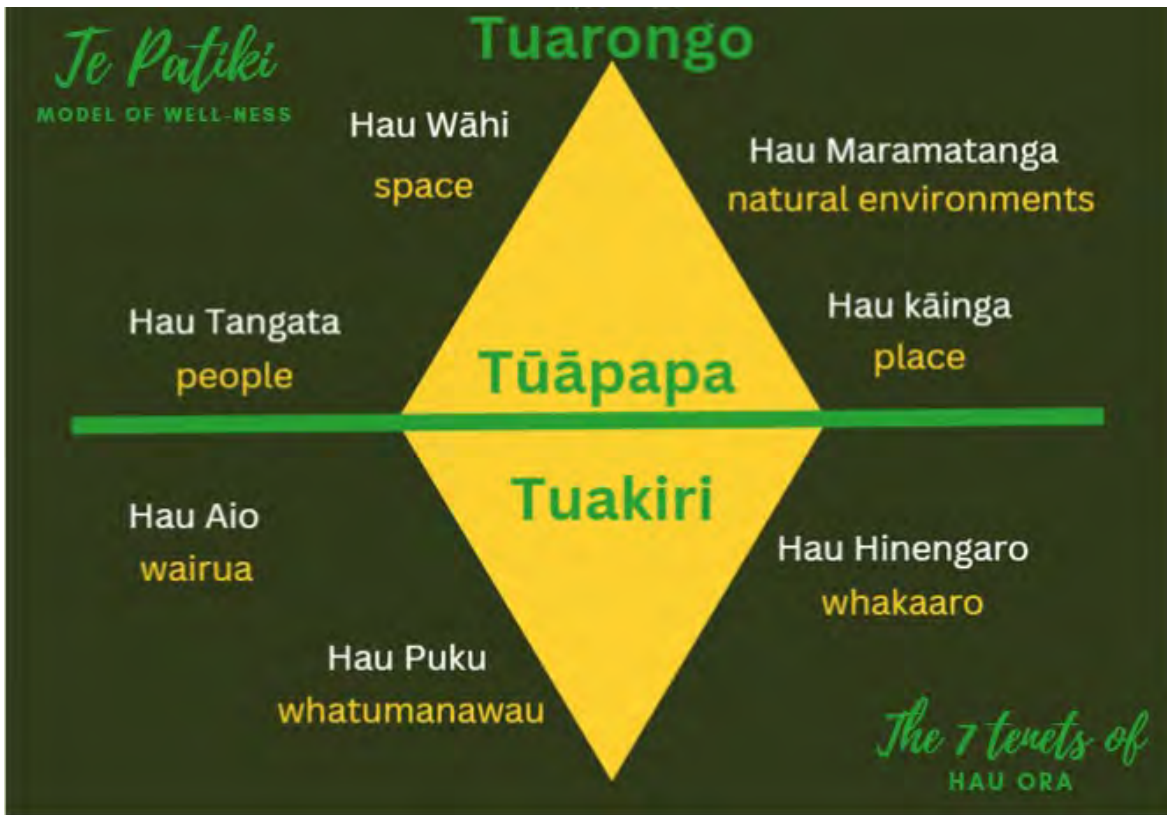


Image 3.22. The 7 tenets of Hau Ora – Patiki framework.

The diagram above aligns the seven pou of RāP to other Indigenous models of well-being as well as the RāP framework. Generally, the Hau Ora tenets that are above the tūāpapa line, can be seen. These include hau tangata, hau maramataka, hau wāhi, and hau kāinga. Those below the tūāpapa line are not as easily detected and require intentional focus and kōrero to determine one’s state of hau ora, these include hau āio, hau hinengaro and hau puku.

Professor Sir Mason Durie’s (2003) previously mentioned model of wellness, ‘Te Whare Tapa Whā’ examines four critical domains of well-being these are wairua, hinengaro, tinana and whānau. Dr Rose Pere’s (1997) ‘Te Wheke’ model extends further into discussing Māori domains of being. These are: Te Whānau – the family; Waiora – total well-being; Wairuatanga – spirituality; Hinengaro – the mind; Taha Tinana – physical well-being; Whatumanawa – the open and healthy expression of emotion; Whanaungatanga – extended family; Mauri – life force in people and objects; Mana Ake – unique identity of individuals and family; and Hā a koro mā, a kui mā – breath of life from forbearers.

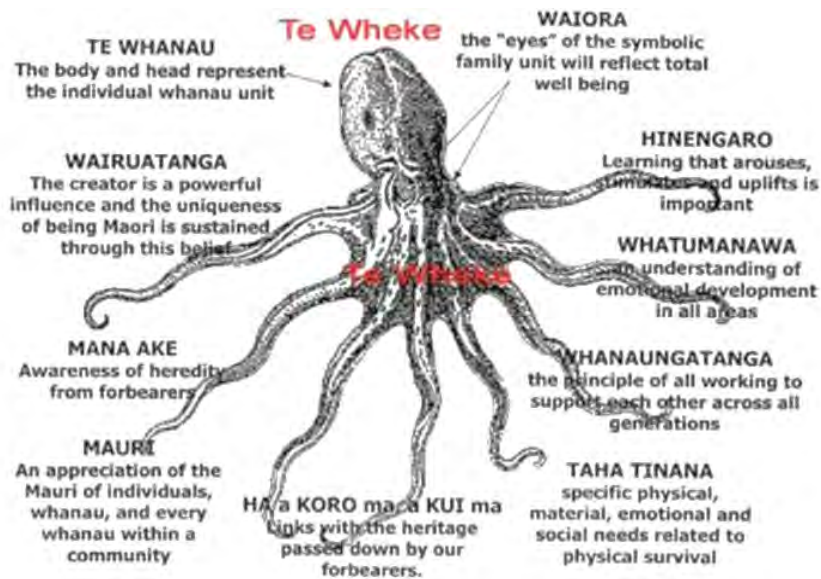


Image 3.23. Dr Rose Pere's Te Wheke model.

Both 'Te Whare Tapa Whā' and Te Wheke are used widely within the health and education sectors as tools to assess well-being. Professor Mera Penehira(2023) reminds us that "Te Whare Tapa Whā can be accredited as providing a very accessible tool and mechanism for those who desire an understanding of Māori health perspectives" (p. 120). Professor Mason Durie has provided a solid tūāpapa for Māori academics and Māori health practitioners to whai whakaaro from. I have used this model for the past 27 years in my professional and personal practice as a base to springboard from. As my mātauranga has grown and evolved, so too have my interpretation of the four concepts and how I apply them in practice.



Image 3.24. Professor Mason Durie’s Te Whare Tapa Whā model.

This study has reviewed several models including Professor Mason Durie’s ‘Te Whare Tapa Whā’ model (2003), Dr Rose Pere’s ‘Te Wheke’ model (1997), and Dr Huirangi Waikerepuru and others ‘Mana Kaitiakitanga’ framework (Smith & Pihama, 2023). The following table attempts to whai whakaaro by aligning the hau ora tenets to existing Indigenous hauora frameworks and models.

Rongo ā Puku seven tenets of hauora

Hau	Rongo ā Puku Framework	Te Whare Tapa Whā	Te Wheke	Mana Kaitiakitanga
Hau Aio	Haere Puku Tūārongo Tuakiri	Wairua	Mana ake Mauri Whanaungatanga Wairuatanga	Hau āio, Hau ora Mauri ora Wairua
Hau Puku	Haere Puku Noho Puku Tuakiri	Hinengaro	Mana ake Mauri Hinengaro Whatumanawa	Hau ora Mauri ora Wairua

Hau Hinengaro	Noho Puku Tuakiri	Hinengaro	Mana ake Hā a koro mā a Kui mā Hinengaro Mauri	Hau ora Wairua Mauri ora
Hau Tangata	Puku Mahi Tūāpapa	Tinana	Mauri Tinana Waiora	Hau ora Hau tangata Mauri ora
Hau Wāhi	Noho Puku Tuakiri	Hinengaro Tinana	Hinengaro Mauri Tinana	Hau ora Mauri ora Hau tangata
Hau Kāinga	Noho Puku Tūāpapa	Whānau Wairua	Mauri Te whānau Whanaungatanga	Hau ora Hau whenua Hau moana Wairua
Hau Maramataka	Haere Puku Tuarongo Noho Puku Puku Mahi	Hinengaro Tinana Whānau Wairua	Hā a koro mā a Kui mā Hinengaro Mana ake Mauri	Hau ora Hau moana Hau whenua Wairua Mauriora

Chapter Four | Literature review

Nāu te rourou, nāku te rourou, ka ora ai te iwi.

With your contribution and mine, the people will thrive and prosper. (MSD, 2023)

The above whakataukī is commonly used in modern contexts to describe the collective efforts and contributions of people. It represents the principles of kotahitanga and collective dreams, goals, and aspirations of whānau, hapū, iwi, hapori.

Introduction

Chapter four and the following literature review chapters five and six look back to recognise, retrieve, and reflect on the existing mātauranga Māori to uplift and support this investigation. Prior to a Pākehā imposed culture that was infiltrated with western ideology, beliefs and behaviours, Māori were thriving and surviving within tribal social constructs. Constructs were underpinned by Māori culture values, principles, and ancient knowledge systems that informed ways of doing, being, and seeing. These structures provided the members with security, sustenance, and sustainability.

Ranginui Walker DCNZM (1 March 1932 – 29 February 2016) from the tribe of Whakatōhea was a highly respected Māori leader and academic. His writings are highly regarded accounts of significant historical events from a Māori perspective. Walker (2004) describes a traditional Māori family unit below:

The basic social unit in Māori society was the whānau, an extended family which included three generations. At the head were the kaumātua and kuia, the male and female elders of the group. They were the storehouses of knowledge, the minders, and the mentors of children. The old people were not only revered for their wisdom but also valued for their contribution to minding the young and performing tasks that were useful to the livelihood of the group. Light tasks such as rolling twine, weaving or the time-consuming task of grinding an adze could be done at an advanced age (p. 63).

According to Tā Hirini Moko Mead (2016), “Māori society was and is about culture”. Historically, culture informed the members of the tribe how to conduct themselves”. Mead further states, “over time, systems were developed that covered all aspects of life” (p. 18). Hemara (2000) adds that “through the recorded deeds of their ancestors, Māori learnt to conduct their lives within certain inherited guidelines” (p. 71).

This suggests that the well-being of the tribe was guided by tikanga Māori (ethical systems of common rules) and dependent on practicing kotahitanga. Barlow (1991) confirms “tribal unity was fundamental to our ancestors. They lived in close-knit communities and worked together and planted food together. Everybody contributed to the well-being of the tribe” (p. 57). Hemara (2000) adds that the principle is “used in the context of unity, either for working towards a common goal or as a protection against a common threat” (p. 70).

Tā Hirini Moko Mead (2016) describes tikanga as binding and historically practiced by most Māori. It is often used in reference to a ‘rule, plan’ or ‘method’, and, more generally, to ‘custom’ and ‘habit’. He further states that “tikanga Māori means ‘the Māori way’ or done ‘according to Māori custom” (p. 18). Tikanga is what informed members of the tribe how to behave, act and live. It created an unconscious norm that didn’t require much thought.

Initially, when arriving to Aotearoa and as Māori adapted to the new conditions and environment, rules and boundaries were implemented with a huge emphasis on health and safety. Professor Mason Durie (2003) explains that as the culture of Māori evolved, the focus of tikanga shifted from a point of survival towards what he describes as “more sophisticated ideals and art forms and to codify what was previously a matter of experience and common sense” (p. 14).

On arrival to the shores of Aotearoa, Pākehā did not understand or relate to this type of governed lifestyle and framed Māori as barbaric and unruly. Māori culture and intrinsic relationship with te taiao was further perceived as a hindrance to the agenda of Pākehā and interfered with the economic and political aspirations of the new settlers.

Professor Linda Smith informs us that the visitors would use this assessment in the process of claiming western superiority over the Māori. She explains, “the negation of Indigenous

views of history was a critical part of asserting colonial ideology, partly because such views were regarded as clearly ‘primitive’ and ‘incorrect’ and mostly because they challenged and resisted the mission of colonisation” (Smith, 2001, p. 33).

This study speaks to how Indigenous social constructs essentially provided Māori individuals with structure and boundaries on how to conduct themselves from day to day whilst contributing effectively and efficiently to the maintenance, growth and of the collective community. In the global process of disabling and destroying Indigenous structures, colonisers gained an added and more detrimental bonus. The thoughts and emotions that presented in individuals as they were pushed away from the korowai of love, security, and sustenance that the social constructs held them in, towards the unfamiliar terrain of western ideology and culture. The disturbance and confusion through the process of assimilation of Indigenous People into the new world has resulted in unfavourable health, social and educational conditions that numerous Indigenous People struggle with today.

The upcoming chapters discuss existing literature that shows how colonisation and government policies have disrupted Indigenous ideology, methods, and practices that historically informed lifestyle. It discusses ancient knowledge systems that were developed over generations to optimise holistic well-being and development within whānau and hapū. Finally, it attempts to align western science, philosophy, and praxis against mātauranga centric approaches towards hauora to highlight the similarities and differences.

The literature review for this study has been organised into the following four sections. The first part discusses mātauranga Māori, chapter five covers Kai Sovereignty, chapter six converses Kai Science, and chapter seven speaks to Kāi (nga).

Chapter Four | Mātauranga Māori

Kia ū ki tōu kāwai tūpuna, kia mātauria ai

I ahu mai koe i hea e anga ana koe ko hea.

Trace out your ancestral stem, so that it may be known

where you come from and where you are heading. (Nga Pae o Maramatanga, 2023).

Māori writers including Durie (2003, 2004), Penehira (2011), Milburn (2004), Cayete (1994), and Vyas (2019) argue that Indigenous People have never really recovered from the historical trauma that uprooted them from their norm and familiar, displacing them into a foreign way of life. Individuals who once found structure, security, support, and protection under the auspices of their tribe were abruptly exposed to conditions and lifestyles that they were not equipped or prepared for. This disruption presented unfamiliar challenges to their basic knowledge base that informed survival and daily functioning.

This chapter discusses how the process of colonisation and assimilation progressively disconnected Indigenous people socially, physically, emotionally, and spiritually from their inherent way of being, living, and doing. The detrimental impacts to holistic well-being continue to feature in a negative way today. It shows through recent health research (Ministry of Health, 2020) that as Indigenous People are leaning more and more into western lifestyles and medicines, they become more and more disconnected to the RāP tenets of Hau Ora. These tenets including hau Āio hau puku, hau hinengaro, hau tangata, hau wāhi, hau kāinga, and hau maramataka are discussed here under the following headings: kauae runga, ancient knowledge and spiritual spaces, kauae raro, Indigenous lifestyles and physical or natural spaces and roro wāhi, traditional well-being ideologies held in psychic spaces (mental real estate).

Moko-Painting, Hamley, Hikuroa, Le Grice, McAllister, McLellan, Parkinson, Renfrew and Rewi (2023) state that “mātauranga is central to kaupapa Māori. Mātauranga is both a body of knowledge, and an epistemology – a way of knowing and worldview”. (p. 1) Whatahoro and Smith (2013) discusses mātauranga Māori and the Whare Wānanga, the ancient place

of teaching and learning for Māori people. Two sections of the Whare Wānanga are described. These are te kauae runga (meaning the upper jaw) and te kauae raro (lower jaw).

Moihi Te Matorohanga (died c. 1876) was a tohunga and historian of the Ngāti Moe subtribe of Ngāti Kahungunu in the Wairarapa. It is reported that he had been trained at two Whare Wānanga – Te Poho-o-Hinepae in Wairarapa, and Ngā Māhanga at Te Toka-a-Hinemoko in the Ngā Herehere area of Te Reinga, north of Wairoa around the mid-1800s (Simmons, 2023). Matorohanga in Whatahoro et al., (2013) defines te kauae runga as “representing everything pertaining to the gods, the heavens, the origin of all things, the creation of man, the science of astronomy, and the record of time”. He goes on to explain that “Te kauae-raro deals with the history, properly so called, of the people, their genealogies, migrations, the tapu, and all knowledge pertaining to terrestrial matters” (p. 79). This account of Matorohanga suggests that te kauae runga represents celestial things, and te kauae raro, terrestrial things.

According to Rev. Maori Marsden, Māori myths within the context of culture were “deliberate constructs employed by seers and sages to encapsulate and condense into easily assimilable forms their view of the World, of ultimate reality and the relationship between the creator, the universe and man” (Royal, 2003, p. 56). This could explain the different accounts of the Māori culture. Mātauranga Māori is so vast and expansive that it is impossible to learn everything in one lifetime. Even a well-educated and trained tohunga within the Whare Wānanga would not know everything. Information that related to the well-being, prosperity and sustainability of the tribe would be shared with the People translated in a way that was relevant and understandable. All other knowledge would be held by the tohunga and used when necessary for the betterment of the People (Whatahoro et al., 2013).

The headings used in this chapter hold the narrative of kauae runga to discuss ancient knowledge and spiritual spaces. Kauae raro is used to discuss Indigenous lifestyles within physical and natural spaces. Lastly, this study uses the idea of roro wāhi to discuss psychic

spaces or 'mental real estate'. In summary, this chapter speaks to mātauranga within spiritual spaces, physical and natural spaces, and psychic spaces.

Rev Māori Marsden describes three types of reality which align to spiritual, physical, or natural and psychic existence. These realities set the scene for the upcoming chapter as the articulation of mātauranga Māori is attempted through an ancient, Indigenous, and traditional lens. (Royal, 2003) explains how "the natural realm is normally subject to physical laws, these can be affected, modified and even changed by the application of the higher laws of the psychic and spiritual" (p. 5).

The notion that all three realities exist within mātauranga Māori recognises that all things are interlinked and interconnected. According to Rev Māori Marsden (Royal, 2003), "knowledge (Mātauranga) is different to knowing (mohio)". He further states that "when illumination of the spirit arrives in the mind of the person that is when understanding occurs – for knowledge belongs to the head and knowing belongs to the heart" (p. 79). These views links to the pillar of hau ora mentioned previously, hau tāngata, and the kīwaha (saying) 'tuhia ki te ngākau'. To know something, and to experience it, is the space between mātauranga and mohiotanga.

The first part of this chapter therefore speaks to ancient knowledge held in spiritual spaces. For Māori this knowledge exists in kauae runga, which refers to knowledge that sits in the celestial realm.

Te Kauae Runga, ancient knowledge held in spiritual spaces.

Dr Rose Pere's statement "He ātua, he tangata, every one of us is both divine and beautifully human", is an ideal place to start this conversation as it suggests that we have direct access to celestial knowledge systems. Living and embracing the internal energies of Tūmatauenga and Rongo-mā-Tāne allow us to operate within the cosmic or metaphysical energies that descend from Io Matua. Spiritual power, which is embedded in our DNA is gifted by Io Matua as we enter the physical realm of existence. People, physical, and metaphysical things, places, and spaces exist to provide gateways and connections to the taonga of Io Matua (Pere, 1997).

Atua are recognised within Te Ao Māori as holding metaphysical authority over people, place, and space. Each tribal area, whānau, hapū, and hāpori have varying interpretations and pūrākau that speak to the domain, influence, and functions of each atua. What appears to be commonly discussed is that atua descend from Ranginui and Papatūānuku. Indigenous writers Pere (1997), Barlow (1991), Hemara (2000), and Royal (2003) discuss the whakapapa of the creation story including the separation of Ranginui and Papatūānuku and how this led to the creation of tangata.

There are many atua discussed across Indigenous literature including the balance of atua that hold wāhine and tāne elements. For this study however, the main atua discussed are those that support the notion of duality such as Rongo-mā-Tāne and Tūmatauenga. Other atua discussed are those that elevate the intrinsic relationship that tangata have with te taiao, and the role atua play in accessing kai and wai as rongoā.

The latest science explaining the role of the vagal system and the function of the parasympathetic and sympathetic nerves aligns to ancient beliefs surrounding our internal dual system dominated by Tūmatauenga and Rongo-mā-Tāne. The vagal nerve is an automotive system that shifts us from a state of 'flight or fight' to 'rest and digest'. It is possible to self-regulate these nerves by engaging in practices such as meditation, breathing, and other activities depending on which nerve needs to be dialled up or dialled down. The same is believed for regulating Tūmatauenga and Rongo-mā-Tāne and having the discipline to discern which atua is needed for specific intentions or purposes.

Tuarongo refers to the back wall of the marae. According to Ngāti Kahungunu kaumātua Tiwana Aranui, it represents the passage from the physical to the metaphysical realm. In ancient times a member of the tribe would be buried alive holding the mauri of the meeting house to activate the passage. Nowadays, a mauri stone or pōhatu is buried beneath the marae to mark the place of the Tuarongo (personal conversation 2023). Within a whare tūpuna, the Tuarongo is the most sacred and peaceful space. It is a place to whaka-aro, to sit and reflect, to remember, and to rangahau.

Tohunga Ahurewa were the highest ranking of tohunga according to prominent Māori leader, Ranginui Walker. Tribal experts were identified, selected, and enlisted in training for up to seven years, learning the art of white magic and provided with ancestral tools that could command elements to enact supernatural forces. According to Walker (2004), “Tohunga Ahurewa were trained in whare wananga astronomy, genealogy, faith healing, as well as a repertoire of chants and karakia for planting, felling trees, building houses, canoes, making war, healing the sick and farewellling the dead” (p. 67). These were critical high-level skills required to maintain and sustain the health and well-being of the people. Such mātauranga was considered highly sacred and precious and was not handed out without due diligence and discernment.

Wiremu ‘Bill’ Tawhai, a well-respected kaumātua of Te Whānau-a-Apanui, Whakatōhea, and Ngāti Awa tribes, informs that knowledge was not shared to all members of the tribe. Special keepers of the knowledge were selected and identified. Tawhai (2013) describes these as special people who “had a natural ability to keep knowledge intact, current and safe”. He further states that in ancient times “people were needed to protect celestial and terrestrial knowledge, and to keep safe the principles and customs that guided their daily lives” (p. 20). Selection, initial training, and ongoing development, ceremonies, and rituals were necessary to keep tohunga koi and in-tune with the people, place, and space they operated within. When used in the context of metaphysical and the mahi of Io Matua, Māori values, principles and terminology go beyond the western interpretations. Following are some ideas that support further consideration around Māori terms and concepts.

Wairua

The Māori believe that all things have a spirit as well as a physical body. Barlow (1991) suggests that “even the earth has a spirit as does the animals, birds and fish; mankind even has a spirit” (p. 20). He further states that the spirit is immortal and when a person dies their spirit descends and returns to the spiritual realm of ngā atua.

As mentioned previously, according to Dr Rose Pere, wairua denotes two waters. Within each person exists dual streams flowing both positive and negative energies which should be considered. Pere (1997) warns that within the context of dual energies affirming the interconnectivity of all things within and across the universe, all is “perfect until it is compared with something else or influenced by negative forces” (p. 16). When we are cognisant of this idea, we can be more prepared of what level energies we are working with in metaphysical spaces and navigate our balance.

Mauri

Like wairua, everything has a mauri including people, fish, animals, birds, forests, lands, seas, and rivers. The mauri is the power which permits these living things to exist within their own realm and sphere. None can control their own mauri or life essence. The mauri makes it impossible to exist within the bounds of its own creation (Barlow, 1991). Dr Rose Pere discusses that mauri has an influence on our everyday lives and living and should be appreciated and respected. She suggests that mauri has the power to bind and join the physical and spiritual being of people. It helps us to relate and care for everyone and everything across the universe (Pere, 1997).

Mana

Mana ake is one’s divine right, a taonga from Io Matua. It holds multiple layers of influence and kudos. Pere (1997) suggests that “mana is inclusive of psychic influence, control, prestige, power, vested and acquired authority and influence, being influential or binding over others” (p. 14). Where a person holds mana, it is evident by others as it permeates from within. Rev Māori Marsden in Royal (2003) describes mana as having spiritual authority and power. He illustrates how mana is derived from the gods. (S)he who holds mana has “lawful permission delegated by the gods to their human agent to act on their behalf in accordance with their revealed will” (p. 4). This suggests that power does not exist in the absence of permission from the atua.

Tohunga

Prior to the Tohunga Suppression Act of 1907, people would look to tohunga for healing and direction on matters beyond their capacity and capability. Tohunga according to Rev Māori Marden “was a person chosen by the gods to be their representative and the agent by which they manifested their operations in the natural world by way of mana” (Royal, 2003, p.14). This suggests that Tohunga carried the mandate to operate in ways that drew celestial knowledge from the gods to heal, guide, educate and cleanse people, places, and spaces.

Indigenous writers Tawhai (2013), Walker (2004), and Royal (2003) discuss the selected tribal members who were entrusted with the specialist knowledge and deep and sacred wisdom. Rev Māori Marden states that the “wānanga wasn’t for everybody. It was selected” (Royal, 2003, p. xxxvii). These Tohunga were learned sages who were mostly identified whilst they were being formed in their mothers’ wombs. In some cases, children were identified soon after birth as demonstrating the key attributes and characteristics of Tohunga.

According to Tawhai (2013), these children were invited into the sacred houses of learning at an early age. These were the ones who were “predestined to become the custodians and keepers of the deep and sacred knowledge of the people” (p. 20). Whilst in the process of learning, ākonga were in a heightened tapu state. The illustration below depicts a scene pre-1907, where Tohunga practices were a normal way of living and being. Here we see a young child feeding rīwai to a Tohunga. Food is often used to shift the condition of tapu into noa. In this scenario the Tohunga avoids ‘touching’ the kai with his hands so that he does not break the tapu state.

They were separated from the other members of the tribe and often challenged and tested physically, mentally, and spiritually before graduating from wānanga. Rev Māori Marden in Royal (2003) provides an example where ākonga would be sent into the forest with no supplies and expected to survive for several weeks. This was a time where the ākonga would fast and reflect on their learnings.



Image 4.1. Tapu. [1863 or 1864]. [Robley, Horatio Gordon] Ref: A-080-003. Alexander Turnbull Library, Wellington, New Zealand. [/records/22690532](#)

The Tohunga Act of 1907 was supported by professionally trained medical practitioners Sir Maui Pomare and Sir Te Rangi Hīroa (Peter Buck) to protect Māori from tuberculosis, a crippling disease sweeping the country in the early 1900s. Within this context, the suppression of Tohunga to practice ancient methods of medical treatment and traditional Māori healing could be seen as a way to protect the health and well-being of the Māori people.

Tohunga were not equipped to deal with the western introduced diseases and Pomare and Hīroa had grave concerns. According to Professor Mason Durie (1998), “Pomare regarded tohunga as unhelpful and accused them of causing more harm than good, especially in the management of infectious disease” (p. 44). For this reason, controls were woven into policy to manage the outbreak of foreign health issues. Unfortunately, this led to many practices and skills being lost and Māori relying on alternate methods that were focussed on treatment as opposed to well-being and prevention.

Tapu, Noa, Rāhui

Walker (2004) describes tapu as a “spiritual force which emanated from the celestial realm of gods. It had three dimensions of sacredness, prohibition, and uncleanness” (p. 67). Within the scope of sacredness this applied to people, rank, places of worship, and ancestral houses.

Rāhui supports the practices of protection, restriction, and conservation over people, place, and spaces. Barlow (1991) describes this as a form of “tapu restricting the use to land, sea, rivers, forests, gardens and other food sources”. He states that traditionally “rāhui will be put on a place by the mana of a person, tribe, hapū or family and would stay in place until it was lifted” (p. 105). Kūmara were held in high regard and were considered kai rangatira. Planting, caring for, harvesting, and storing involved a process that involved karakia, tapu and rāhui. Variations on how these were conducted are mentioned by Walker (2004), Matamua (2017), and Fiso (2020), however, they normally involved karakia, Tohunga, tohu, rāhui and a sacrifice of some kind.

Mahinga kai according to Monique Fiso (2020) has its “roots in tikanga and is rich in mātauranga Māori” (p. 27). In referring to the separations of Rangi and Papatūānuku and the emergence of Te Ao Marama, the whakapapa of kai is acknowledged as coming from the natural world. Instruments for gathering kai were also considered tapu as were the sites and places where kai was collected. Karakia and rituals were an integral part of the process.

Pursuits such as carving were also viewed as highly sacred, and women and children were prohibited to enter spaces where this mahi was taking place. Women were seen as tapu or unclean within their menstruation cycles and restrictions were put in place to keep them away from kai as they were in a state of spiritual tapu. Tā moko was a further highly tapu example provided by Ranginui Walker. The artist was considered in a tapu state and was not permitted to touch food while doing tā moko.

Noa according to Dr Rose Pere (1997), involved a process allowing tapu to be lifted, opening the way for entry into neutrality, free from restrictions. The role of noa was instrumental to the physical well-being of people. It was a means to free people, space, or place from the state of spiritual or ceremonial restraints and controls. Traditionally the practices of tapu and noa were applied to everyday life and ordinary situations. Pere suggests that this was a “vital part of the most formal complex ritual and social controls over Māori people” (p. 56). There are certain natural phenomena or tohu that according to Pere emanate noa such as rainbows, whales in the ocean, and eagles soaring in the sky.

Sir Mason Durie (2003) discusses how tapu and noa can be employed as a tool for health protection within a modern context. He suggests that the principles can “provide some guidelines and sensible practices that will lead to a better adaptation to modern environments, and all their risks” (p. 222). Barlow (1991) provides examples of how tapu and noa have been used by government in modern rule to “restrict access and use of traditional Māori food sources” (p. 106). There has been some conflict arise from this approach however, as Māori are denied aspects of customary rights to hunt, fish, and gather traditional kai freely within Indigenous tikanga and kawa.

Creating spaces for play and kōrero was a natural way of being within traditional Indigenous constructs where cross generations would interact. Referencing hau wāhi and creating spaces of āhurutanga, these occurred naturally when there was a sense of belonging and identity. Dr Rose Pere shares that “the pre-European Māori did not have a police state, the institution of tapu itself enabled communities to have a high level of social control and discipline” (Pere, 1994, p. 40).

Ways of thinking and leading (hegemony) was supported by tikanga and practices of tapu, rāhui, noa and mana. Children were introduced to these concepts at a very early age and shown areas that were tapu and out of bounds. These included dangerous river holes, cliff faces, swamps, and reefs. This system or social construct according to Pere (1994) provided an “excellent means of social control, self-discipline, conservation and preservation” (p. 40).

Maramataka

Mātauranga Māori systems of teaching and learning, such as the maramataka are starting to find space in the state education system. These systems can also be applied in the health and well-being sector.

Rereata Makiha (RNZ, 2021) encourages people to observe what the environment is telling us. The traditional practice of tiro tiro was a tool for creating systems of planting and fishing. He asserts that teachings around how to access Māori systems and tools of knowing are embedded in oriori, kōrero tawhito, and waiata. He states "our tūpuna, our ancestors, left behind a language on how to understand the world that we live in through the movement and the shifts in an environment. They're what we call: kōrero tuku iho. They've left behind some unique examples of what we should be doing and how we should be doing things".

According to Moko-Painting et al., (2023), "literature, both academic and the literature shared through whakapapa kōrero (ancestral narratives, histories), waiata (songs), whakataukī (proverb), whakairo (to carve), and many more ways are key to expressions of mātauranga within pūtaiao" (p. 1). Teachings suggest that when we are tuned in to our surrounding, we remember that we are part of an environment, we're not separate from it. Te taiao as pedagogy is not an unfamiliar approach to education. The challenge for many people is the contradictory messaging that occurs in state schools and institutions.

Native American educator from Santa Clara Pueblo, New Mexico, Professor Gregory Cayete has dedicated his life's work to honouring the foundations of Indigenous knowledge in education. Cayete (1994) informs us that the way in which education is delivered in American schools' conflicts with traditional Indian belief. Stating that western curriculums advocate the "world is an inanimate mass of matter arranged by chance into a set of shapes and energy patterns is a matter of belief not experience and is a polar opposite of traditional Indian belief" (p. 12).

According to Cayete (1994) the fear is that, over time, “the emphasis on western oriented curricula will erode Indigenous ways of life” (p. 17). Along with Hemara (2000), he calls for the revitalisation of Indigenous ways of teaching return to modern educational context.

Circadian rhythms

Reddy, Reddy and Sharma (2023) inform how the “biological circadian system has evolved to help humans adapt to changes in our environment and anticipate changes in radiation, temperature, and food availability. Without this endogenous circadian clock, *Homo sapiens* would not be able to optimize energy expenditure and the internal physiology of the body” (p. 1). The science behind circadian rhythms provides further evidence of the importance of how our human biology is interconnected with te taiao.

Reddy et al., (2023) further demonstrate how the internal biological system of knowing informs our sleep-wake pattern over the course of a 24-hour day. Most living things have one and predominantly it is influenced by light and dark, as well as other factors. Influenced by the earth’s rotation around the sun, this idea supports how the moon cycles can influence our energies levels, moods, and behaviours. This makes sense because 70–80% of our body’s composition is made up of water. In the same way that the moon’s energy pulls on the ocean, it pulls on our waters also impacting our natural ebbs and flows (emotions, moods, energy levels).

Aside from the sleep-wake cycle, the circadian system helps us to regulate other critical internal functions including appetites, digestion, body temperature, hormone levels, alertness, daily performance, blood pressure, and reaction times. Reddy et al., (2023) stresses the importance of sleep and shares the implications and disorders that can arise if patterns are disrupted., noting that the “various chronic health conditions linked to irregular rhythms include diabetes, obesity, depression, bipolar disorder, seasonal affective disorder, and other sleep disorders” (p. 1).



Image 4.2. Circadian rhythms and patterns, Rongo ā Puku resources.

Te Kauae raro, Indigenous lifestyles, physical and natural spaces

This section of the Mātauranga Māori chapter is concerned with knowledge held in physical and natural spaces. For Māori, this knowledge exists in te kauae raro, which refers to knowledge that sits in the terrestrial realm. Discussion here is focused on people, place, and space. Reviewing the RāP framework, this area of mātauranga refers to the concept of tūāpapa, being grounded in Indigenous knowledge systems before opening to other ideas.

Professor Graham Hingangaroa Smith discusses two approaches to decolonisation covering structural and cultural constructs (Ngā Wai a Te Tūi, 2020). The critical distinction between these constructs highlights cultural as the way we act or behave, and structural as the way we think. Smith urges kaupapa Māori practitioners to engage in a process of critical analysis and utilise critical tools to address Indigenous issues within Māori modern realities.

The culturalist approach is worthy of recognition as Māori assert language, knowledge, and culture as a means of survival. Smith argues however that attention towards engaging in structuralist approaches is key to sustaining culture affirming that although “cultural stuff will change attitudes and behaviours around language, knowledge and culture, on its own

this is not enough” (Ngā wai a te tūī, 2020, 34:50). Attention and investment into challenging big and super structures are critical. Policy, economics, system elements, and hegemony (the way we think) are what have the biggest influence on people’s lives.

Pre the disruption caused by colonisation of the Māori people, systems, processes, and procedures underpinned by Indigenous values and principles existed. These guided the collective towards ensuring the maintenance, preservation, and sustainability of physical, spiritual, economic, and environmental resources. Further to this, the constructs provided structure and guidance to individuals, directing their daily activities, and providing instruction on how effectively and efficiently contribute to the community. Individuals were interconnected to one another, the lands, and the environments. Knowledge was weaved into everyday life imparted in a naturally occurring manner.

Assimilation into a foreign an unfamiliar world can be attributed to the loss of knowledge and confidence that individuals required to survive in the western society. Indigenous writers Durie (2003, 2004), Professor Mera Penehira (2011), Milburn (2004), Cayete (1994), and Vyas (2019) outline the many detrimental impacts that this process has had on Indigenous peoples and links are made to the various deprivation faced in Indigenous hapori today. Māori went from self-determination, thriving, and prosperity to struggle and unwellness today. This is directly linked to western assertion and interference.

The limitations that exist to reverse the conditions caused by poor nutrition can be attributed to other factors where Indigenous People feature such as poverty, poor housing, low educational achievement, and unemployment. Government intervention is therefore required to ensure equity and equality and so that these communities are not disadvantaged from achieving optimal performance. Rev Marsden in Royal (2003, p. 27) speaks to the “centre” or “core” of one’s belief system and values determine how a person views, interpret, and experiences the world. Professor Mason Durie informs us that “well before 1800, Māori in Aotearoa recognised the importance of heathy communities, and a public health system evolved which was based on a set of values that reflected the close and intimate relationship between people and the natural environment” (1994, p. 7).

The ancient way of doing things have to some degree continued to be practiced within whānau, hapū, iwi, hāpori. Today, visit any Māori construct or institution and you will find that the values and principles are what guide daily interactions of people, place, and purpose (kaupapa). The kōhanga reo movement, Te Kura Kaupapa and Te Whare Wānanga have been major vehicles for language revitalisation and normalising of Te Reo Māori within the New Zealand Education system (Smith, Hoskins & Jones, 2017). Kaupapa such as Matatini, Regional and National Kapa Haka whakataetae (competitions), National Waka Ama whakataetae (and other traditional Māori events have been instrumental in keeping the wider hāpori connected to the manawa of Māori culture.

Ihi and wehi

The vital force of one's persona is described by Rev Māori Marsden as a "personal magnetism which validation from a person, elicits in the beholder a response of awe and respect". Marsden further states that ihi is "a psychic and not a spiritual force" and "not mental power but a mental force" (Royal, 2003, p.4). Ihi can rise beyond physical and spiritual capacity which further demonstrates how powerful the mind is. What stimulates and feeds ihi can come from within or be triggered externally. How the mind responds determines the power of ihi. The power of ihi will manifest through a person's hau, the essence of their being, their presence, their confidence, and their mana.

Wehi according to Rev Māori Marsden "is to be in awe or fear in the presence of the ihi" further stating that "it is the emotion of fear generated by anxiety or apprehension" (Royal, 2003, p.7). Within our history we have many examples of where ihi and wehi can be experienced. These will be discussed in the next sections on kapa haka and the 28th Māori Battalion.

Kapa haka

Waiata is a traditional method used to disseminate cultural knowledge and used as a tool of teaching and learning within kura wananga or sacred school of teaching. Oriori which can

be likened to a lullaby was sung to children at a very early age. According to Dr Rose Pere, “as well as to comfort children the song was intended to instil important ideas and messages about the lives of their ancestors” (1997, p. 151). Many of the ancient thinking concerning culture was imprinted into waiata along with whakapapa, rituals, and significant events.

The poi is a dance which was mainly performed by wāhine represented and illustrated poise, grace, charm, and rhythm (Pere, 1997). It was also a way to teach children how to emulate and depict the movement of the natural world. Children would observe the birds, the swaying of trees, the crashing and dancing of waves, the flight and dance of insects, and incorporate this in mediums such as poi, toi, whakaari, and other arts.



Image 4.3. Māori women performing the poi at Lepea village, at the 7th Festival of Pacific Arts, Apia, Samoa. Brooke-White, Julia, 1942-: Photographs. Ref: PA12-7254-06. Alexander Turnbull Library, Wellington, New Zealand. [/records/32050638](#)

Since 2005, Te Wānanga ō Aotearoa brings kaimahi together across Aotearoa biannually to participate in Mata Wānanga, an event that celebrates language, knowledge, and culture. Kaimahi from across Te Wānanga ō Aotearoa are invited to participate in kapa haka, sports, games and whai kōrero to celebrate ngā uara (values) me ngā takepu (principles) in a

meaningful way. Due to the disruptions of COVID-19 and natural disasters, it had been four years since Mata Wānanga had occurred. In October 2023, the event returned in full force as hundreds gathered in Feilding to support and perform. It is another kaupapa Māori event that enables whānau to be unapologetically Māori and innately create an environment that is exuding kotahitanga, whanaungatanga, manaakitanga, wairuatanga.



Image 4.4. Opening ceremony, Mata Wānanga 2023, Hata Paora College, Feilding. Photo credit: Erica Sinclair.

The build-up for Mata Wānanga involves weekend wānanga, a significant part of the journey that provides a space for kaimahi from different campuses to join in preparation. Referring to hau kōrero and hau tangata, Mata Wānanga is an example of bringing together intergenerational vibrations for a kaupapa.

The preparation wānanga was a space where whānau from pēpi to kaumātua came together in one space to support kaimahi participation. Even rangatahi who came to support their mātua and kaumātua jump in the lines to help build confidence in the newcomers to haka. The ihi from the youth is always welcomed as it uplifts and inspires the tired and weary. The ihi in this context is an energy that excites a person on the stage and off the stage. It is what ignites passion and pride to be connected and a part of a collective mahi.

When you are performing on stage, the ihi can be caught from the person you are next to. If the energy is uplifting, then you can lean into this energy taking your personal

performance to another level. Wehi is described as the emotion that those in the audience are experiencing. When ihi and wehi are present then wana will manifest, and this is the wānanga that we experience when we come together to celebrate in culture (Rikki Soloman and Charlizza Matehe, personal conversations).



Image 4.5. Mata Wānanga 2023, Te Waenga Takiwā. Photo credit: Erica Sinclair

As a new performer in 2023, I found the ihi that permeated from my peers gave me the confidence I needed to overcome my anxieties and to stand in my own mana. I can recall the moment as I was about to take the stage, I was so nervous. However, as I saw I was not alone and remembered my 'why', my fears dissipated. I entered the stage and looked out to see my whānau and all those who had been on the journey to the build-up, those who had worked in the background providing kai and kōrero, transport and words of encouragement. The performance became more about 'ko au' and more about 'ko tātau'. This was the fuel that fed my ihi to another level. I left the stage, my ngākau full, it had become more than a performance, it was a movement. I had shifted from a place of whakamā to a place of whakamana.

The messages of congratulations flooded through from peers and whānau who had watched the live stream. This wasn't Matatini however for me it was a huge milestone. I had not engaged in kapa haka since I was at primary school, and it took over 40 years for me to get back there. The experience had touched every tenet of my hau, and those who knew me were able to share in the moment. The one comment that stood out for me was from my colleague Dr Joni Collins. It read, "I just want to acknowledge Sally for her performance today! I am watching her on livestream from Mata Wānanga and inspired. Ka pai e hoa. You have inspired me to pull my socks up and participate next time! Love it! And love our awesome wānanga".



Image 4.6. Mata Wānanga 2023, moments before our performance a proud moment with my Te Waenga whānau Eugene Temara and Rauangi Ohia. Photo credit: Keith Edwards

Experiences such as these are carved in your heart, 'tuhia ki te ngākau', it is different to tuhia ki te rae – reading about an experience (Tiwana Aranui, personal conversation). According to Barlow (1991), "ihi refers to the vitality or total personality of a person, which increases through the devotion to the gods and the development of one's skills and talents"

(p. 31). Barlow (1991) suggests that wehi refers to the effect that one person's power and influence has on another.

Being aware that your ihi can go places that exceed your physical capabilities is essential in kapa haka. Recognising duality, that within each person exists Tūmatauenga and Rongo-mā-tane, and knowing when to dial up or dial down is beneficial. Te Matatini performer and Ringa Toi (Māori artist), Cody Hollis is a champion at shifting between states of ihi with his mahi haka. He shared that the manifestation of ihi is linked to how you navigate between Tūmatauenga and Rongo-mā-Tāne. He states that "you don't want too much of Tūmatauenga that you lose control, and you don't want too much of Rongo-mā-Tāne in that you have no kaha on stage" (personal conversation, 2023). This would suggest that you be in tune with where the ihi is taking you, and that you are able to navigate the ihi for the purpose it is required.

The 28th Māori Battalion

In 1939, when Māori were fighting for fairness and equal citizen rights as Pākehā, war broke out across the world. Prominent Ngāti Porou leader, Tā Āpirana Ngata (1874–1950) was the first Māori to complete a Law Degree and first Māori Politician, saw this disruption as an opportunity for the Māori people to stand in battle with their Treaty partner and claim the full privileges as citizens of Aotearoa. Ngata, a well-respected and established leader was able to mobilise young men across Aotearoa who rose up in response to his aspiration call (28th Battalion, 2023).

At the time, Ngata and other Māori leaders paving the way in the political arena were doing what they could with the resources they had to push the Māori voice. In his attempt to position Māori at the table alongside its Treaty partner, he made this aspirational statement, "we will lose some of our most promising young leaders, but we will gain the respect of our Pākehā brothers and the future of our race as a component and respected part of the New Zealand people will be less precarious" (Ngata, 1943, p.1.).

Based on the ideology of ihi, wehi, wana, Ngāta and other Māori leaders knew the value of an all-Māori unit and advocated to the government to form the four companies of the 28th Māori Battalion. These companies were established based on the boundaries of the Māori parliamentary electorates. Each company had its own nickname, reflecting the history.

- A Company, drawn from Ngāpuhi, Ngāti Whātua and other northern iwi, was known as the Gum Diggers (Ngā Kiri Kapia) due to the long history of kauri gum digging in the north.
- B Company, centred on Te Arawa and the Mataatua tribes, were the Penny Divers (Ngā Ruku Kapa) – a reference to the practice of diving for coins to entertain tourists at Whakarewarewa, Rotorua.
- C Company, drawn from the Tairāwhiti/East Coast region, were the Cowboys (Ngā Kaupoi), because of the common use of horses for transport in that area.
- D Company, which covered the whole of the South Island and the remainder of the North Island, including Waikato, Taranaki, Manawatū and Wairarapa, was known as the Foreign Legion or Ngāti Walkabout.

Headquarters (HQ) Company drew its personnel from all over Māoridom. Its diverse origins and roles earned it the name 'Odds and Sods' (28th Battalion, 2023).



Image 4.7. Māori Battalion at a transit camp in Egypt. New Zealand. Department of Internal Affairs. War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency. Ref: DA-06839-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/22680272](#)

Lieutenant Alfred 'Bunty' Preece QSO (1922 – 1 March 1918) from the Chatham Islands was assigned to the 'D Company' (the Foreign Legion or the Ngāti Walkabouts). Preece was quick to move up in rank. He was commissioned in the field and promoted to lieutenant. By the time he was 24 years old, he was promoted to an officer. In Crean (2012), he shares his personal experiences about the war, "the gentlest became savage, and the savage would weep" (p. 1). He was proud to stand alongside brave and courageous men and recalls NZ Division commander General Freyberg's reference to the 28th Māori Battalion being "no infantry had a more distinguished record, or saw more fighting, or alas, had such heavy casualties" (p. 1).

Such bravery was recognised by the enemy as Rev. Canon W. T. Huata, M.C recited the quote in Huata (1978) from Field Marshall Erwin Rommel (famous Commander of the German Afrika Korps) who once said, "give me a Māori Battalion and I will conquer the world." Huata (1978) went on to add that the Māori soldiers "had the reputation of being some of the best courageous fighters in two world wars, winning many decorations for bravery on European battlefield's" (p.1).



Image 4.8. Māori Battalion performing a haka, Egypt. New Zealand. Department of Internal Affairs. War History Branch: Photographs relating to World War 1914-1918, World War 1939-1945, occupation of Japan, Korean War, and Malayan Emergency. Ref: DA-01229-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/23061877](#)

The Māori Battalion suffered twice the number of casualties of any other New Zealand infantry unit during the Second World War, losing 660 of its men. Amongst those who fell in battle was Moana-Nui-a-Kiwa Ngarimu VC (7 April 1918 – 27 March 1943). Ngarimu was of Ngāti Porou descent and a member of the C Company (Ngā Kaupoi – the Cowboys). For demonstrating outstanding bravery, determination, and exceptional leadership, he became the first Māori to be awarded the Victoria Cross. The Victoria Cross (VC) is the highest award for gallantry in the face of the enemy that can be awarded to British and Commonwealth forces.

Memories of the 28th Māori Battalion and the outstanding bravery and courage have become immortal in the minds of those who carry their stories. When we imagine the collective ihi that magnified spaces they entered, we can resonate and be in awe of who they were, and what they stand for. This wehi that lingers and continues to impact a new generation in inspiring ways is powerful. Ngarimu VC scholarships to support higher education are an example and reminder that we all have the ability to tap into ihi and manifest wehi.



Image 4.9. 2nd Lieutenant, Moana-Nui-a-Kiwa Ngarimu VC. Sourced from [2/Lt Ngarimu sends a message home | 28 Māori Battalion \(28maoribattalion.org.nz\)](#)

Te Roro wāhi, traditional well-being ideologies held in psychic spaces (mental real estate)

The three ideas that are presented here support the psychic space, a domain that is not often fully recognised, realised or engaged within. More so in modern times the average person spends most of their time and energy in the ‘doing’ space or puku mahi. This section explores traditional well-being ideologies held in psychic spaces and speaks to the following as key areas to consider in terms of well-being: *Neuroplasticity*, the ability to rewire and transform the structure of our brains through whakaaro and building intentional thought

patterns. *Noho Puku*, mauri tau, mindfulness, and meditation and *Haere Puku*, the ability to transcend and shapeshift.

Neuroplasticity

Neuroplasticity is the ability to rewire and transform the structure of our brains through whakaaro and building intentional thought patterns. The human brain contains four parts that are visible by looking at a brain with unaided eyes. These parts are called the cerebrum, cerebellum, diencephalon, and brainstem. Brain scientists have also discovered many other smaller structures inside the brain, each one controlling specific functions in the brain and body.

The cerebrum and cerebellum are divided into two halves, one on each side of the body. These two halves are called brain hemispheres. The two hemispheres of the cerebrum are connected by the corpus callosum, a thick nerve fibre. Each hemisphere is responsible for specific functions. For example, the left hemisphere mainly controls our rational thoughts, while the right hemisphere is responsible for our intuition, emotions, and creativity. (Leaf, 2013)

Neuroplasticity is the ability to rewire and transform the structure of our brains through whakaaro and building intentional thought patterns. Dr Caroline Leaf (2013), leading scientist who has worked as a neuroscientist since 1985, asserts that, according to the latest science, “thoughts are real, physical things that occupy mental real estate” (p. 13). This section covers three ideas that support Indigenous beliefs concerning the power of our minds.

Dr Rose Pere explains the concept of Hinengaro. Hine meaning the conscious part of the mind and ngaro being that part of the mind that is hidden or the unconscious mind. Hinengaro in this context refers to mental, intuitive, and feeling, and the seat of the

emotions. Pere (1997) further explains the function of the mind as “thinking, knowing, perceiving remembering, recognising, feeling, abstracting, generalizing, sensing, responding, and reacting” (p. 32).

Traditional Māori settings allowed members to live naturally within the boundaries of the tribe. Each member had a role, responsibility, and awareness of how they contributed towards the social and economic well-being of the community. As mentioned in earlier sections, interactions between people, place and space were managed by practices of tapu, noa, rāhui, mana and supported by tikanga and kawa. The thinking to guide this way of living was normally the responsibility of the tribal leaders and tohunga (Tiwana Aranui, personal conversation).

Following the disruption of these social constructs, members were displaced from the security of these constructs and left to think and fend for themselves. Indigenous writers such as Durie (2003, 2004), Professor Mera Penhira (2011), Milburn (2004), Cayete (1994), and Vyas (2019) inform us that the impacts of this lifestyle interference on the mental well-being of Indigenous People was great. Thoughts of anxiety, fear, confusion would have been experienced, leading to many health issues.

Epigenetics

New studies around epigenetics show how the thought patterns that have led to unhealthy lifestyles can impact future generations. Dr Carolyn Leaf (2013) notes that the “science has demonstrated how the thought network can pass through sperm and ova via DNA to the next four generations” (p. 57). The good news is that through the process of neuroplasticity, these patterns of thinking can be reversed, changing, and rewiring the structure of the brain. Science shows in Leaf (2013) that “when you make a conscious decision to focus and direct your attention correctly, you change physical matter-your brain and body can change in a healthy way” (p. 73).

Recent disturbances caused by COVID-19 and Cyclone Gabrielle floods were tragic events for many whānau, hapū, iwi, hāpori. Within Ngāti Kahungunu, many whānau remained displaced months after the devastating floods ripped through their homes and marae. What we did see during these challenging times is how Indigenous systems of manaakitanga were mobilised overnight. While local and national government were stumbling over themselves to respond to the urgent needs of the people, marae and communities had pivoted to provide care and attention to those impacted. Many people opened their kāinga and their pātaka, clothing, feeding, and providing shelter without the blink of an eye. Dr Caroline Leaf (2013) further informs us that “we are wired for love, which means all our mental circuitry is wired only for positive, and we have a natural optimism bias wired into us” (p. 14). This suggests that when crisis hits, our natural intention is to show love and empathy.

The idea of hau hinengaro as a pou for wellness suggests that the way we think can reshape the structure of our brains in a negative or positive manner. Our perception of the world plays a major part in this idea. Carl Mika of Tuhourangi descent and a professor in Aotahi: School of Māori and Indigenous Studies, University of Canterbury specialises in Māori and Indigenous philosophy. He is currently working on the Māori concepts of nothingness and darkness in response to an enlightenment focus on clarity and is speculating on how they can form the backdrop of academic expression (University of Canterbury, 2023). In Mika (2017), he presents the idea of ‘worldedness’, suggesting the “one thing is constituted by all things in the world”. He further suggests that “the general nature of Indigenous relationships with the world is complex, abstract and often paradoxical” (p. 34). This suggests that even when reasoning would recommend one action, the way we inherently feel will direct our paths in a different direction. This gut feeling of knowing can be further explored through the idea of noho puku, which follows in the next section.

From observations and inquiry during this investigation, the maramataka system of mātauranga carves out three key areas to engage in activities. The RāP framework identifies these as Puku Mahi (a time for doing), Noho Puku (a time for being), and Haere Puku (a time

for seeing). These align to when the moon is in a phase of high energy (Puku Mahi) average energy (Noho Puku) and low energy (Haere Puku).

Noho puku, mauri tau, mindfulness, and meditation

This next section of this chapter is concerned with noho puku, a time for being. Māori expert on the maramataka, Wiremu Tawhai provides examples of times when to noho puku. When the moon is in the phase of Mutuwhenua, he states, “the soul and body relax into a state of calm and peace. The mind is free to address other pursuits” (Tawhai, 2013, p. 40). Within a modern context, it is difficult to fully align to the shifting energies of the moon, especially with demanding work schedules. We can however use the maramataka to plan certain activities and maximise the energies from the moon in our existing work schedules.

Mauri tau

Science also shows how we can create spaces of noho puku to raise our consciousness using mindfulness and meditation. (Silva, 2022). Traditional practices of mauri tau used natural earth elements to assist in the shifting from states of Tūmatauenga (fight and flight) towards Rongo-mā-Tāne (rest and digest). Karakia, beathing techniques as well as herbs, smoke, ice, stream, and water were used to further access and activate a state of mauri tau (Jessica McGregor, Sabre Puna, Waka Rye, Arapera Riki, personal conversation 2023).

The Silva method provides techniques backed by the latest science that shows us how to slow our minds down through meditation, allowing us to tap into knowledge that we already know but need to remember. Developed by Jose Silva, it is used by millions of people around the world and is transforming lives. The main function of the method is to assist individuals to become stress-free, relaxed, energized, more creative, and motivated by accessing the Alpha level of consciousness. This has great benefits for health and well-being, if we can learn to visualise and relax, we can promote overall well-being and self-heal (Silva, 2022).

Day (2017) supports the theory of meditation as healing, stating that “the practice of mindfulness meditation has been shown to correspond directly with neurological changes in the brain contributing to observed improvements in pain and coping” (p. 250). Mauri tau is a contemporary practice based on ancient ideas of noho puku. Reweti, Ware and Moriarty (2023) describes mauri tau as “a state whereby the mauri, or lifeforce, of a person is settled and open to a process of renewal and rejuvenation” (p. 3).

Professor Carl Mika asserts that “as Indigenous peoples, when we think, we are in fact giving some acknowledgement to Being”. He further suggests that “Being in its own right is evocative, and it draws the Indigenous self on to ponder it, regardless of whether it is a conscious theme in a discussion” (Mika, 2017, p. 32). Setting time in our yearly personal and professional plans to do this is advisable as there is considerable opportunity for growth when we take time to sit and be.

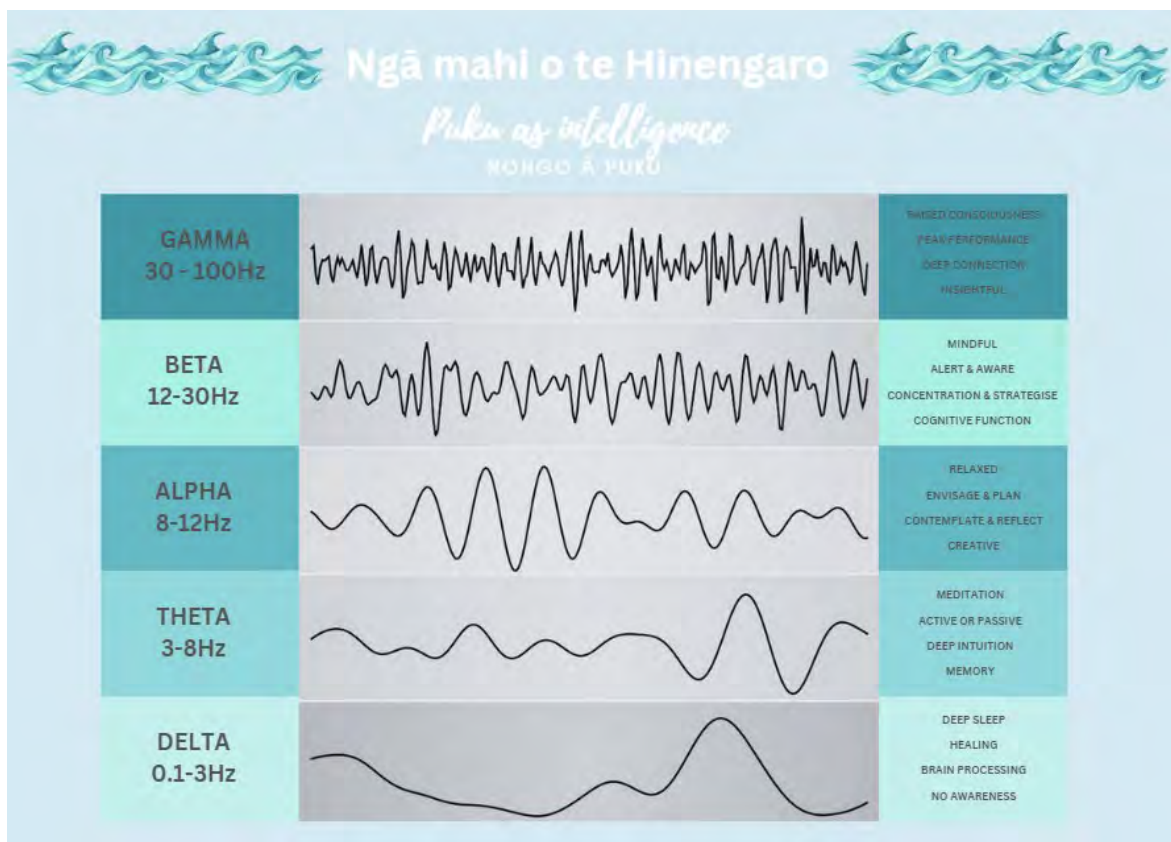
Brain waves

There are four main structures of the human brain, these being the cerebrum, cerebellum, diencephalon, and brainstem.

The cerebrum and cerebellum are divided into two halves, one on each side of the body. These two halves are called brain hemispheres. Each hemisphere is responsible for specific functions. The left side controls our rational thoughts, while the right side is responsible for our intuition, emotions, and creativity. Gerard (1937), Leaf (2013), and Miller and Buschman (2015).

Neurons are the cells that intersect within the structures of the brain. They communicate with each other through electric impulses. The brainwaves are measured by their frequency using a machine called an Electroencephalograph (EEG). According to Miller et al., (2015), “brain waves are not random: they vary with mental state. For example, when you are relaxed, your brain tends to show lower frequency waves; but if you suddenly focus on a task, brain regions that are needed to perform that task begin to produce higher frequency waves” (p. 115).

Our brains can produce more than one frequency at a time depending on what we are doing. One frequency will normally dominate, depending on the activity or state of consciousness of the person. Our conscious and unconscious actions, thoughts, and feelings are controlled by brainwaves.



4.10. The mahi of our brainwaves. Rongo ā Puku resources.

We can stimulate the brain into operating in a specific brain wave. Techniques used are typically sound or visual provocations. We can actually change our moods and raise or lower our level of ihi, hau and mauri through this process which will impact our tinana functioning as well.

Each state of consciousness has an associated range of brainwave frequencies. These are delta, theta, alpha, beta and gamma. Delta brainwave frequencies are accessed during deep stages of sleep. These are the slowest brainwaves we experience. When we enter a delta brainwave state, we are in the deepest non-dreaming part of our sleeping consciousness.

Theta-frequencies are measurable during deep relaxation and light sleep with active subconsciousness. When we fall asleep, our brain produces waves at the lower point of the measuring scale. The upper limit of the scale is reached at deep relaxation periods.

Alpha frequencies brainwaves occurs when a person is just ready to get up or relaxes without going to sleep. At this phase, the soul is open and ready to accept stimuli, which may influence its brainwaves, and which may reach its subconsciousness. Beta-frequencies however occur when humans are fully awake and active. The more concentrated a human works, the higher the beta-frequency rises.

As you can see in the image above the gamma waves have the highest frequency. During this state there are multiple areas of the brain functioning simultaneously. Reaching the gamma state takes some skill and discipline. It requires your mind to be tau. You can learn to access gamma through the Alpha and Theta states. The gamma state is when you feel most spiritually connected, uplifted, and blessed. Techniques to enter into this state would include active and passive meditation, vibrations of sound and fasting to name a few. This leads into the next sessions which speaks about haere puku.

Haere Puku, the ability to transcend and shapeshift.

Within the context of this study and the RāP Framework, Haere Puku relates to raising our thinking to the highest consciousness within the realms of celestial knowledge. Although the tools and methods to enter haere puku are the same as noho puku such as karakia, beathing techniques as well as herbs, with smoke, ice, stream, and water, the intention is different. The idea is to enter a state of tapu through fasting (abstaining from kai) to allow our consciousness to transcend to a spiritual place.

Professor Carl Mika suggests that “metaphysical thought is a material substance that influences subsequent practice, selfhood, and well-being” (Mika, 2017, p. 53). Dr Rose Pere (1997) concurs, stating that “each person is a universe and needs to have dominion over herself or himself” (p. 24). Both these ideas support my mother’s teachings, ‘ko koe te

rongoā, you are the medicine’. The Māori system of maramataka along with ideas surrounding mauri tau provide the tools and methods to gain autonomy/selfhood over our own well-being and that of our whānau, hapū, iwi, hapori.

Whakarongo mai e tama. Kotahi tonu te hiringa

i kake ai Tane ki Tikitiki-o-rangi;

ko te hiringa i te mahara.

Ka kitea i reira ko lo-matua-te-kore anake.

I a ia te Toi-ariki, te Toi-uru-tapu,

te Toi-uru-rangi, te Toi-uru-roa;

*Listen O son. There was only one power
that transported Tane to the Uppermost realm;*

it was the spiritual power of the mind.

Nought seen there but lo-the-parentless.

Source of all authority, Source of all spiritual energy,

Source of all heavenly origin, Source of all creation.

Na, He Oriori mo Tuteremoana.

Tuteremoana was a tino Rangatira from Rangitātau Pā and the grandson of Tara the prominent chief from Wellington – Te Whanganui-a-Tara (Heritage NZ, 2023). The above ori ori has been passed on through generations to remind people of the spiritual capacity of the mind. The words, according to Riwai-Couch (2021), “encourage those who follow to live up to the legacy of educational excellence demonstrated by Tāne” (p. 23). In this ori ori, Tuteremoana alludes to the art of transcending in psychic spaces. This will be discussed in upcoming chapters alongside the idea of haere puku and entering a high state of consciousness through practicing fasting.

This chapter discussed how the process of colonisation and assimilation progressively disconnected Indigenous People socially, physically, emotionally, and spiritually from their inherent way of being, living, and doing. The first part spoke about kauae runga, ancient knowledge and spiritual spaces. The next section provided insights into kauae raro,

Indigenous lifestyles and physical or natural spaces, and the final section presented te waenga o wāhi, traditional well-being ideologies held in psychic spaces (mental real estate).

Ways in which whānau could reclaim hauora were discussed and presented including engaging in natural time systems such as the maramataka and circadian rhythms and practicing noho puku and haere puku as strategies for healing, finding balance, and reaching higher levels of consciousness.

Chapter Five | Kai sovereignty, Kai sustainability, Kai security

To know yourself you need to know who your ancestors were.

From your ancestors you inherit a store of mana, you own abilities and your roots to the land.

(Metge, 2010, p. 44)

The agenda of British colonisers was clear, they believed that the western philosophy of self-reliance and self-help and the best pathway towards success was self-determination. Māori were pressured to abandon the collective aspirations of their tribe and embrace this attitude of the Pākehā. In referring to Māori, Williams (1969) describes how colonisers encouraged and promoted the key message that “their proper goal should be to become like Europeans” (p 23). Smith (2012) outlines the rationale used by the British colonisers to integrate Indigenous People into the western culture. Primarily they believed that they were primitive people who were incapable of using their minds to invent, create, imagine, or produce anything of value.

Williams (1969) explains that “standing in the way of Māori progress was the Māori communal social system” (p. 20). The perception of the colonisers was that the traditional Māori constructs were unhygienic and placed occupants at risk of disease. It was further suggested that communal Māori land tenure and control was unproductive and abolishment of the system of ownership was on the agenda in the early days of colonisation. Colonisers saw the collapse of the collective land ownership system as a critical method for fostering individual success and betterment for all.

According to Williams (1969), “by 1890 a massive and complicated legislation existed concerning Māori land, the result of a half-century search for an easy and effective way of alienating Māori land to European settlers” (p. 15). Pākehā complained about the tribal ownership of land and lobbied for the government to intervene. Within the system of tribal ownership, families, and individuals had specific rights to cultivation grounds, eel weirs, territories for bird snaring and rat catching, and for other economic uses (Williams, 1969).

Māori had an integral relationship to the land that went far beyond residential status. The land provided their livelihood and was the heartbeat of the tribes' existence.

The ideology of shifting from participating in a collective towards an 'all men for themselves' mentality is overwhelming and stressful for people who have historically functioned within a communal context. The anxiety and loss of confidence that would have transpired in the struggle to fit into society would have been crushing to the physical and spiritual well-being of individuals and their families. It is not surprising therefore that many Indigenous People were left behind and failed to assimilate successfully into the western culture. Whether the transition was successful or not, assimilation happened and with it the significant loss of land, loss of culture, loss of language, loss of learning, and loss of direction.

It is evident that imperialism and colonisation brought complete disorder to colonised peoples, disconnecting them from their histories, their landscapes, their languages, their social relations, and their own ways of thinking, feeling, and interacting with the world (Smith, 2012). A common belief instilled in Indigenous People relates to the interconnectedness that people have to one another and the environment. Cayete (1994) proposes that "the whole human being and the whole community are integrally related" (p. 177). This suggests that when the person is displaced from their community, they are no longer whole.

Flowing on from the previous chapter discussing mātauranga Māori. In this chapter I discuss conceptual as well as evidence-based ways to revitalise more traditional knowledge, practices and understandings related to kai through re-claiming autonomy over how we source kai, consume kai, sustain, and regenerate kai systems. The chapter is organised in 3 parts covering: Kai sovereignty, Kai sustainability and Kai security.

The first part of this chapter discusses the disruptions to te taiao, social constructs and traditional food systems, and how this has contributed to unwellness for he tangata, he whenua me te taiao. Following this, I discuss the importance of kai and wai, looking at kaitiakitanga, the earths elements (hā, whenua, wai and ahi), food cycles, and te mana o te

wai. The last part of this chapter discusses social constructs, kai security including emotions surrounding kai, food memories, and associations (belonging, loved, manaakitanga, respect).

Kai sovereignty

Kai sovereignty relates to our thinking around kai. It aspires towards taking control over the way we engage with kai and how society, policy, and systems support this thinking. It investigates our tikanga surrounding kai, and looks at who controls what we know, and how we think about kai. A huge influence around kai sovereignty is the principle of kaitiakitanga, and how policy and structures protect the way in which we access and source kai, considering physical laws alongside, and cultural and emotional consequences.

For generations, ancestors successfully preserved, maintained, protected, and sustained the natural environment through an intrinsic relationship they upheld and actively participated in that was underpinned by interconnectivity and understanding. The land and environment speak to us each day, warning us of behaviours that are placing the future and well-being of our tamariki and mokopuna at risk. We need to turn our attention towards these messages and do our part in ensuring a sustainable future.

Haida (Canada) teaching

*“We do not inherit the land from our ancestors
we borrow it from our children”. (Smith et al., 2019. p. 28).*

This Haida proverb capitulates the principle of kaitiakitanga and the importance of being good caretakers of our environment. When we engage with taiao our intention should always be about leaving it in a better condition to how we found it. The disruptions to te taiao, social constructs and traditional food systems since colonisation have crippled te taiao, and continues to contribute towards unwellness of te tāngata, te whenua me te taiao.

These disruptions are a major contributor to the way in which Indigenous People have become estranged from living off the land. The impacts that this has had on the care and protection of our landscapes is evident. Further to the damaging impacts to our waterways

and whenua, in modern days, Indigenous People have opted more for the convenience of fast foods and processed foods putting well-being of the people at risk.

Dr Jessica Hutchings is a Kaupapa Māori research leader trained in the fields of environmental and Indigenous studies. She is a staunch advocate of Hua Parakore and runs a small Māori organic farm near Wellington. Hutchings, he uri o Ngāi Tahu discusses how she places herself in the centre of the 'problem' disclosing a personal motivation to share her findings on kai sovereignty as tools and strategies for indigenous People to reconnect and reclaim traditional approaches to food supply. (Hutchings & Lee-Morgan, 2016)

Challenging the imposed separation between 'Man' and nature through the disruption of colonisation, Hutchings is convincing in outlining the damaging impacts that current global food systems have had, and continue to have, on Indigenous People physically, mentally, and spiritually. The research and application of Hutchings' knowledge towards the controversial topic of food sovereignty is embedded in her writings. Recognising that this kaupapa is worthy of further exploration and debate, Hutchings insists that food sovereignty be on the agenda of decolonising education in Aotearoa.

Hutchings and Lee-Morgan (2016) state that "Indigenous food knowledge is critical to a decolonising education and learning agenda for indigenous communities, because food connect us with the landscapes we eat, thereby forming a key part of our cultural, mental and physical well-being as indigenous peoples" (p. 177). She shares her personal experiences through a storytelling approach, making references to the traditional methods of food supply she employs such as using moon cycles and seed saving from previous crops.

Hutchings attributes her current well-being to her mindful connection to the food she grows in her māra kai (garden) and the sustenance this provides to her body, mind, and spirit. It is her opinion that the disconnect from land and water supplies to produce kai (food) can be attributed to the current state of being as Māori people.

Te taiao

Smith et al., (2019) suggests that “land is an articulation of ancient knowledge and grounded in the experiences of self-in-relationship to place. Indigenous literacy is based on reading the cosmos – it is about reading all the things around us that are not necessarily written word but nevertheless contain valuable information” (p. 25). Māori have an intimate and intrinsic relationship to the environment.

This ideology is supported by Harmsworth and Awatere (2013) who state that “the Māori world view acknowledges a natural order to the universe, a balance or equilibrium, and that when part of this system shifts, the entire system is put out of balance” (p. 274).

From a western perspective, measurements of time are captured and presented in clocks and calendars. Within Indigenous paradigms, time aligns to the rhythms of nature and integrates celestial, environmental, and ecological occurrences. According to Whaanga, Harris and Matamua (2020), “the movement of the sun, moon and stars, were used as clocks to regulate the timing of agricultural, fishing and hunting activities, and rituals” (p. 16). In modern times we are distracted by ‘getting the job done, or the task complete’. We lean into western concepts of time and many of us are disconnected from our natural timekeepers – te taiao.

It is therefore critical that triangulation of people, place, and space is applied. This means observing the moon and aligning to what is happening within te taiao and how this impacts people. Further to this, consideration and attention is directed towards circadian rhythms, understanding ngā hiringa o te marama – the energies of the moon phases, the moon, variations of maramataka, and understanding how this informs planting, fishing, hunting, and well-being practices. Finally, noticing tohu and key messages from te taiao and how the trees, plants, flowers, and gathering of birds inform us when to collect kai from the ocean.



Image 5.1. Ngā hiringa o te maramataka. Source: Rongo ā Puku resources.

Indigenous planting systems

When Māori first arrived at Aotearoa, they experienced the promises of the prominent voyager Kupe who had spoken of the land that was plentiful in kaimoana, birds, plants, fruits, and berries. Māori had brought on their waka seeds and plants from their place of origin. What they would soon discover was that in the new climate only kūmara, hue (gourd), aute (paper mulberry) taro, uwhi (yam) and tī pore (Pacific cabbage tree) would survive (Fiso, 2020).

Joy Hendry is Emeritus Professor of Social and Cultural Anthropology at Oxford Brookes University and a Senior Member of St Antony's College, University of Oxford, United Kingdom. Her research examines Indigenous science involving environmentally focused, sustainable practices that allow people to live with the land, rather than despite it. Hendry has witnessed through field experience the spiritual connection Indigenous People have to

land and place. They have, throughout generations, undertaken systematic observations that are “intent on conserving the resources they need to sustain the livelihood they share” (Hendry, 2014, p.40). Over time, Māori developed high level sophisticated systems for growing plants and techniques for hunting and fishing. When kai collection was halted by seasonal changes, they discovered foraging and developed skills in preserving and storing kai. Māori experienced a range of ways to extend the growing season or to allow more efficient and effective growth.

Tribes employed the natural resources around them to maximise the growth process of the plants they had brought from their homeland that were battling with the colder climates. Writers Fiso (2020), Mead (2016), and Royal (2003) discuss the rituals that were employed to support each step of the planting process from clearing the land and breaking the soil through to harvesting. A sacred fire (ahi taitai) according to Mead (2016) which was accompanied with special karakia was used “to restore and retain the productiveness, health, welfare etc. of the food products, as also of the land and people” (p. 156).

In response to the struggle that kūmara experienced in Aotearoa, the people of Ōtuataua worked with the rich volcanic soil in the Auckland district, scattering stone and forming walls around garden plots. These paenga-maru (sheltering and dividing walls) were up to one metre high (Royal & Kaka-Scott, 2023). The following image provides an example of this, believed to have been established in the 15th century.



Image 5. 2. Traditional plots of kūmara in Ōtuataua, Auckland. Source: (Royal et al, 2013).

Consideration involving the design of the māra kai was informed by observations and trials across generations. Science, knowledge, and art was infused to create the most productive, sustainable system of planting that had the least impact on te taiao. The following image provides an artist's impression of a māra kai. Its crops include taro at the lower right and hue (bottle gourds) at the lower left. The larger plots contain kūmara (sweet potato) plants. The plots are kept free of weeds and protected by stone walls and wooden fences. Women harvest the hue and the smaller kūmara for making kao (dried kūmara) (Royal et al, 2023).

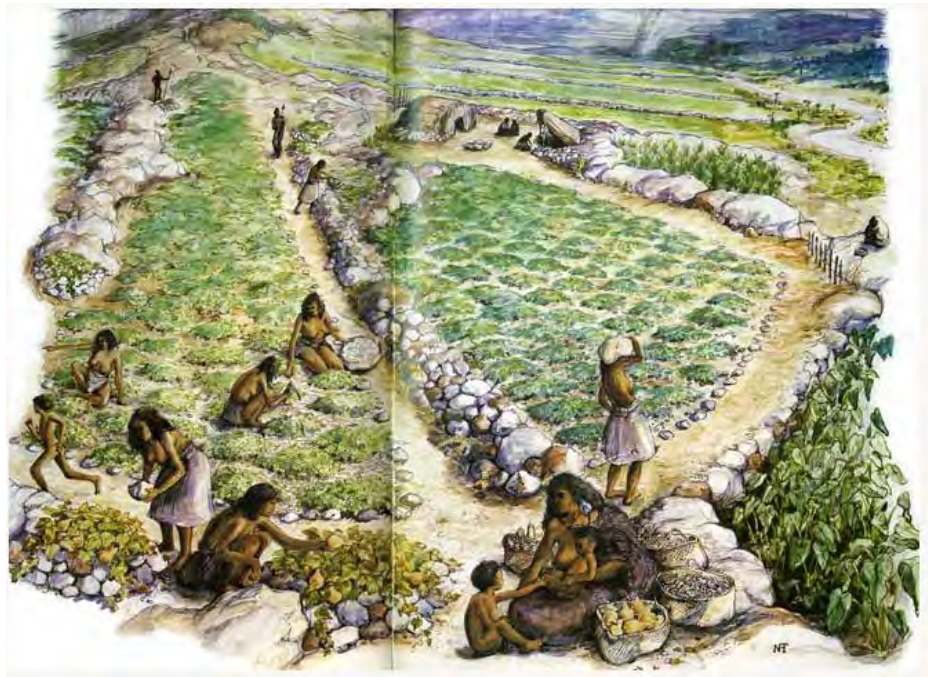


Image 5.3. Mārā kai. Source: <https://teara.govt.nz/files/40246-enz.jpg>



Image 5.4. Kūmara patch in Ruatoria. Source: Westra, Ans, 1936-2023: Photographs. Ref: AW-2044. Alexander Turnbull Library, Wellington, NZ [/records/38423420](https://records/38423420)

The image above shows a kuia digging in a patch of kūmara in Ruatoria. These large kūmara patches were common and intended to provide kai for the hapū.

By the time the Europeans had arrived with their gardening tools and tricks, the rise of Māori agriculture system had already built momentum and Māori easily adapted and applied the introduced western techniques and strategies. By the 1830s, according to Petrie, (2013), “most of the coastal shipping in the North Island was under Māori ownership, and a large proportion of the food sold locally and exported to Australia was grown by Māori” (p. 1). This was no surprise as Māori had been studying the patterns of whenua and seasons for generations prior to European arrival.

Wheat and corn were introduced to Aotearoa in the early 1800s and the versatility and productivity led to an extensive growth movement across the North Island. Māori responded by setting up water operated flour mills across the motu. By the middle of the 18th century there were 27 flour mills set up for Māori owners in Auckland (Petrie, 2013).



Image 5.4. Māori man, woman and children gathering maize, Nelson region. Tyree Studio: Negatives of Nelson and Marlborough districts. Ref: 10x8-0944-G. Alexander Turnbull Library, Wellington, New Zealand. [/records/22740489](#)

The 'Three Sisters' is an Indigenous planting system practiced for generations across Mexico, Canada, and America with the Native Peoples. The system is a specific intercropping practice involving corn, bean and squash. Traditionally, the three plants were planted in mounds rather than following the western concept involving straight neat rows.



Image 5.5. A snapshot of a Native American planting system involving the 'Three Sisters', source: [heritage corn, polyculture and more: seedkeeper rowen white of sierra seeds - A Way To Garden](#)

The 'Three Sisters' planting system is described by Hendry (2014):

“The corn puts up tall sturdy posts to support its cobs and at the same time to provide poles for the beans to climb as they grow. The beans themselves produce nutrients that feed back into the soil and keeps it in good condition for the other two crops which the squash sends out big flat leaves to protect the soil from too much drying sunshine and hold in the moisture at the same time keeping down the growth of unwanted plants/weeds” (p. 39).

The ideology that informs planting corn, beans, and squash together on a mound, promotes the principles of a tuakana-teina relationship, suggesting that each plant helps the other grow. The 'Three Sisters' remind us that every member of the whānau has something to offer. Together these plants are considered by Indigenous People as sustaining of life. Corn, beans, and squash also complement each other nutritionally. Corn provides carbohydrates,

beans are rich in protein, and squash produces both vitamins from the fruit, and oil from the seeds.

Together the 'Three Sisters' form a perfect nutritional diet. According to Pleasant (2016), "intercropping maize, bean, and pumpkin provided a highly productive cropping system that largely satisfied the dietary needs of Haudenosaunee communities" adding that a "diet based on maize, bean, and pumpkin can meet peoples' basic energy and protein requirements" (p. 94). The science is clear that the ho a haere or companion planting system has sustainable productivity and nutritional benefits. However, the Three Sisters structure is also, according to Lewandowski (1987), "a significant cultural and spiritual construct" (p. 76).



Image 5.6. The Three sisters. Sources: Indian Time website [Three Sisters Planting System - Indian Time](#)

Milburn (2004) further urges Indigenous People to return to traditional diets to prevent what he considers 'western diseases. Walters (2009) provides a strong argument concerning research with First Nations communities, diabetes, and pathways to healing using an Indigenous approach and framework. In navigating subjects towards an understanding of pre-colonised lifestyles accompanied with inherent strengths and

resilience, participants were able to resonate with the ideology and begin to reclaim their Indigeneity, regulating themselves back to healthier eating and activity that promoted well-being.

Writers Fiso (2020), Milburn (2004), and Walters (2009) confirm that the staple diet for Indigenous People pre contact with the Europeans was mainly plant based and included kai from the ocean, forest, and land. As they familiarised themselves with the new landscapes, they gained knowledge on how to access, grow, harvest, and store the kai they discovered. According to Fiso (2020), Māori had “names for 50 types of soil, over 100 birds, 60 types of earthworms and more than 300 plants”. Further to this, she estimates that there were “190 edible native plants in Aotearoa” stating that “Māori used all of them – their roots, leaves, berries and even the trunks of the trees provided kai” (p. 27).

Māori drank fresh water, and, for prevention, healing, and general well-being, they drank wai rākau found in the ngahere or māra kai. Tikanga guiding harvesting, preparing, and processing of plants was adhered to based on local kawa. Karakia and being intentional were critical elements to activating the medicinal elements and directing the purpose for the person or other (animal, place, space) it was prepared for. The plants could be used as stimulants commonly used for reaching higher consciousness in wānanga or preparing for battle. Unnatural stimulants were introduced by western visitors (personal conversations Sabre Puna, Jessica McGreggor, and Waka Rye 2023).

Some plants were highly poisonous, and some could cause serious harm if the user exceeded toxicity levels. According to my 2023 Rongoā kaiako, Jessica McGreggor, the kernel of the karaka berries is poisonous and can cause paralysis. The process to make the berries usable involves removing the flesh of the berries and steeping it in water. Following this, cooking for up to 12 hours was required (personal conversations Jessica McGreggor 2023). To make flour according to Royal et al, (2023), “the processed kernels were sundried until the husk came apart. The nut was then pounded into flour, mixed with water, and cooked on the embers” (p. 3). The following image shows a Māori whānau roasting karaka berry at Whakarongotai, Waikanae.



Image 5.7. Roasting Karaka berries in Whakarongotai, Waikana, 1906. Source: Ref: PA1-o-229-48-4. Alexander Turnbull Library, Wellington, New Zealand. [/records/22786504](#)

Karengo is a type of seaweed that Māori would use to compliment kai and also for medicinal purposes. It was easily accessible from the moana and could be used for steaming fish, kōura (crayfish) and other kaimoana (seafood). Like the nori seaweed commonly used with sushi, karengo could be eaten once dried or added to steaming water as a soup (Royal, et al, 2023). Fungi was abundant in the lands of Aotearoa and preferred the cool, damp spots in the ngahere bush. Since settling in Aotearoa, Māori had become familiar with of many varieties of edible fungus including harore (bootlace mushroom), hakeka (wood ear), and pukurau (puffballs). The season for harore was short lived. However, they were plentiful and could be preserved for off seasons (Fiso, 2020; Royal et al, 2023).

Pākehā settlers introduced heavy meats and heavy plants when they arrived in Aotearoa. These included sheep, pigs, goats and chickens, and vegetables such as pumpkin, potato, corn and maize, carrots, and cabbage. It is interesting how some of these foods are linked to chronic diseases that Māori struggle with today (Health Coalition Aotearoa, 2023). The crops that were introduced seemed to enjoy the Aotearoa climate and took to the whenua

well. The other added feature was that they could be harvested several times a year. Given productivity and accessibility throughout the year, traditional foods were set aside, and the focus was shifted to the imported plants. As a cost to this transition, much of the mātauranga associated with harvesting and cultivating them disappeared (Fiso, 2020; Royal et al, 2023).

As Māori suffered many casualties during the Second World War, much of the mātauranga that had been passed through generations was also lost as people began to migrate to urban areas following promises of jobs and houses. As they became displaced and disconnected from their ūkaipō, papa kainga, hau kāinga – the source, and access to traditional kai systems, they turned to western foods. According to Royal et al, (2023), “they began to buy most of their food instead of purchasing basics such as flour and sugar, and hunting and harvesting the rest” (p. 1).

Boil-up consisting of pork, potatoes, and puha or watercress became a crowd favourite in Māori homes. Potatoes were much easier to grow than kūmara which involved an intense process and rituals associated to the sacredness of this kai Rangatira. Pigs were accessible also and renowned for fattening quickly. Doughballs (water dumplings) were normally added to the meal in the final stages of cooking. The rolled balls of flour, salt and water were seen to add substance to the meal. Given these features, the boil up was seen as practical, affordable, and tasty. The Māori boil up is popular today and usually accompanied with paraoa parai (fried bread), takakau (flatbread) or rewena bread. One of the key benefits is that it can feed large whānau groups from a large pot (Royal et al, 2023).

The Green Revolution

Underpinning the western ideas concerning mass food supply are corporate driven entities existing for profit ledgers rather than building a relationship with the land. The introduction of the Green Revolution in the 1970s gained popularity as it was endorsed by neo-capitalist drivers and western science. Genetically modified food and non-based pesticides soon infiltrated supermarkets in Aotearoa, exposing Māori to a faster, more convenient way of accessing food.

The beginnings of the Green Revolution are often attributed to Norman Borlaug, an American scientist interested in agriculture. Often termed 'the father of the Green Revolution', he began in the 1940s conducting research in Mexico and developed new disease resistance high-yield varieties of wheat. By combining Borlaug's wheat varieties with new mechanised agricultural technologies, Mexico was able to produce more wheat than was needed by its own citizens, leading to them becoming an exporter of wheat by the 1960s. Prior to the use of these varieties, the country was importing almost half of its wheat supply. Since fertilisers are largely what made the Green Revolution possible, they forever changed agricultural practices because the high yield varieties developed during this time cannot grow successfully without the help of fertilisers. (Hutchings, 2015)

Irrigation also played a large role in the Green Revolution, and this forever changed the areas where various crops could be grown. For instance, before the Green Revolution, agriculture was severely limited to areas with a significant amount of rainfall, but by using irrigation, water could be stored and sent to drier areas, putting more land into agricultural production thus increasing nationwide crop yields. A recent report claims that alongside saving many lives, the Green Revolution saved the world \$83 trillion (English, 2021). But at what cost was this to te taiao, I guess it depends on who is holding the pen.

Hē o te kotahi, nō te tokomaha.

The faults of one, impact the multitudes. (Quizlet, 2023)



Image 5.8. The Green Revolution. Rongo ā Puku resources

Writers Hutchings (2015), Hutchings et al., (2016), and Vandana (2015) concur that the Green Revolution in the 1970s has much to be accountable in the shift from traditional methods of food supply to convenient methodologies. An approach to address this is through bringing the matter to the attention of Government, and highlighting the devastating impacts these western ideas of food supply are having on our landscapes, bodies, minds, and spirits. The conversational whakawhiti kōrero surrounding the Green Revolution and its disruption to Indigenous systems of planting is discussed here.

One of the biggest costs to maintain the systems and technologies introduced by the Green Revolution is the cost to our water supply. Without water, food production is not possible. Vandana Shiva is an Indian scholar, environmental activist, food sovereignty advocate, ecofeminist and anti-globalisation author. According to Vandana (2015), “the Green Revolution, crops that produce higher nutrition per unit of water used have been called inferior and have been displaced by water-intensive crop” (p. 1). Local

government in Aotearoa have introduced policies that aim to protect 'Te Mana o Te Wai' (to be discussed in the section on kai sustainability).



Image 5.9. Unnamed fertiliser works, Napier. Source: Ref: DW-3297-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/22556498](#)



Image 5.10. A Gisborne Aerial Topdressing Co. Ltd. plane taking off probably from Rongotai.

Source: Ref: 114/203/15-G. Alexander Turnbull Library, Wellington, New Zealand. [/records/22840238](#)

The impact on whenua is another major issue where the soil is being deprived of essential nutrients and pumped with unnatural products that are designed to increase productivity. Vandana adds that the “Green Revolution replaced Indigenous agriculture with monocultures, where dwarf varieties replaced tall ones, chemical fertilisers substituted organic ones, and irrigation displaced rain-fed cropping” (p. 229). Hutchings et al., (2016) discuss a Kaupapa Māori response to this harmful and detrimental practice that degrades our whenua. A food sovereignty and food security initiative, Hua Parakore advocates indigenous knowledge that informs the way we grow and consume food.

The fundamental drive behind this initiative aims to encourage Indigenous peoples to reconnect and reclaim our food supply. Born out of the research of Hutchings (2016), this initiative “validates Māori culture values and ways of knowing” (p. 177). Gaining support across the country from Māori growers, whānau and Māori communities, this initiative has demonstrated a pathway forward towards reclaiming food security for Indigenous People.

Promoting six kaupapa Māori principles including whakapapa (genealogical connections), wairuatanga (spirituality), mana (authority), māramatanga (enlightenment), te ao turoa (the natural world), and mauri (life force), Hua Parakore aims to raise awareness within whānau and learning communities, calling for an urgent response to engage in traditional methodologies and knowledge to sustain food supplies.

Mahinga Kai, Indigenous food gathering.

Mahinga kai (food gathering and production) is about supporting cultural practices that strengthen social constructs through promoting relationships and reciprocity. Engaging in Mahinga kai processes and other traditional methods and approaches to food supplies

foster an ako experience which enables the knowledge, skills, and tools to be passed on through generations.

Mahinga according to Fiso, “is concerned with the resources of the land, forest, foreshore and sea from where we take our food” (2020, p.27). Mead (2016) provides definitions surrounding kai gathering as it appears in the Resource Management Act 1991. These are mātaītai (“food resources from the sea”) and mahinga mātaītai (“area from which these resources are gathered”). Writers Mead (2016), Fiso (2020), Royal (2003), Walker (1996), and Moon (2008) speak to the certain tikanga, or protocols associated with kai gathering that cover tapu, noa, rāhui, mauri. For Māori, the sacredness linked to kai and kai provision stems from the creation story and separation of Ranginui (the sky father) and Papatūānuku (the earth mother).

In the process of creating Te Ao Marama (the world of light), ngā atua and their tamariki were free to wander the space left between their parents establishing their roots and purpose. As these atua provide the hua of the land, air and sea, there is a belief that their produce are our tuakana and with this our whakapapa. Kai is essentially the connection between people, place and ngā atua. According to Fiso (2020), “every time food is gathered, whether from the garden, forest or water, the balance of the mauri of the resources needs to be protected, now and for future generations” (p. 27). The way in which we interact with the process of kai gathering is therefore guided by tikanga passed on from mai rā anō, generations that link Indigenous People to the beginning of time.

When tribes arrived at the shores of Aotearoa, settling into the new homelands, and locating papakāinga was a conscious and strategic decision. Marae are situated near sources of kai and wai. The marae is the landmark or identifier, and streams of water are nearby. When referring to papakāinga, Mead (2016) notes that “the place (meaning the place where the buildings including whare tūpuna, wharekai and urupā stand) then extends outwards to include the territory of the iwi – the rivers, lakes, mountains, islands” (p. 42).

Kevin Andrew Lynch (January 7, 1918 – April 25, 1984) was an American urban planner and author. He is known for his work on the perceptual form of urban environments and was an early proponent of mental mapping. He identifies five key elements of designing a city. These are landmarks, node, edge, path, and district. According to Lynch (1960), “landmarks are a point of reference”. He adds that they are “usually a physical object: building, sign, store or mountain” (p. 48).



Image 5.11. The Elements of a city. Source, <https://planningtank.com/wp-content/uploads/2019/02/Elements-of-a-city-by-Kevin-Lynch.jpg?ezimgfmt=ng:webp/ngcb134>

The image below depicts a traditional marae setting. In vision is the whare tūpuna, whare kai, pātaka, and possibly whare wānanga in rear. In the backdrop is the maunga and wai and kai source.



Image 5.12. Artist, John Philemon impression of a traditional Māori Pa site from around 1845–1908. Source: Ref: G-004. Alexander Turnbull Library, Wellington, New Zealand. [/records/22811829](#)

The benefit of having sources to kai nearby is that it served as an open pantry for the whānau. Men would do most of the diving and women and children would gather the shellfish depending on seasons. Harvesting of kina can occur in October, November, December, January, and February. The best time to harvest them are at low tide on the first, second, and third day after the full moon. Each tribe had its own way of knowing by connecting to, and reading, the patterns of the marama and environment. According to Te Ao Hou (1965), “when the kōwhai is in bloom the kina tongues are yellow and full, but sour; when the Pohutukawa is in bloom, they are red, full and sweet” (p. 3). The image below shows tamariki with kina collected in the Awanui district, Northland.



Image 5.13. Two children, with kina in their hands. Source: Ref: 1/2-010199-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/22782918](#)

Before the introduction of pigs, cows and sheep, the main source of protein came from the ocean and forests. Although Māori had brought the kiore (Polynesian rat) and the kurī (Polynesian dog), the main meat sourced was birds. The flightless Moa was a gift with multiple purposes when the Māori first arrived on waka as it was easy to source and catch. However, once the Moa was off the menu, Māori sought the indigenous birds.

Kurī were used in the hunt for birds such as kiwi, kākāpō, weka, pūkeko, and māunu (moulting grey ducks). For the birds of flight, sophisticated snares, traps, decoys, and lures were designed as traps (Fiso, 2020). The following image shows a snatching perch used for

plump kererū, kaka, and tūī in summer seasons once they had filled up on tawa berries and rātā nectar.



Image 5.14 Māori bird snaring perch. Source: Alexander Turnbull Library, Wellington, New Zealand. [/records/22722052](#)

Reading the patterns of the marama and environment was further applied when hunting birds. As discussed in Matamua (2017), the following whakataukī or kōrero tawhito indicates optimal times to catch the kererū, “ka kitea a Matariki, kua maoka te hinu meaning ‘when Matariki is seen, the fat of the kererū is rendered so the birds can be preserved” (p. 29).



Image 5.15. The nine starts of Matariki

source: [Matariki Te Whetū o te Tau - Dr Rangi Matamua \(native.zone\)](#)

The wooden trough in the image below was called a waka waituhi and was used with snare loops for catching birds such as the kererū. The waka waituhi was placed at the foot of miro trees. Māori were aware that the kereru were fond of the miro berries and also knew that the berries would make them thirsty. The birds would come to the trough to drink. To access the water, they needed to push their heads through the noose and fall victim to the clever trap.



Image 5.16. Waka waituhi, Wooden water trough used for catching birds. Source: Alexander Turnbull Library, Wellington, New Zealand. [/records/23131581](#)

The following image demonstrates the Māori 'pae kākārīki' technique. A hunter kneels on a platform in a tree, using a long spear to kill a wood pigeon. The loose cords shewn, when pulled taut, would imprison the bird's legs.



Image 5.17. Pae kākārīki technique used to spear a wood pigeon [1955]. Source: Ref: B-023-018.

Alexander Turnbull Library, Wellington, NZ. [/records/22349403](#)



Image 5.18. Drying tuna. Source: Ref: 1/2-040047-F. Alexander Turnbull Library, Wellington, New

Zealand. [/records/22688859](#)

Tuna (freshwater eels) were a critical source of protein for Māori. Fiso (2020), highlights that “Māori had more than 100 names to describe their different colours and sizes” (p. 42). There were a few techniques for catching tuna which included weirs, pots, and spears. In some cases, tuna could be caught by hand. The image below shows a traditional trap on the Whanganui River whilst the image above demonstrates a technique used to dry tuna once they have been trapped.

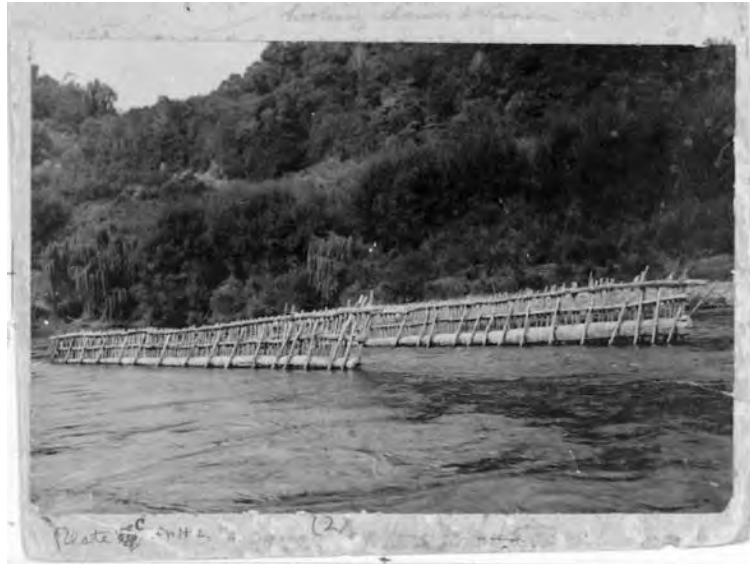


Image 5.19. Traditional Māori eel trap on the Whanganui River. Source: Ref: 1/2-140012-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/22832337](#)

Mahinga kai and modern approaches

The following section shifts from the wholesome and natural way of mahinga kai and discusses some issues with modern ways of sourcing food. One of the key differences with traditional methods and modern food sources is knowing the whakapapa or origin of the kai. When we don't have autonomy or sovereignty over how kai is grown, harvested, or preserved, we are putting our trust into the hands of others. These others are typically in the business of generating profits and prosperity and arguably with little regard to te taiao.

The image below is a resource used in RāP workshops to discuss the state of the meat in supermarkets or suppliers whereby we are removed from exposure to the source of the meat.

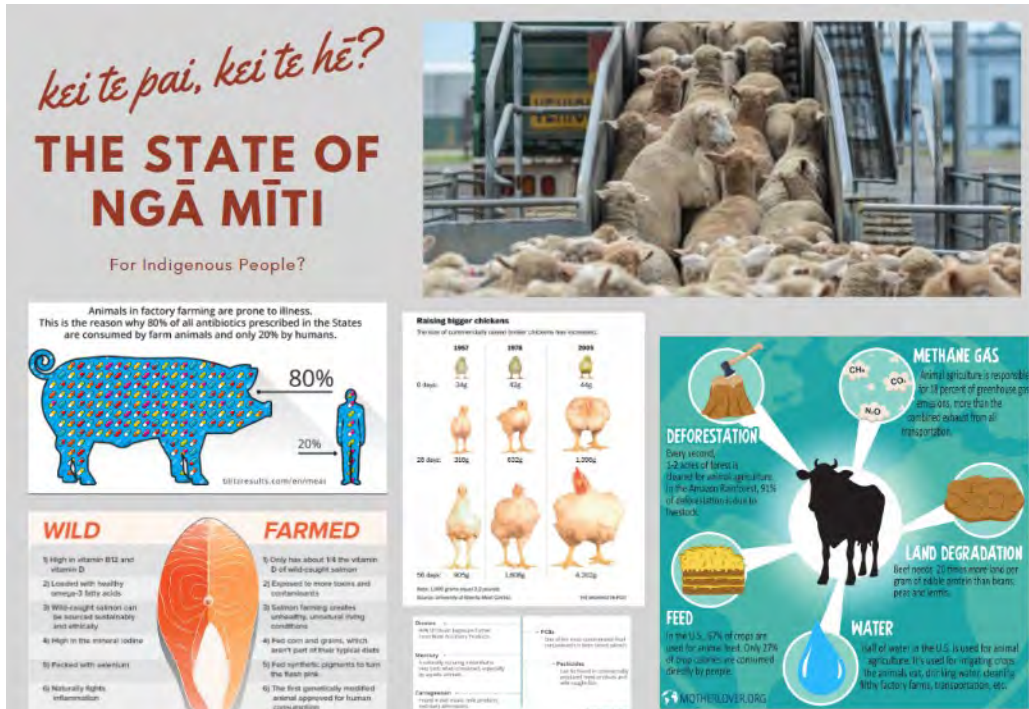


Image 5.20. The state of ngā mīti. Source: Rongo ā Puku resources.

Although there are many claims by businesses justifying and celebrating their produces to be ‘organic’, ‘healthy’, ‘green’, and ‘good for the planet’, unless you do your own rangahau then you are relying on someone else’s truth. Granted there are some credible sources of information, however, it is important to understand the difference between science and marketing, and the integrity of the research. Indicators that will assist in determining the reliability relate to who funded the research, how many subjects/samples were involved, and was there a multiply layered or meta-analysis process involved.

‘Chicken Check is a website providing information about how chicken is raised and processed in the United States. The site is funded by the National Chicken Council who represents member companies including chicken producer/processors, poultry distributors, and allied supplier firms. The image below provides a snapshot of how the average chicken which weighed in at 905g from the 1957s has evolved to a massive 4,202g in 2005, proudly

celebrating how tampering with chickens using a cross breeding, genetic cocktail science lab technique is more sustainable for the planet.

Thanks to the new breed (the broiler chicken), according to Chicken Check In (2023) “the environmental footprint of chicken production has decreased by 50% since 1965” (p. 1). Further to this, the new breed of chicken uses less feed than it did in 60 years ago.

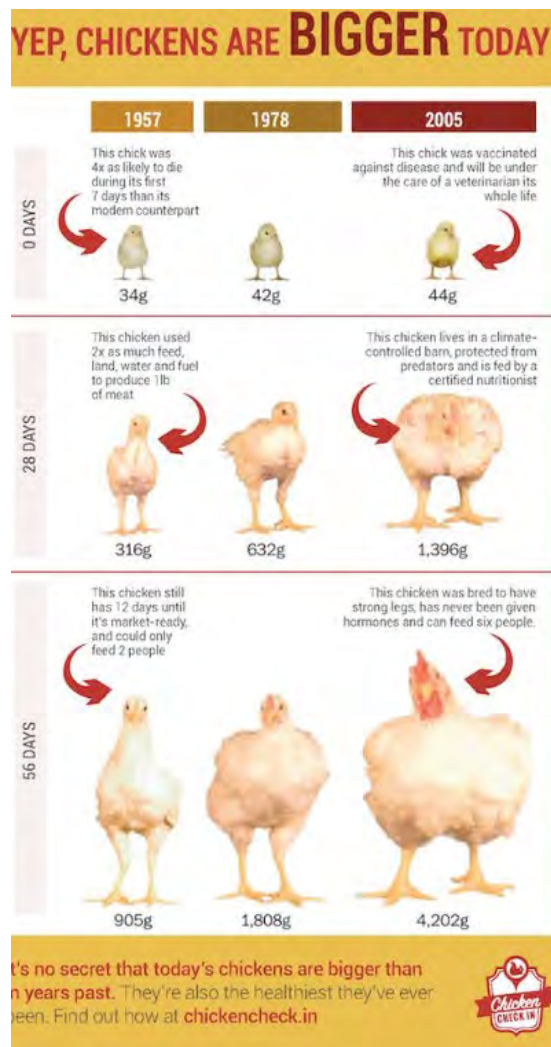


Image 5. 21. The state of chicken. Chicken Check In - Chicken Check In

So, the question worthy of asking is, “is this good for humans?”. I guess like anything, it depends on who is telling the story.

Chicken is a popular choice of protein in Aotearoa and a country favourite. Chicken Farming in NZ (2023) states that “between us, we eat around 37.5kg of chicken every year – that’s around 20 chickens per person, per year” (p. 1). The varieties of birds produced in Aotearoa originate from the UK and US – the Ross and Cobb. Consumers find comfort in being advised that a strict code of welfare exists with high standards and expectations on the stockmanship and care of chicken including research and science to ensure birds are healthy and free from disease. The following image shows a free-range chicken farm in Aotearoa.



Image 5.22. Chicken farming in NZ. Source: [NZ Chicken | Poultry Industry Association New Zealand \(pianz.org.nz\)](https://pianz.org.nz)

Despite the reassurance of the chicken industry, researchers and scientists are still finding data that would tell another story. Condrón (2005) found that the fat in chicken today is three times higher and that protein has dropped significantly. They highlight that “in 1970 there was an average 8.6grams of fat per 100 grams of meat. Today there is an average of 22.8grams. Protein levels in 1970 were 24.3grams per 100 grams. Today it is a mere 16.5grams. Buying organic gives only slight protection from the extra fat” (p. 1). The reason behind the changes in the nutritional value can be attributed to the unnatural diets and current exercise regime which restricts them to caged areas and barns.

The research was conducted by a team led by Professor Michael Crawford and conducted within the Institute of Brain Chemistry and Human Nutrition at London Metropolitan University. The data to inform the research was extracted from a long-ranging study into mothers' diets, which investigated the content of chicken meat and made a comparison from 1970 to when the research was done.

In 2016, concern swept the nation when *Campylobacter*, a superbug had been found in chicken.

Consumer (2016) reports that the bug, a leading cause of food poisoning, was “an antibiotic-resistant strain of campylobacter” and that it was “also found in humans with cases in Auckland, Manawatu and Wellington” (p. 1). Antibiotics are available to treat the condition, however it did raise concerns around antibiotic resistance, and whether campylobacter infection continues to be a major health threat. It was further stated that “in 2014, 6776 cases of campylobacter infection were reported in New Zealand. Actual rates are estimated to be significantly higher as not every case is reported and campylobacter in chicken is responsible for about half of all cases” (p. 1). Although regulations and policies exist to control the use of antibiotics on plants and animals, the topic continues to raise concerns on how much is really used in food production. The following image provides a snapshot of how misuse can be spread.

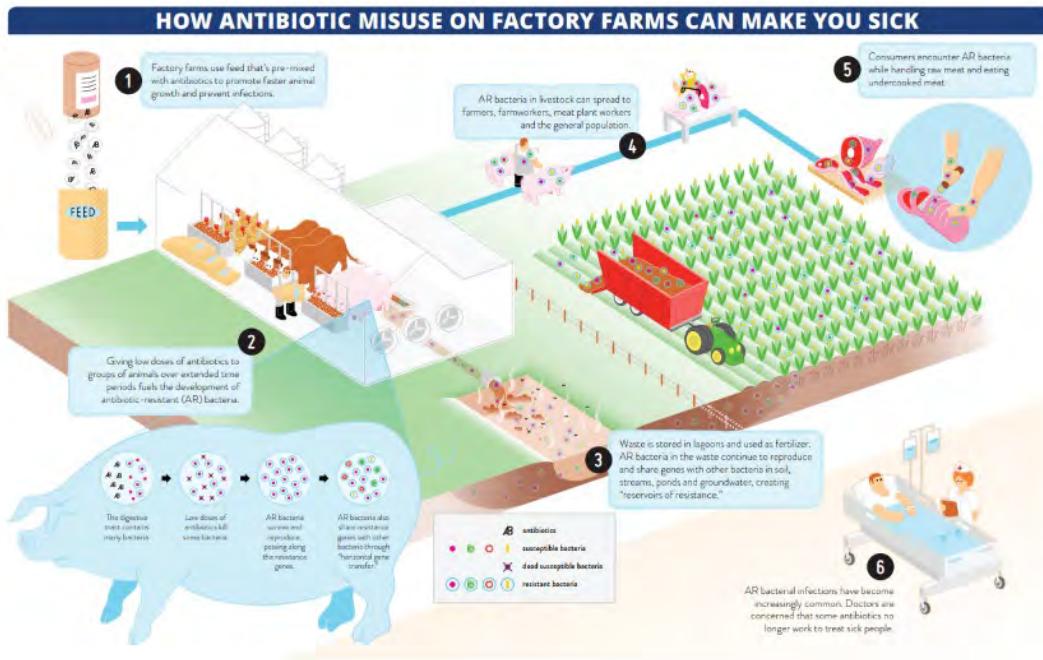


Image 5.23. Antibiotic use in animals in the US. [RPT_1502_NewAntibiosUpdate-FINAL.pdf](https://www.foodandwaterwatch.org)
[foodandwaterwatch.org](https://www.foodandwaterwatch.org)

The Ministry for Primary Industries in Aotearoa reported in October 2023 that the sales of antibiotics used in animals and plants were down by nearly a quarter. On release of the 2022 Antibiotic Agricultural Compound Sales Analysis Report, New Zealand Food Safety deputy director-general Vincent Arbuckle stated in (MPI, 2023), "the World Health Organization has identified antimicrobial resistance (AMR) as one of the top 10 global health threats facing humanity, so seeing a 23% drop in the sale of antibiotics for plants and animals is good news" (p. 1).

Although this reduction of antibiotic use is promising, veterinary antibiotic sales by species/sector are still a concern for the health conscious. And despite the reduction in sales of antibiotics, 41,033kg are still being administered with 57% sold for use on dairy cattle, 16% for use on pigs, 9% for use on horses, 4% for use on beef cattle, 4% for use on meat poultry, 4% for use on sheep, 4% for use on companion and non-production animals, 1% for use in layer poultry, and <1% for use on deer. (MPI, 2023) When animals are confined to restricted spaces, there is always going to be an elevated risk of spreading bugs and disease. The authentic costs of this to consumers' needs to be clearly articulated and socialised.

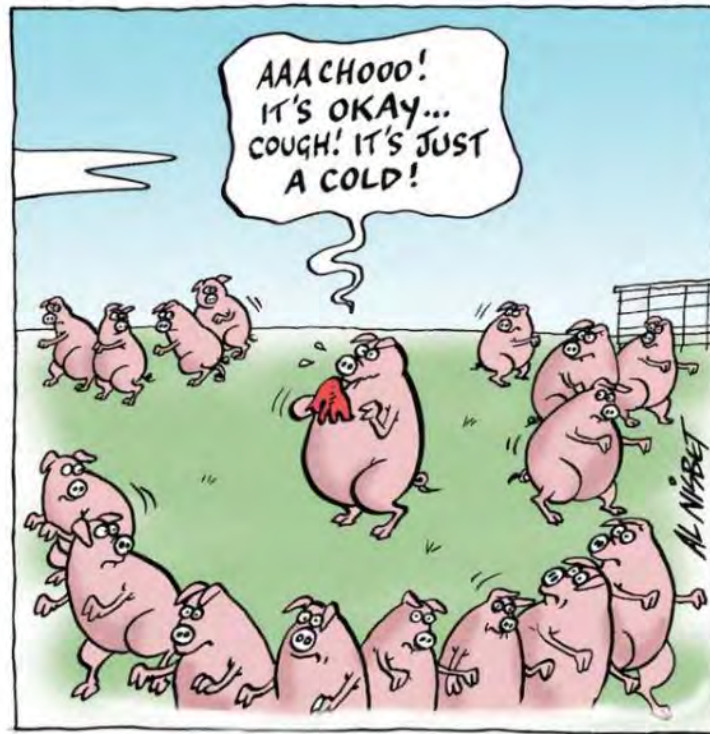


Image 5.24. "Aaachooo! It's okay... Cough! It's just a cold!" 2 May 2009. Source: . Alexander Turnbull Library, Wellington, New Zealand. [/records/22864528](#)



Image 5.25. New Zealand Beef. Source: [New Zealand beef production to rise this year \(agriland.ie\)](#)

Traditional store houses

The following image provides examples of three different types of traditional pātaka or storehouses. Before there were fridges and freezers, this was the typical way of storing kai. Pre-European, Māori quickly learnt the kai seasons and cycles and created ways of preserving and storing kai in times when food availability was limited. Pātaka were designed to keep kai elevated from the ground and air well circulated. Kūmara were normally stored in a separate storehouse called a rua.

Kūmara are harvested in late autumn and traditionally involved ceremony, karakia, offerings to ngā atua, and a careful process for storage so they would be available all year round. Once the tapu was lifted by Tohunga, the process for harvesting, preparing, and preserving began. Once kūmara were sorted, the ones to be stored were placed in tīraha (flax baskets) and stored in rua – an underground pit. The image below provides an example of a rua kūmara. The design of the rua was to keep the kūmara safe and dry. Kūmara were also stored in pātaka like the ones above, depending on when they were to be consumed (Fiso, 2020).



Image 5.26. Pātaka (Storehouses for food) Source: Ref: PUBL-0014-30. Alexander Turnbull Library, Wellington, New Zealand. [/records/23053951](#)



Image 5.27. Rua Kūmara storehouse on the East Coast. Source: Ref: PAColl-0477-15. Alexander Turnbull Library, Wellington, New Zealand. [/records/22648283](#)

Kai sustainability

Kai sustainability is concerned with how we behave around kai. It examines tapu, rāhui, noa and mana and how these principles play a part in upholding Indigenous practices around kai sustainability. It further considers climate change and how human behaviours impact the condition of te taiao. The evolution of kai is revealed along with how Indigenous People worked with natural eco systems and seasons to manage kai sustainability.

He kau ra, he kau ra

U - U

He Kau Kawana koe

Kai miti mai te raurekau

A he kau ra, he kau ra!

U – U – U

You're an animal, cattle beast

Moo! Moo!

You are a munching bullock, O Governor,

Munching up the lowland forest.

A beast, ah, a beast!

Moo-oo-oo!

This short chant (haka ngeri) composed around the 1860s was chanted in support of the Kīngitanga movement as Māori leaders battled against British colonial government to protect the progressive exploitation of Māori land. Becoming increasingly frustrated by the illegal uplifting of lands by Pākehā, the haka was an attempt to 'call out' the greed of the Pākehā and their unrelenting thirst for land. Not only did the Pākehā steal the tribal lands they also destroyed lush, life sustaining forests that protected the soil and water, and provided fuel, building materials, clothing, and food (NZ Folk Song, 2020).

For decades, Māori have advocated and protested to government to intervene and protect land from the threat of Pākehā who have continued to impose their ambitious agendas at any cost to our natural resources. Prior to colonisation, Indigenous people had their own systems, processes, and protocols in place to preserve, maintain, protect, and sustain the natural resources they believed they were the kaitiaki (guardians) of. Restrictions and limits on activities were implemented and closely managed where there was a potential threat to the sustainability of the land, environment and natural habitats within the ocean, forests, and rivers.

These rāhui and tikanga were applied and adhered to by all members of the tribe, failure to do so resulted in physical and spiritual consequences. To some extent these restrictions remain, particularly for Māori who continue to strive towards protecting and sustaining land, waterways, and forests. Penehira (2011) states that “our state of well-being, or otherwise, impacts on our ability to operate in healthy ways with and within the environment, and to conduct ourselves in law/loreful ways, by knowing and practicing tikanga Māori” (p. 40).

Kaitiakitanga

Alongside these Māori efforts, Government intervention is imperative, policies that align to Māori philosophies of kaitiakitanga need to be applied urgently as the environment continues to be degraded and contaminated at the hands of man. Te Aorere Pewhairangi (Ngāti Porou) is a te reo Māori champion, Māori sports commentator and broadcaster and a Tik Tok influencer. Earlier this year, in response to Cyclone Gabrielle, he raised around \$90 000 through his initiative, the ‘Waewae The 35’ hīkoi. The pūtea went directly to whānau on the East Coast affected by the devastating impact of the floods. Recently he has been involved with Professor Rangi Matamua, raising awareness around Matariki, Kaitiakitanga and te taiao. He uses social media to push some of the key messages around kai sustainability including the following:

Give a man fish and he will feed for the day

Teach him how to fish and he will feed his whānau for a lifetime

Teach a man the principles of Kaitiakitanga and his people will eat forever. ([Teao_p \(@teao.p\) | TikTok](#))



Image 5.28. Te Aorere Pewhairangi and Rangi Matamua using social media to raise awareness around kai sovereignty, Matariki and kaitiakitanga. Source: [Teao_p \(@teao.p\) | TikTok](#)

According to Harmsworth et al., (2016), kaitiakitanga has strengthened the rights of inclusion of Indigenous peoples in decision-making processes and natural resource management across Aotearoa. Māori have been studying the whenua, patterns and tohu of nature and space for generations before the Pākehā arrived at Aotearoa. The mātauranga held by tangata whenua is critical for informing a sustainable future for all New Zealanders. To teach these principles, Māori need to be at the table where decision are being made concerning te taiao.

In recent years, the Government has made some efforts to influence the management of freshwater resources. Prompted by the Resource Management Act 1991, the National

Policy Statement for Freshwater Management (NPS-FM) was implemented in 2014 which, according to Harmsworth et al., (2016), “provides direction to local government on matters of national significance in reference to the RMA. Setting enforceable quality and quantity limits is a key purpose, so that regional councils and communities can more consistently and transparently plan for freshwater objectives” (p. 2).

Under the NPS-FM, attention is drawn to the role in which the principles of kaitiakitanga can be applied to protecting freshwater in Aotearoa. Underpinned by Māori values, Te Mana O Te Wai was also introduced in 2014 as an overarching framework for NPS-FM. Te Mana o Te Wai makes clear references to the quality and vitality of water used for many purposes within Te Ao Māori as well as for all people who reside in Aotearoa. As stated, by Harmsworth et al., (2016), “fresh water is a natural resource the health of which is integral to the social, cultural, economic, and environmental well-being of communities” (p. 2).

Toi Matarua, an Indigenous research company based in Ngāti Kahungunu have facilitated workshops with rangatahi to discuss Te Mana o te Wai. According to lead researcher, Charlizza Matehe, “rangatahi who have been raised on the shores of Mahia see the beaches beyond recreational purposes. It is their hau kāinga, their source of life and sustenance. They feel it in their ngākau when the ocean is exploited and associate this with someone coming into their home and disrespecting space and place” (Charlizza Matehe, personal conversation, 2023).

According to Styres (2017), “Indigenous people exist in deeply intimate and sacred relationships with land – it is the relationship that comes before all else. Our first environment was water – we are born of water – water is the lifeblood of mother earth” (p. 59). There is an intrinsic relationship to te wai. Youth worker, Soraya Kamau from Toi Matarua concurs, “our tamariki learn how to swim before they learn how to walk, it is our deep inherent relationship with the moana that keeps us safe in the living waters of Tangaroa. It has been the source of well-being for our ancestors for generations” (Soraya Brady-Kamau, personal conversation, 2023).

E kore tātau e mōhio ki te waitohu nui o te wai kia mimiti rawa te puna.

We never know the worth of water until the well runs dry.

Na, Te Wharehuia Milroy (Elder, 2020)

For generations our ancestors successfully preserved, maintained, protected, and sustained the natural environment through an intrinsic relationship they upheld and actively participated in using lore, mana, tapu, noa and tikanga (discussed in earlier chapters).

With ongoing impacts of colonisation and turning our attention to the more convenient ways of living we have become out of sync with our circadian rhythms. According to Durie (2004), this disconnect is causing unwellness and robbing us of living a full and holistic life. Dr Anne Marie Helmenstine, Ph.D. is an expert in biomedical sciences and is a science writer, educator, and consultant. According to Helmenstine (2020) “the amount of water in the human heart and brain is 73%, the lungs are 83%, muscles and kidneys are 79%, the skin is 64%, and the bones are around 31%” (p. 1).

Helmenstine (2020) further offers the following facts that concur with Te Mana o te Wai: Water is the primary building block of cells. It acts as an insulator, regulating internal body temperature. Water is needed to metabolise proteins and carbohydrates used as food and it is the primary component of saliva, used to digest carbohydrates and aid in swallowing food. The water compound lubricates joints as well as insulates the brain, spinal cord, organs, and foetus. Water acts as a shock absorber and is used to flush waste and toxins from the body via urine. Water is the principal solvent in the body, and it dissolves minerals, soluble vitamins, and certain nutrients. Water carries oxygen and nutrients to cells, the amount of water varies, depending on the organ. Finally, water is in blood plasma (20% of the body's total).

These facts affirm the urgency to assume kaitiakitanga rights over te wai. Poipoia (2020) concurs, stating that, “freshwater within New Zealand is extremely degraded and urgent action is required to address and reverse this damage” (p. 9). The Government has released staggering statistics regarding freshwater within Aotearoa that highlight how 90% of wetlands have been lost to agricultural or urban development.

Estuaries throughout Aotearoa are being seriously damaged by sediment smothering the seabed and shellfish. Increasing sediment is also resulting in the expansion of mangroves. Over 90% of river length in urban areas about 70% in pastoral farming areas have nitrogen levels that may affect the growth of some aquatic species (Poipoia, 2020).

Whyte (2020) informs us of the recent action the Government is making to clean up Aotearoa waterways by creating a 700-million-dollar fund accessible for this purpose. According to Whyte (2020), the fund will “be used to for installing mini wetlands, removing sediment, riparian planting, helping farmers with stock exclusion and developing farm plans and stabilising riverbanks” (p. 1).

This action is well overdue and urgent action is now required by the Government as according to Whyte (2020), “many of our rivers, lakes and wetlands are under serious threat after years of decline and political inaction. If we don’t start cleaning up our water now, they will get worse, become more expensive to fix and we risk serious damage to our international clean green reputation” (p. 1).

A major concern impacting significantly on waterways is that of stock sediment which is entering waterways, streams, and rivers causing contamination issues and preventing locals from safely accessing natural supplies of water for drinking, swimming, and fishing.

From a global warming crisis analysis, Ornish (2012) explains that that “livestock consumption accounts for more global warming than all forms of transport combined. It is responsible for 10% of the total world greenhouse submission compared to the entire global transportation system that is responsible for 18%” (2:50). Psihoyos (2018) suggests that “agriculture is not only the biggest culprit threatening the future for humanity on earth, but also the biggest and most important silver bullet to a solution” (1:11:39). Compared to humans, livestock are producing almost 50 times more waste per year and contaminating rivers, lakes, and streams.

The Ministry for the Environment (2020) explains that “greenhouse gases in the Earth’s atmosphere trap warmth from the sun and make life as we know it possible” (p. 20). In

Aotearoa, the agriculture and energy sectors are the main perpetrators to this problem, contributing 48% and 41 % respectively to gross emissions.

It is questionable whether the Government is taking these alarming statistics concerning nitrogen pollution seriously. The Ministry for the Environment (2020) further state that “freshwater campaigners are frustrated the Government has delayed a crucial decision on nitrogen pollution for a further 12 months until after the election” (p. 1).

Adams, Carpenter, Housty, Neasloss, Paquet, Service, Walkus and Darimont, (2014) discuss an approach to addressing freshwater issues that is informed by a knowledge system and world view where the concepts of people and land are intrinsically interwoven. Western science falls short when this methodology and thinking is not applied as it does not account for the “cultural influence that permeates the ecosystems in which research occurs” (p. 1).

Following studies and research conducted with the Indigenous people of Canada, Adams et al., (2014) promotes “that community engagement, practiced with a sense of humility, respect for place and people, as well as an awareness of the complexities of the issues at hand, could present resolutions for current social-ecological challenges of conservation and resource management for Indigenous communities and beyond” (p. 1).

It is suggested that an approach to action would require government policy to be informed by western science and the voices of the people. Referring to the Government’s response to the recent COVID-19 pandemic, the country has proven that swift results can be achieved when policy is informed by relevant and authentic data to protect the well-being of all New Zealanders. The Ministry for the Environment (2020) urges that “we need exactly the same approach on rivers.”

Further to Government intervention, everyone can play their part in protecting our environment from continued disturbances causing pollution, contamination, and deprivation of lands. It is my opinion that people need to be more mindful of how they are personally contributing to the impactful factors that are detrimental to our environment and future well-being. Advocating for less meat consumption in daily diets, Ornish (2012)

highlights that “Intervention can make a powerful difference. What is personally sustainable is globally sustainable. What’s good for you is good for the planet” (1:38).

Greggor et al., (2017) argues that humans eat mindlessly with no regard for the future, noting that people need to urgently pay attention to what and how they are eating if they want to live healthy and productive lives. In suggesting that “we eat as though the future doesn’t matter and there is actually data to back that up” (28:10), Gregor et al., (2017) warns that “if we continue to eat as though we are having our last meal, eventually we will be” (28:35).

The Ministry for the Environment (2020) website outlines key actions individuals can implement to contribute towards a more sustainable future. These include being aware of electricity usage, consuming less meat, shopping at your local fruit and vegetable market. Reduce/reuse /recycle, plant trees, know your area and be prepared. Replace lawns with native plants, be aware of your emissions and drive and fly less.

Being mindful and adjusting our behaviours to reduce the impacts these activities can have on our environment can make a significant difference towards a more sustainable future. The way in which every day activities can influence climate change was recently highlighted as countries shutdown in response to COVID-19. In reporting against the positive impacts of the global lockdown, Ismail (2020) reported that “nitrogen dioxide pollution levels have plummeted, particularly in China and Italy. Lockdowns have significantly reduced emissions and air pollution levels the world over. For the first time in 30 years, the Himalayas are visible from India” (p. 1).

This significant recovery has reminded us during this period of rāhui (restriction) how nature can thrive in the absence of human interference. As the world paused from economic, social, and physical activities, the environment spoke to us through a fresh lens as our eyes were enlightened by the blue skies and glistening landscapes, and as our ears were awakened by the sounds of the birds and insects as they happily engaged with the natural environments.

Kai Security

Kai security speaks to how we react to social conditions that impact kai provisions. Affordability is a major contributor to poor kai choices being made. Patterns that have evolved since urbanisation, war, and food scarcity have been normalised within whānau and are now difficult to untangle. Childhood traumas born from food scarcity in the 1950s–1980s linger in the adult minds of those impacted. Children are now suffering with health conditions due to their parents suffering with kai shortages. Parents are overcompensating by giving their children whatever they want when they want. Unfortunately, this type of response has created cycles of ongoing unwellness creating a generation addicted to foods high in sugar, fat, heavy meats, and wheat-based kai.

Social constructs

Several writers including Durie (2003, 2004), Penehira (2011,) and Milburn (2004) have drawn a link between colonisation and poor health. Durie (2004) argues that loss of sovereignty along with dispossession (of lands, waterways, customary laws) created a climate of material and spiritual oppression with increased susceptibility to disease and injury. Abrupt shifts towards urbanisation forced whānau into a space that was different and unfamiliar to the norm. Many were unable to source kai from lands, sea, or forest due to work commitments, resources, or locations.

Since migrating to the cities, many individuals have been left in isolation to fend for themselves in the new environments they were forced into. In the absence of tribal leadership, direction, and communal resources to maintain and sustain the collective well-being of the Indigenous People, many succumbed to lifestyle choices that have resulted in poor health and welfare.

Writers Milburn (2004), Greggor, et al., (2017), Vyas (2019), and Ornish et al., (2019) point to evidence showing that western diets are predominately high in fats, gluten, sugar, meat, and dairy. The evidence highlights those diets, along with tobacco and alcohol indulgence,

are the main perpetrators to the many chronic diseases Indigenous People battle with today.

According to Devon Abbott Mihesuah, an award winning Choctaw historian and writer, poor health is a result of lifestyle choice. She states that heart disease, obesity, diabetes, cancer, high blood pressure, and alcoholism rage across tribal Nations. Mihesuah (2003) further states that members of her affiliated tribe, the Choctaw Nation Mihesuah, “have been hit hard by a variety of ailments directly linked to poor diet and lack of activity” (p. 1).

Durie, 2004, Walker (1996), Mead (2016), and Royal (2003) highlight how traditionally, Indigenous lifestyles were a collective responsibility. Tribes were organised and controlled by tikanga or a code for practical living. Activities, situations, or objects were categorised into a matrix of low, medium, and high risk. Risk mitigation and management was applied using the parameters of tapu and noa. Access to kai was also managed by this system and supported by the principle of kaitiakitanga. The knowing and familiarity provided reassurance and security whilst contributing significantly to the healthy functioning of individuals and collectives.

In many ways, lifestyles have shifted from the ways of our ancestors. A new approach of self-sustaining and self-responsibilities have emerged from modern society which is left for the individual to discern the level of risk. Major health concerns have emerged from this change of living and being because of poor choices. Durie (2004) tells us these ways of living “reflect an imbalance and can be found in patterns of nutritional intake, the use of alcohol and drugs, unsafe roadway practices, tobacco use” (p. 12). In the absence of collective leadership, direction and controls that existed with social constructs, individuals have fallen victim to life threatening and restricting conditions and poor quality of life.

Milburn (2004), Greggor et al., (2017), Vyas (2019), and Ornish et al., (2019) further illustrate the damaging impacts that fast foods and high sugary based foods have on health. Experts advocate the importance of increasing fruit and vegetable consumption to protect against disease. This is great advice for consumers who have the resources and means to engage in this ideology. However, according to the Ministry of Health (2020), “surveys of

food security have shown that many low-income New Zealanders may be unable to afford nutritious food choices” (p. 1).

For many Indigenous People however, the capacity and capability to make these choices is heavily influenced by other conditions such as poverty, education, employment, and housing. The Ministry of Health (2020) concurs that “people with more of these challenges in their lives are at greater risk of poor health” (p. 70). What this affirms is that a national intervention is urgently required to enable fair and equal access to resources and conditions for all.

In 2017, the leading causes of death in Aotearoa were directly linked to cardiovascular diseases, claiming the lives of around 11,000 people. Ischemic heart disease contributed to an estimated 6,000 deaths and stroke led to 2,500 estimated deaths. Further to these alarming statistics, the New Zealand Cardiac Network identifies Māori, Pacific, and Southeast Asian New Zealanders as having the worse cardiovascular disease outcomes than other New Zealanders (Ministry of Health, 2020).

There is sufficient evidence to suggest that approaches to maintaining good health and reducing the risks of preventable diseases is to make good, informed choices such as not smoking, maintaining a healthy weight, regular exercise, and eating a good balanced diet. Gregor et al., (2017) state that “adhering to just 4 simple healthy lifestyle factors can have a strong impact on the prevention of chronic disease” (p. 100). Vyas (2019) adds that “eating health promoting foods along with physical activity and stress management can help lead to overall well-being” (p. 129). Once again Indigenous People need access to resources, tools, and education to enable this shift.

Durie (2003) supports that “generally, where there is greater choice in housing, education, leisure activity, and employment, the chances of well-being and healthy lifestyles are higher” (p. 65). People become more susceptible to ill health when their choices are limited because of their placement and status in society.

Leslie McKeague is an Indigenous Native Hawaiian daughter and American citizen based in Oahu, Hawaii. An ex-military officer, local Youth Pastor and Social Worker, she is no stranger to being around unwellness and imbalance of hau. I spoke to Leslie about the traditional Hawaiian understandings relating to nutrition. It is her perception that the economic structure plays a heavy influence on the choices that people are provided (personal conversation, 2020).

In a western society, a lower socio-economic community is more exposed to fast foods and high sugary based foods making them easily accessible and affordable. For many of her Native brothers and sisters, the choices are stimulated by an environment saturated with promotions of 'cheap and nasty' western foods making it difficult for them to resist.

This suggests that interventions that focus on improving nutrition, active living, and maintaining a healthy weight should be implemented in schools to ensure equality so that those experiencing social disparities are not disadvantaged. Policies that fail to take account of the sociocultural context within which individuals and families make lifestyle choices are unlikely to succeed (Ministry of Health, 2020).

Scarcity of kai

There are multiple factors that contribute to kai scarcity. For many it is a real thing and for others it is an unconscious fear triggered by the residue of childhood trauma. The uncertainty of the pantry being empty can trigger emotions that can lead to poor kai choices. Hana King is an Ako Kaiwhakarite for Te Wānanga o Aotearoa. Although she has the means and resources to keep kai in the kāinga, she still has experiences and anxieties when it comes to providing kai for her whānau. As a child she recalls times when she didn't know when her next meal would be.

As a parent she admits that she has enabled poor habits for her whānau. She states, "we have always given our tamariki whatever kai they wanted as we didn't have those options" going on to say, "our children are suffering because of our suffering' (personal conversation, 2023).

Growing up in the in the 1940s on a small farm in Kuratau, Ruatoria, access to kai was never an issue for my Mum and her whānau. Even though it was a demanding life from sunrise to sunset, Mum had fond memories surrounding kai and how it brought her whānau together. The second youngest of 16 siblings, by the age of five years old Mum knew everything there was to know about running a farm, from milking the cows, tending to the māra and butchering. When she was seven years old her father handed her a shotgun and pointed to a sheep, “shoot it” he told her. Barely able to hold the gun, mum recalls taking a breath and pulling the trigger. When I asked her, did you get it, she replied “of course I did, my father wouldn’t have been happy if I wasted a bullet” (personal conversation, 2023).



Image 5.29. Driving sheep through the creek before shearing; Ruatoria. Source: Ref: AWM-0587-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/36389599](#)

On the farm growing up, there was abundance of kai. Excess kai was shared or bartered with the neighbouring whānau in Kuratau, Ruatoria. The moana was plentiful and an open

pantry. Mum can remember from a very early age collecting kai from the ocean alongside her mother and siblings, it was a whānau thing. It was a good life Mum recalls.

At her 80th birthday in 2022, she sat and reminisced with her last surviving siblings Uncle West and Aunty Lily. There was much debate between the sisters on who was the naughty one, my uncle cautious not to take sides. What they all agreed on was how blessed they were to always have a full puku. They could still remember the homely feeling as they returned from kura to the smell of kai that their pāpā had prepared. When there were no kai aromas pressing through the whare, they knew someone was in trouble and it was typically for wagging school.



Image 5.30. Tōku Pāpā, tōku Māmā, Uncle West and Aunty Lily. Photo credit: Andrew Strickland.

The above photo was taken the day of Mum's 80th birthday celebration. Sadly, my Aunty Lily passed away three days after this photo was taken. It had been over 30 years since the two sisters had seen each other. My beautiful Aunty had said to me she wasn't going to miss her baby sister's big day. The photo above captured the final encounter Mum had with Aunty Lily. Although they were both in their 80s it felt as if I was witnessing two young girls. As they shared stories, chatting, giggling, and teasing, I felt as if I was in those moments in their stories. It was a precious hau experience I will never forget.



Image 5.31. Mum and Aunty sharing precious memories. Photo credit, Sally Rye.



Image 5.32. An abundance of kaimoana taken around the mid-1900s. Northland Region. Source: Ref: 1/1-006322-G. Alexander Turnbull Library, Wellington, New Zealand. [/records/23039658](#)



Image 5.33. Shellfish was collected by women and children. Toheroa was plentiful and easily accessible. Source: Ref: 1/1-026519-G. Alexander Turnbull Library, Wellington, NZ. [/records/23174202](#)

When Mum migrated to Hawke's Bay, she adapted to the new environment and learnt quickly where the spots were for mahinga kai. We were fortunate as a whānau that Mum had held the traditional mātauranga and ways of how-to source, access, grow and harvest kai. Further to this, she already had the mindset seeded around kai sovereignty and sustainability. When my parents settled in Maraenui, Napier they immediately started to build māra kai and planted fruit trees across our property. My Dad, along with working two jobs put his head in books to learn about plants, the soil, the environment, and seasons.



Image 5.34. Taking a break from the māra, me and my dad. Photo credit: Waka Rye.

My Dad is my whenua hero. He could grow anything from seeds using natural resources around him and making homemade concoctions to maximise the soil potential. The fruit trees he grew from seeds are still proudly standing in the backyard of our homestead. My parents made friends with our neighbour Mrs Atkins an elderly Pākehā lady who lived on her own. Mrs Atkins had chickens and a walnut tree, and I remember her coming over bringing fresh eggs and bags of walnuts. I think she welcomed the company and having purpose feeding the hungry children next door. We always had kai and plenty to share with those around us. This was the sense of my community back in the 1970s.

Our whānau were one of the fortunate ones. Others were not so. Prior to Pukemokimoki marae being established in the heart of Maraenui, our whare was like the local marae. Before social services, the local rangatahi would come to stay at our kāinga where they would find kai and shelter. It was tough back then for many families. They had been promised jobs and homes during the process of urbanisation and migration into the cities away from their ūkaipo.

For many families, supermarkets become the main source and supplier of kai. Not all whānau had the resources, tools, and knowledge to set up māra kai and the whānau mātauranga was not active or left dominant in that generation. The unfulfilled promises of

homes meant that home ownership was an issue, and the transient nature of the state homes meant an unstable or insecure placement. People were working long hours and in some cases two jobs leaving them time poor. It was a struggle to put kai on the table and there was less time for the time-consuming tasks of traditional ways of mahinga kai (Fiso 2020).



Image 5.35. Growing from clippings and sharing pots with whānau. Photo credit: Sally Rye.

Recently shifts in thinking around kai sovereignty has emerged from the rising costs of kai, global pandemics, and natural disasters. Initiatives such as Hua Parakore, Whenua Warriors, Moko Boys and Aunties Garden in Waipatu, Hastings are inspiring whānau to set up sustainable māra. Breaking through barriers such as limited land, whānau are becoming creative and innovative using containers, pots and raised gardens to grow kai.



Image 5.36. Toi Matarua rangatahi learning how to plant kūmara tipu from Aunty Hani, Aunties Garden, Waipatu Hastings. Photo credit: Sally Rye.

Toi Matarua is running wānanga throughout the tribal areas of Ngāti Kahungunu and Rongomaiwahine aimed at reconnecting rangatahi with traditional methods of planting, and their role as kaitiakitanga for the sustainability of te taiao.



Image 5.37 (left) Planting native trees in Tutira. (right) Toi Matarua rangatahi learning the seven steps of Hākari. Photo credit: Sally Rye.



Image 5.38. Jah Ivor, Moko Boys learning to plant kūmara for local kaumātua. Photo credit: Sally Rye.

A movement and resurgence of traditional kai systems is occurring as the ways of living and doing have become more in reach for whānau who are still suffering from the residue of urbanisation and the Native Schools Act. Social media has created a platform for mātauranga to be shared, reawakened, and reignited. With astronomy champions such as Professor Rangī Matamua, Rereata Makiha and Rikki Soloman generously sharing their knowledge on Matariki, te Maramataka and Te Aorangi across the motu, whānau are leaning in.

Ako, sharing of traditional knowledge systems.

Learning institutions play a significant role in shaping the minds of children. According to Psihoyos (2018), “guidelines taught in schools will influence children for the rest of their lives” (108:22). Māori have made significant progress in paving the way for Indigenous People by tapping into the education system to embed language and heritage as an approach to the revitalisation of the Māori culture. Te Kohanga Reo, Te Kura Kaupapa

Māori, Te Whare Reo and Te Whare Wānanga are breeding strong confident and articulate Māori speakers and academics who are making a valid contribution towards the development of Te Ao Māori as well as Te Ao Pākehā.

In exploring the cognitive development and well-being of Indigenous People, Smith (2012) highlights how “numerous accounts across nations now attest to the critical role played by schools in assimilating colonized peoples, and in the systemic, frequently brutal, forms of denial of indigenous languages, knowledge and cultures” (p. 67).

Addressing Indian educators and Tribal leaders, Cayete (1994) draws attention to educational constructs in America and the transference of knowledge to Indigenous People within learning institutions. He urges leaders to examine the application of western education and warns that these constructs can “condition people away from their cultural roots” (p. 17). This would suggest that alongside the continued drive to ensure our ways of knowing and being are included in the curriculum of early childhood, primary, secondary, and higher learning institutions. is the importance of the exchange of mātauranga in homes, marae, and communities.



Image 5.39. Whānau at Whakawerawera steaming baskets of food. Source: Ref: 1/2-066390-F.

Alexander Turnbull Library, Wellington, New Zealand. [/records/22871907](https://records.22871907)

Traditionally, learning occurred naturally in the centre of Indigenous communities and lessons were woven into every day and night activities. Cayete (1994) suggests that “by watching, listening, experiencing, and participating everyone learned what it was to be one of the People, and how to survive in community with others. Learning how to care for oneself and others, learning relationship between people and other things, learning the customs, traditions, and values of a community” (p. 175). Milburn (2004) affirms that Indigenous knowledge derives from mediating the connection between people and the environment and acknowledges the role this has in health and well-being.

Poipoia te kākano, kia puawai.

Nurture the seed and it will grow. (Toi Matarua, 2023)

Our values and principles surrounding kai sovereignty need to be passed on to our tamariki and mokopuna as soon as possible so that the seeds of mātauranga can be embedded and bloom throughout their lives. Schools are one construct, however hapū and urban marae need to play a lead in bringing communities together to address local issues concerning well-being. These are the appropriate spaces for whānau to access whakatinana (action) mātauranga Māori ways of knowing and being.



Image 6.2. Tāku mokopuna Erueti connecting with te whenua. Photo credit: Sally Rye.

This chapter discussed the disruptions to te taiao, social constructs, and traditional food systems and how this has contributed to unwellness for te tāngata, te whenua me te taiao. It presented kaitiakitanga, as a principle to protect our environment with the earth's elements (hā, whenua, wai and ahi), food cycles, and Te Mana o te Wai. It discussed social constructs, kai security including emotions surrounding kai, food memories and associations (belonging, loved, manaakitanga, respect). The upcoming chapter presents kai science, and the role food has in recovering, upholding, and sustaining wellness.

Chapter Six | Kai science

The doctor of the future will give no medicine but will interest his patient in the care of the human frame, in diet and in the cause and prevention of disease.

Thomas Edison (1903). (Thomas Edison Quotes, n.d)

This investigation looks at the way in which Indigenous People lived prior to the disconnect and displacement caused through colonisation. It seeks evidence to link this disruption to deprivation faced by Indigenous populations. Currently, the specific areas of interest relate to health trends, social impacts, and environment costs. The aspiration of this study was to research, recover, and reclaim inherent ways of managing and maintaining optimal holistic well-being. According to Penehira (2011), “we know from oral history, from whakapapa records, from waiata, and from many other historical records, that our ancestors were strong and healthy people” (p. 58). What this suggests is that the patterns to well-being exist in our whakapapa – DNA as well as our mātauranga Māori, kōrero tawhito, toi, pūrākau and taonga Māori.

Historical evidence from Durie (2003, 2004), Penehira (2011), Milburn (2004), Cayete (1994), and Vyas (2019) represent Indigenous People as healthy and very active, engaged daily in activities such as hunting, fishing, horticulture, and clearing bush lands. Other activities such as building, carving, weaving, cooking, preserving food and artefacts, and preparing for warfare to name a few, indicates that there was little down time for lethargic behaviours. The main source of diet was predominately plant based and depending on the season, also included fish, shellfish, insects, birds, eels, and kiore as protein sources.

Indigenous writers suggest that the current state of health of Indigenous People is directly related to the influences of western lifestyles. Penehira (2011) states, “what is clear is that the impact of colonisation on Māori approaches to health has been significant” (p. 62). The impacts and disturbances caused from the displacement of Indigenous People from land, culture, and community has created a knowledge and spiritual gap. This has resulted in individuals having gaps in intergenerational knowing and therefore ill prepared to maintain and sustain well-being in the absence of traditional social constructs.

Further to this, the introduction of western foods and lifestyle behaviours have been detrimental to the well-being of Indigenous People as they were encouraged to dabble in tobacco and alcohol usage as well as abandon traditionally well-balanced diets and opt for foods high in fats, sugar, meat, gluten, and dairy. In addressing the globalisation of chronic disease, Ornish (2012) warns that “countries are beginning to eat like us, live like us and all too often beginning to die like us. The irony is that the diet that we found that can reverse and even prevent most of these conditions is the way that most of these countries were eating before they began to copy us” (1:20).

This study investigates how Indigenous lifestyles including the practices surrounding kai maintained and sustained well-being for generations before European contact. Indigenous systems of fermentation, kai as rongoā, feasting and fasting, and the hoa haere of plants is explored. Gut microbiome, plant-based kai, telomeres, and the gut-brain axis from a western lens is discussed, providing a comparative analysis on how kai can optimise or disrupt puku ora.

This chapter examines western science surrounding kai and discusses how this knowledge aligns to mātauranga Māori and ancient knowledge relating to kai patterns and systems. The first part of this chapter looks at the science that links nutrition to preventable disease. Following that, I discuss the recent science on gut health and how this aligns to the traditional practices and behaviours surrounding kai that promote puku ora. The last part of this chapter discusses the gut-brain axis where I present the hononga between the hinengaro and puku.

This chapter has been organised into 3 parts: Firstly, Kai as rongoā (food as medicine) is covered and discussed. Next the theory, science and kōrero surrounding Puku Ora (gut health) is offered and lastly, he hononga i te puku me te roro (the gut-brain connection) is presented.

Kai as rongoā

Growing up, I had a front seat view experiencing the critical role that plants had on sustaining health and well-being. A daily intake of organic vegetables straight from my Dad's māra along with wholesome cooked meals were surely what kept me and my siblings in good health. I even remember times when I had tried to fake being sick so I could stay home from school, but my Dad would always catch me out.

My parents also had us involved in a diverse range of sports including ballet, tennis, softball, karate, netball, rugby, basketball, and athletics. This was a strategic move to keep us busy and occupied while they worked and so they knew where we were, and what we were doing. Despite the full schedules of school, sports and chores, my siblings and I seemed to have loads of energy. Looking back, I can confidently say this could be attributed to the kai we ate, exercise, and the weekly spoonful of malt every Sunday evening.

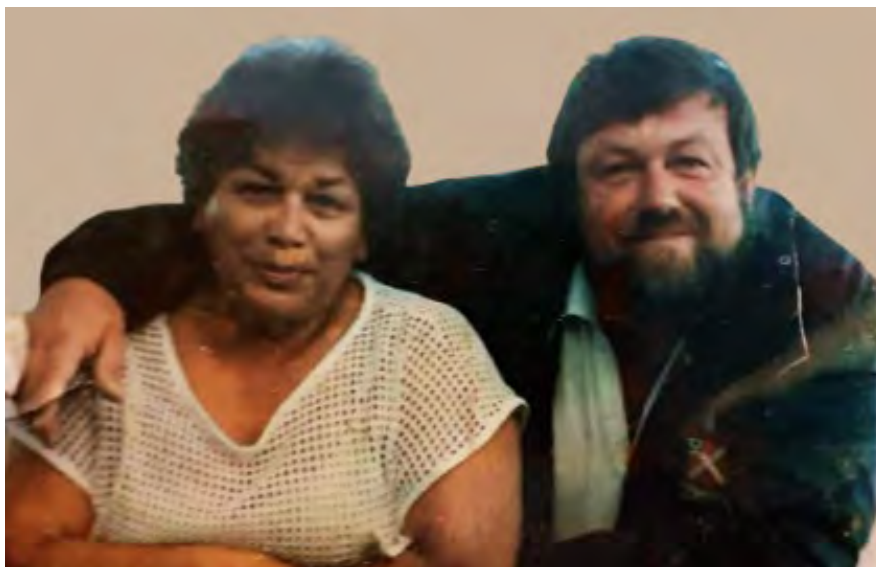


Image 6.1. Mum and Dad in 1988. Photo credit: Sally Rye.

On the rare occasion when we did get unwell, cuts or boils, Mum or Dad would be on it whipping up some treatments they had made from plants gathered from the māra. I recall the star of the show was comfrey, it seemed to fix everything along with Mum's karakia and dad's borderline gas lighting, "you're alright, you're tough, you're a Rye, get up and go to school" we would bounce back quickly, the power of the mind working with nature and infused with karakia.

This section of the chapter discusses some of the elements mentioned above. It looks at the science and mātauranga that links nutrition to preventable disease including the following: Plant based kai, Plants and herb and Foods that heal (cancer, heart disease).

Plant based kai.

In 2018, a team of archaeologists and forensic scientists at the Medical University of Vienna recovered and analysed the remains of 68 Roman Gladiators. Key findings according to Psihoyos, (2018) highlighted that the Gladiators were engaged in an “intense training and high-quality diet” (5:41). Predominately vegetarian, Gladiators were considered according to be “highly prized fighters that got the most advanced training and medical care in the Roman Empire” (Psihoyos, 2018, 6:42) suggesting that they could have accessed any diet they desired. Yet they opted for a plant-based diet which earned them the nickname of the *Hordearis* meaning bean and barley munchers.

The myth that meat is good for you stems from research conducted in the 1800s by famous German chemist, Justus Von Liebig. According to Psihoyos (2018), he “hypothesised that muscular energy came from animal protein”, and that “vegetarians were theoretically incapable of prolonged exercise” (11:01). His theory was flawed, however, by the time this was proven in 1882 by scientist T.H McBirde who discovered that “hard working muscles work mainly from carbohydrates found in plants” (11:39), it was too late. Society had already embraced and adopted the idea that energy stemmed from meat consumption.

Complimenting the myth that meat is good for humans, is research undertaken at the Max Plank Institute for the Science of Human History in Germany. Evidence shows that our teeth are square which are not designed for meat consumption, carnivores have triangular teeth. We have trichromatic visions which enables us to see more colours as opposed to carnivores who have dichromatic vision whereby, they don't see colour.

Dr Christina Warriner, Archaeological Geneticist for the Max Plank Institute states that the diet of early humans was predominately plant based, confirming that “there is no specialised genetic, anatomical or physiological adaptations to meat consumption, by

contrast we have many annidations to plant consumption” (Psihoyos, 2018, 45:05). It is further explained that “the reason an animal-based diet isn’t good for us is because our bodies aren’t built for it – it’s simply the wrong type of food for fuel” (47:19).

The idea of eating for sustenance as opposed to indulgence aligns to the historical behaviours concerning diet. I believe that ideas and theories concerning meat consumption and eating patterns that have lacked substantial evidence, have been placed into the minds of people by corporate entities for the purpose of economic gains.

The following image speaks to the timeless words of Hippocrates (c. 460 – c. 370 BC) spoken centuries ago but still of relevance today. Hippocrates was a Greek physician and considered the ‘father of medicine.’ Yet these wise words gifted by a brilliant scientist have been set aside as people lean into lifestyles that typically result in health issues requiring synthetic drugs and clinical intervention (Health Coalition Aotearoa, 2023).



Image 6.2. The power of plants. Source: Rongō ā Puku resources.

Kia whakatōmuri te haere whakamua

I walk backwards into the future with my eyes fixed on the past. Rameka (2017).

This whakataukī is commonly used in modern contexts to build a foundation on the knowledge and teachings left by our tūpuna. Milburn (2004) claims that there is a correlation between western diseases and poor nutrition. Providing a personal account of the benefits of a traditional Mi'kmaq diet based, he calls for Indigenous People to embrace and regain what has been lost. He believes that “the only way we’re going to reduce disease is to go backwards to the diet and lifestyles of our ancestors” (p. 1). Vyas (2019), Greggor et al., (2017), and Psihoyos (2018) concur suggesting that the way to address current health issues is to follow the diet patterns of Indigenous People.

This concept was presented through a different lens by Vyas (2019) who advocates a plant-based diet as an approach to preventing disease. Vyas (2019) presents a clear analysis on the relationships between nutrition and preventable diseases due to diet and lifestyle choices. According to Vyas (2019), “addressing these risk factors with food as medicine can be the first line of defence against chronic diseases and may allow you to stave off or reduce the use of expensive life-long medications and/or invasive medical procedures” (p. 131).

Dr Glenis Mark (Ngāpuhi, Ngāi Tahu) is an Indigenous researcher. Her focus of investigation looks at rongoā Māori theory and practice, as well as the range of well-being benefits that derive from following this traditional form of healing. According to Mark, Boulton and Kerridge (2019), rongoā Māori refers to “traditional Māori healing, encompasses Māori values, customs and healing practices that have existed in Aotearoa for more than a thousand years, more than 800 years longer than the current western medical system” (p. 2).

Walker (1996), Royal (2003), Mead (2016), and Tawhai (2013) discuss how historically, Tohunga within tribes were the gatekeepers of mātauranga Māori and considered the experts and keepers of ancient and authentic knowledge relevant to the tribe. Tribal chiefs would seek advice, council, and guidance from Tohunga who were practitioners and

teachers in all taonga tuku iho (gifts passed on from ancestors) pertaining to the tribe including karakia (prayer), rongoā (medicine), mātauranga (knowledge), whakairo (carvings), navigation and voyaging.

With many of the social constructs dismantled throughout the 1800s, Tohunga had continued to make a significant contribution to the well-being of Māori up until the Tohunga Suppression Act in 1907. The intention of the New Zealand Government in enacting this Act was according to Moon (2008) “to amputate this branch of Māori culture” (p. 10). In the process of suppressing Tohunga from society, the support system that for generations upheld the mana, integrity, and well-being of Māori culture was becoming more and more vulnerable to survival.

According to Cayete (1994), “achieving harmony, peace of mind, and health were ideal goals that were anything but easy to attain. They had to be actively sought, sacrificed, and prayed for” (p. 178). For Indigenous People, a focus on the holistic person was employed to achieve optional balance of well-being. Penehira (2011), Durie (2004), Walker (1996), and Royal (2003) discuss how suppressing Tohunga from practicing healing methods was a means to continue a colonial pattern of undermining Māori spirituality and connection to people, place, and space.

In 2023, I enrolled into a level 4 Rongoā programme at Te Wānanga o Aotearoa. Given my upbringing and exposure to kai as rongoā, I entered the space confidently. What I was reminded of in the first few weeks was how expansive mātauranga Māori is and how what we learn in the terrestrial space is only one tiny part of the vesting of knowledge that sits in the celestial space. The beautiful thing about wānanga is that your kaiako and hoa ākonga (fellow student) come with a richness of knowledge in their respective fields of rongoā. The Ako Wānanga model that provides spaces for the four tenets of whanaungatanga (building relationships), te hiringa (inspiring learning spaces), ako (teaching and learning), and aro (reflective learning) enabled a powerful ako experience amongst ākonga and kaiako. Much

of the intuitive and intrinsic knowing I have gathered throughout my hauora journey found articulation and meaning in this wānanga.



Image 6.3. Ti kouka as rongoā. Source: tāku mahi, Level 4 Rongoā presentation 2023.



Image 6.4. Harvesting kawa kawa for wai rakau and panipani. Photo credit: Charlizza Matehe.

Puku Ora – Gut health

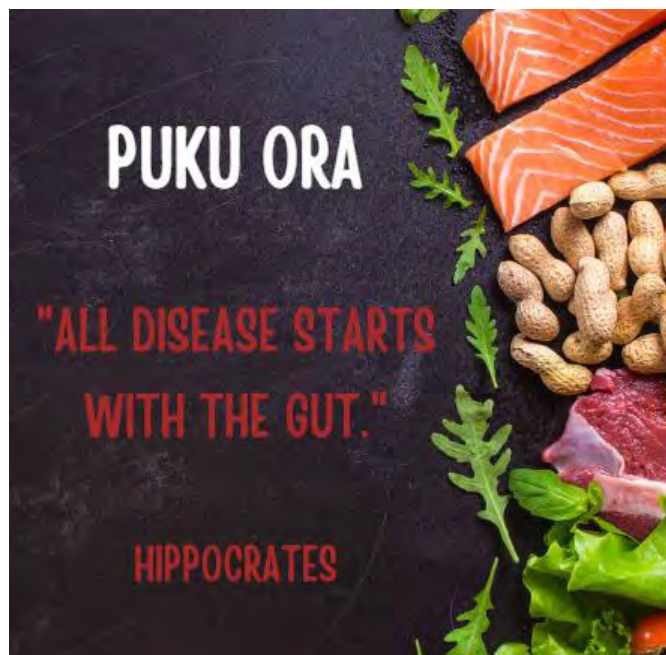


Image 6.5. Puku ora. Source: Rongo ā Puku resources.

Everything begins with gut. From being on my hauora journey for eight years now and through years of going up and down, I can 100% without doubt say that ‘puku ora is vital for sustaining well-being!’ If your puku is in balance, then there is a highly likely chance every other organ in your body will be functioning normally. Once everything is in a ‘normal state’ you have the ability through practices and intent to push yourself to optimal performance.

The following image informs what you can expect when you actively focus on good puku ora (gut health). Depending on how far down the unwellness track you have found yourself, you may be able to notice the changes as soon as overnight. I am at the point now that when I ‘indulge’ in kai or inu that is known to disrupt puku ora by stripping the good bacteria, I know exactly what to do to get back into balance. I have also learnt that if I don’t address or rebuild puku ora balance as soon as possible, the impacts and symptoms hit me almost immediately. These include puku cramps, heavy head, fatigue, and erratic moods. Prolonged neglect to returning to balance further impacts my sleep patterns, motivation levels, and cognitive functions (discussed in the next section).

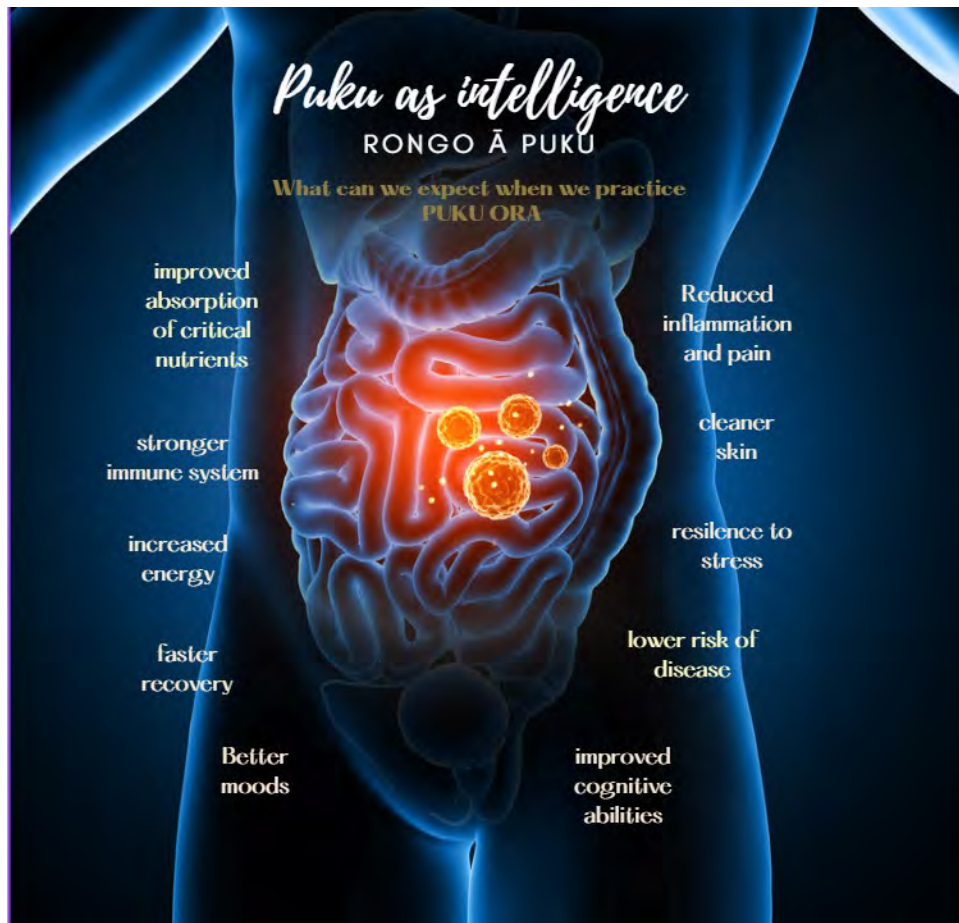


Image 6.6. Puku ora benefits. Source: Rongo ā Puku resources.

What the science further tells us in Hill (2021), Vyas (2019), Greggor et al., (2017), and Psihoyos (2018) is that when our puku is in balance then our tinana is better able to absorb the critical nutrients required for peak operation. We can then expect the following health benefits including a reduction in inflammation and pain, clearer skin, improved cognitive abilities. Our resilience to stress is heightened and the risk of disease is lowered. We regain better control and regulation of moods and experience faster recovery from disease, stress, and illness. We feel increased and sustained energy and strengthen our immune system.

The upcoming section focusses on how to build gut health and makes the connection between the latest science and mātauranga Māori. An overview of this is presented below.

Gut Health Science	Puku Ora - Indigenous examples
Fermentation Probiotics	kōura mara fermented crayfish kānga kōpiro - rotten corn Rewana Bread - Preferment starter potatoes leaven bread dough
Kai Diversity	Prior to the arrival of Europeans, Māori had access to over 100 birds, 190 edible native plants, 9 edible insects, fish and shellfish from the ocean, kiore and kuri.
Plants as medicine to detoxify body	Māori had knowledge of what plants were do to cleanse the body and how to prepare them as a wai rakau (tonic) or pouiice, oil or cream.
No- Ultra processed foods	Māori had sophisticated ways of preserving kai. Methods included using fat, smoking or dehydrating. Open fires or embers were used to preserve fish and eels. Birds were a labor intense process and involved drying, and cooking over flames, fat collection and storing the birds in their own fat.
Eat seasonally	Due to the limited storage capacity (no fridges) pātaka were used to store kai in times when food was scarce. In most cases kai was consumed as it was collected or harvested. Kūmara was an exception and was stored in special underground rua - pits so the nutritional value of this kai rangatira could be enjoyed throughout the year. Kūmara was considered a sacred kai and the process of growing, harvesting and storing kūmara involved karākia.
Avoid alcohol	Māori used natural stimulants for medicine purposes, rituals and preparing for war. Alcohol was introduced by the Europeans.
Avoid smoking tobacco	Introduced by Europeans
Avoid stress	This rose with the pressures caused by urbanisation and leaving the break down of traditional social constructs
Avoid deep fried foods & heavy meats. Choose organic meats	These were introduced by Europeans along with heavy meats such as pork, lamb and beef. Prior to colonisation, animals and fish roamed freely and were only caught when required mainly for special occasions. Strict tikanga was followed when gathering kai from the sea and forests. This was believed to change the state of the mauri of the animal so it did not transfer to people.
Practice fasting for autophagy - allow cells to renew and recycle	Kai was ceremonial and involved a process underpinned by tikanga. Mahina kai, mārā kai and kai storehouse were protected by the controls of tapu, rāhui and noa. Kai was for sustenance not indulgence. Hākari was for special occasion or tino rangatira and special visitors. Given this we can gather that meal times were likely to be once a day and in some cases when kai was scarce, fasting would have been a normal occurrence.

Puku as intelligence
RONGO Ā PUKU

Image 6.7. Puku ora science and mātauranga Māori. Source: Rongo ā Puku resources.

Microbiome

As mentioned in previous sections, prior to European kai and lifestyle influences, Māori people were fit and healthy. From the image above we can see the clear alignment to what the science says about gut health and Māori behaviours and practices surrounding kai. Also mentioned previously, for varying reasons, these practices have been lost over generations and knowledge sitting dormant and inactive. Both the Health Coalition (2023) and Health New Zealand | Te Whatu Ora (2024) note links between these shifts in lifestyle and the serious health concerns faced by Māori today. Isaac, Heke and Breed (2023) states that “based on the close relationship between the microbiome and health, pursuing a better understanding of the microbiome and its role in Indigenous health could contribute toward more equitable Indigenous health outcomes” (p. 1).

Weston Andrew Valleau Price (September 6, 1870 – January 23, 1948) was an internationally recognised Canadian dentist who specialised in nutrition, dental health, and physical health. In his research he was able to find the direct link between western diets,

poor nutrition, and health disease. In his global travels and observations of isolated tribes, Price travelled to Aotearoa. According to Price (2000), “Māori had beautiful straight teeth, freedom from decay, stalwart bodies, resistance to disease and fine characters that were typical of native peoples on their traditional diets, rich in essential food factors” (p. 1). This further supports the Indigenous examples provided above, and Hippocrates’ notion that all disease starts with the gut.

There are some simple patterns that we can weave into our existing routines that will promote puku ora. The following image provides an overview of how we can achieve puku ora or puku mate.



Image 6.6. Puku ora – Puku Mate. Source: Rongo ā Puku resources.

Isaac et al., (2023), Srivastava, Ibrahim, Chattopadhyay and Arbab (2023), Choct (2009), and Benezra (2023) highlight the clear association between a healthy gut microbiome and overall well-being. The gut microbiome is an extremely complex system. According to Benezra (2023), “microbes populate our bodies by the hundreds of trillions, from the moment of birth until long after we’ve died”. He adds that “biologically, materially, and genomically, we are much more microbe than human” (p. 3). Regardless of the complexity, the practices to achieve good gut health are relatively simple and to the most part have been practiced for generations by our ancestor.

What is important to know is explained by Choct (2009) who tells us that “the diversity of bacterial species in the gut is one of the most important factors for the establishment of a stable ecosystem in the intestinal tract” (p. 10). What is needed to support this diversity is explained in Srivastava et al., (2023), Choct (2009), Hill (2021), Warren (2014), and Benezra (2023) (summarised in the sections following).

Fermenting

Fermented kai is an essential probiotic that feed good bacteria in our gut. According to Fiso (2020), “fermentation was a popular with early Māori as it was with modern food lovers” (p. 63). The process for kōura mara or fermented crayfish involved placing the crayfish into a woven kete and placing the kete in a stream or slow running waters. When the meat of the crayfish came away from the shell this indicated that it was ready. When corn was introduced by the Europeans, the same process was applied to produce kānga kōpiro or rotten corn.


Preserving


Māori developed some resourceful techniques for preserving kai. These involved smoking or dehydrating. The process of preserving kai was labour intensive and involved a few steps especially for birds. Birds were plucked, cleaned, and boned and before being submerged in chilled water. Following this the meat was dried and then cooked over flames. The fat from the birds was collected in wooden troughs and used to set the birds once they cooled


down. According to Fiso (2020), “preserving titī came with its own process, the birds were cooked in their own fat and then stored in inflated bags made from bulk kelp which in turn was stored in flax kete as a final protective layer” (p. 62). It is easy to see that when more convenient and less time-consuming options were introduced by the Pākehā, these methods were left and forgotten in most whānau.


What is the kai telling us?


Kai from our Father


Broccoli: If you look closely, broccoli heads look like 100 cancer cells. studies show that eating broccoli weekly will reduce prostate cancer by 45%. 


Figs: Figs are full of seeds and hang in 2s when they grow. Figs are known to increase mobility of male sperm count and prevent sterility. 


Kumara: Kumara can balance the glycemic index of diabetics and promotes a healthy pancreas. they are high in beta cartene which is a potent antioxidant that protects all tissues int he body from damage and aging. 


Kidney Beans: Kidney beans help to heal and maintain kidney function. They provide a variety of vitamins and minerals which benefit wellbeing. 


Celery, rhubarb and bok choy: Celery, rhubarb and bok choy resemble bone structure, bones are made up of 23% sodium - these foods contain sodium and target bone health. 


Avocado and pears: Avocado and pears are good for health and functioning of the womb and cervix. consumed weekly studies have shown this will balance birth hormones, shed birth weight and prevent cervical cancer. 


Carrots: Carrots look like the human eye, eating carrots increase the blood flow to the eyes! 


Walnuts: Walnuts help in developing over 3 dozen neuron - transmitters within the brain enhancing the signaling and encouraging new messaging between brain cells. they help to ward off dementia. 


Mushrooms: Mushrooms improve hearing abilities and contain vitamin D which is healthy for bones especially the 3 tiny bones in the ear that transmit sound to the brain. 


Ginger root: Ginger root is a holistic cure for the whole body. 

Tomato: Tomato has four chambers and red. they are loaded with lycopene which is good for the heart. 

Ginger: Ginger aids in digestion and can calm puku and cure nausea. it can slow the growth rate of bowel tumors. 

Banana: Containing protein called tryptophan it converts to a neurotransmitter - serotine when digested which is a mood regulator chemical in the brain. 

Ginger and Olive Oil: Assisting in the health and function of the ovaries. containing oils that may suppress genes predisposed to cause cancer. 

Grapes: Grapes resemble the alveoli of the lungs. a diet high in grapes is proven to reduce lung disease. 


Resveratrol: Rich in antioxidants and polyphenols including resveratrol. proven to thin blood to reduce blood clots which are associated to stoke and heart disease. 

Image 6.7. Kai from our father. Rongo ā Puku resources.

The image above is one of my favourite resources to use when facilitating kōrero on gut health. The science shows us that foods that are shaped like body parts are good for that organ or bodily function. Kūmara are amongst these and a traditional Māori staple. The kūmara has been proven to have many nutritional attributes including promoting a healthy pancreas (Hill, 2021).

Hormones

Apart from being the largest immune organ in the body, gut experts including Warren (2014, 2020), Srivastava et al., (2023), Choct (2009), Hill (2021), and Benezra (2023) highlight the link between good gut health and hormones. According to Choct (2009), “the gut harbours more than 640 different species of bacteria, contains over 20 different hormones, digests and absorbs the vast majority of nutrients, and accounts for 20% of body energy expenditure” (p. 9). The body’s biochemical elements are influenced by hormones and well as protein, carbohydrate, lipid, nucleic acid, and vitamins. Food patterns that support the release of hormones such as serotonin (good mood), melatonin (sleep regulator), cortisol (energy), oxytocin (love), endorphins (well-being and natural high), and dopamine (feel good) will promote balanced well-being and mood.

Bodily processes

The human body is a complex, multi-functional, multi purposeful entity. From a physical point of matter it exists as an organism, meaning it is made up with living cells and extracellular materials which are formed, organised and shaped into tissues, organs, and systems. In terms of processing kai, the following images provide an overview of our digestive system. The structure is made up of cells, tissues, the organ (puku), the organ system (the parts of the body that contribute towards the mahi – breaking down the food), and the organism (how the system is placed in the wider scheme of things and interconnected to other cells, tissues, organs, and systems to maximise health benefits for the tinana).

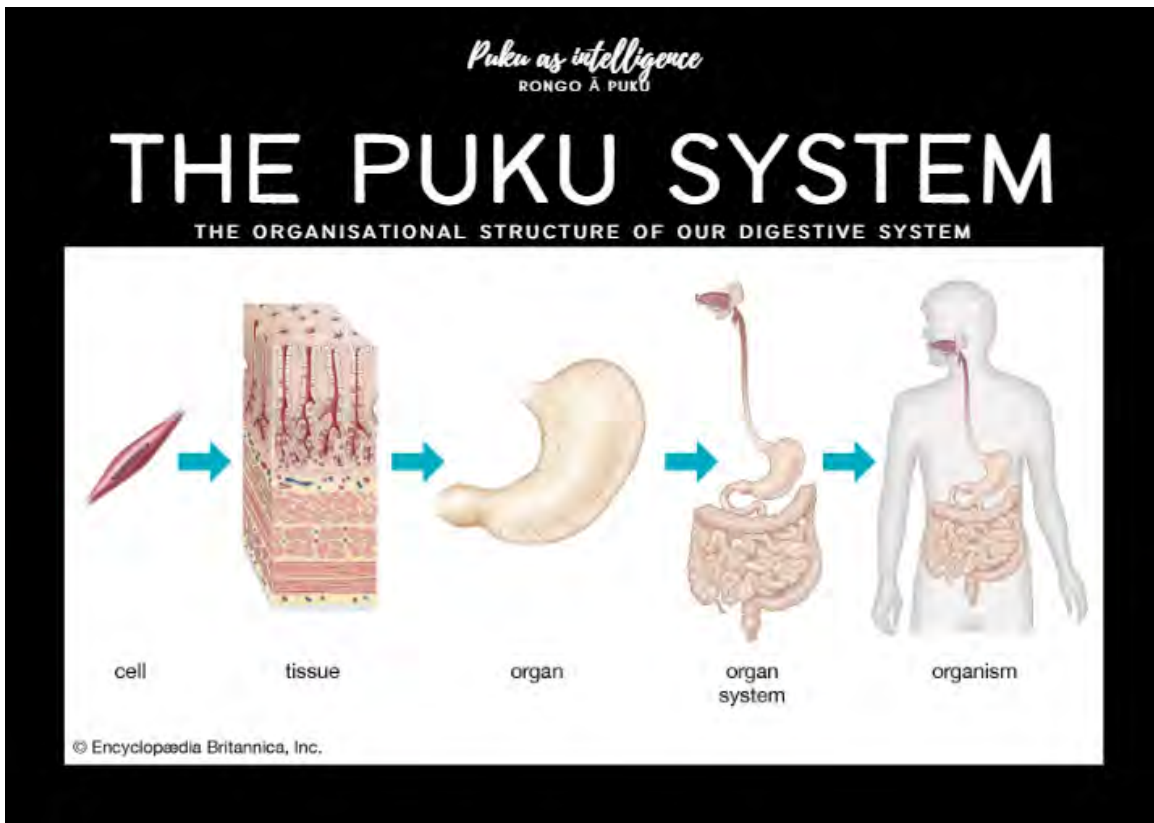


Image 6.8. Hormones and the puku. Source: Rongo ā Puku resources.

Extensive and comprehensive data exists to discuss the human anatomy and physiology such as: the cardiovascular system; human digestive system; human endocrine system; renal system; skin; human muscle system; nervous system; human reproductive system; human respiration; human sensory reception; and, human skeletal system (Britannica, 2023). Finch (2007), Nordström (2022), and Odyā (2023) describe how the body develops from birth to death and the influencers, factors, and contributors towards maximising longevity of life. What this study is concerned with is quality of life and how we re-indigenise kai to optimise well-being. The following image shows some of the organs and key parts of the human body.

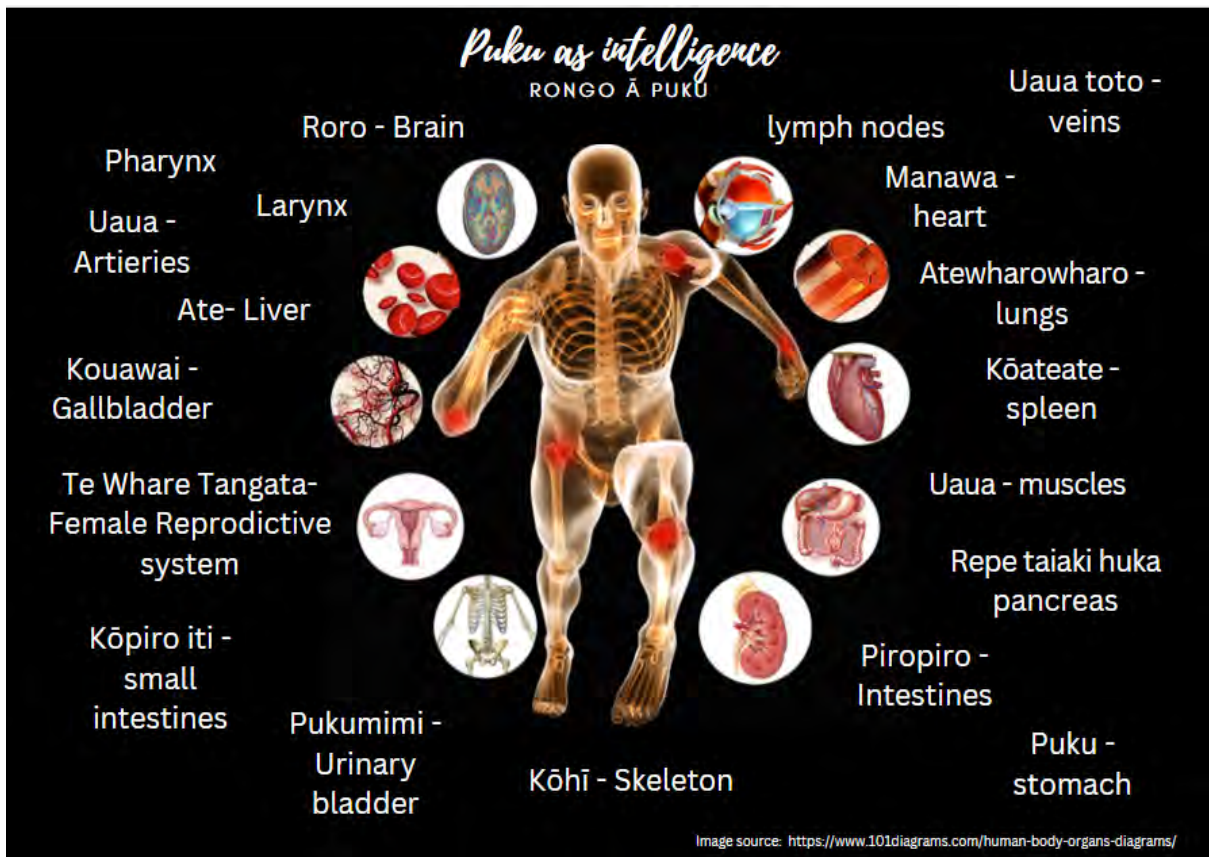


Image 6.9. The Human body. Source, Rongo ā Puku resources.

It is important to be aware of the colonies of live organism and multiple systems and functions that exists within us. It is not necessary to know all the details, but what is useful to know is that we have 70 organs working throughout our body. Their main job is to mahi tahi (work together) to maximise our performance. There are also some key bodily processes that we should be aware of. Srivastava et al., (2023), Choct (2009), Hill (2021), Warren (2014), and Benezra (2023) argue that what we eat and how we eat has a direct impact on the efficient operations of these processes.

These include: The metabolism, the three main functions are the conversion of the energy in food to energy available to run cellular processes: the conversion of food to building blocks for proteins, lipids, nucleic acids. Secondly, the homeostasis, this refers to keeping a constant internal balance and includes blood pressure, blood sugar regulation, fluid (water)

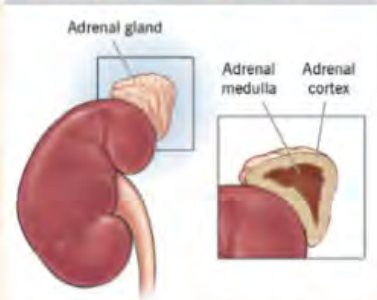
and electrolyte balance and body temperature. Also, growth and development, sexual functions, reproduction, mood, and the sleep – wake cycles.

Adrenal fatigue

A common issue that appears to be presented more frequently since COVID-19 is fatigue. Possibly linked to excessive use of the computer since conditions to work from home opened up since the lockdowns and social distancing. However, it is more likely to be linked to other important factors such as nutrition, medication and drugs, repeated stress, loss of a loved one, financial pressure, negative belief and attitude, emotional stress, infections, toxins, caffeine, trauma, fear, unwanted employment (or change in working conditions), allergies, psychological stress, lack of relaxation, wounds and healing, and exercise imbalance. Most if not all these factors can certainly be linked to the conditions that were experienced during the Government lock down.

Although the world has reopened and many people have returned to working in offices, fatigue can still linger if not identified or detected. The residue of the COVID-19 lockdown, along with the trauma or awareness of what the source of the issue is can result in the condition not being addressed. The adrenal hormones are critical for regulating bodily functions that include metabolism, blood pressure, and responses to stress. If the issue is prolonged it can lead to other serious issues and conditions. The best way to deal with this adrenal fatigue is presented in the following image, highlighting foods to avoid and foods to embrace.

ADRENAL FATIGUE



Adrenal glands are super important as they produce many hormones, including cortisol, aldosterone and adrenaline. We kinda need these to sustain energy throughout the day. The adrenal hormones are also very important as they help regulate several bodily functions including metabolism, blood pressure and your body's response to stress.

Factors that impact the adrenals

- nutrition
- medications & drugs
- repeated stress
- loss of loved one.
- financial pressure
- negative belief and attitude
- emotional stress
- infections
- toxins
- caffeine
- trauma
- fear
- unwanted employment
- allergies
- psychological stress
- lack of relaxation
- wounds and healing
- exercise imbalance

best foods

- protein sources like lean meats, fish, eggs, dairy, nuts, and legumes
- leafy greens and colorful vegetables
- whole grains
- relatively low-sugar fruits
- sea salt in moderation
- healthy fats like olive oil and avocado

worst foods

- white sugar
- white flour
- soda
- fried food
- processed food
- artificial sweeteners

Image 6.10. Factors that impact adrenals. Rongo ā Puku resources.

Telomeres – stress

Have you ever wondered what makes our bodies age, our skin wrinkle, our hair turns white, and our immune systems weaken? Biologist and Nobel Prize recipient Dr Elizabeth Blackburn has spent decades in search of finding the answers with the discovery of telomerase, an enzyme that replenishes the caps at the end of chromosomes, which break down when cells divide. Blackburn (2017) suggests that “the food you eat everyday may have an impact on how fast you lose your telomeres. The consumption of fruits, vegetables

and other antioxidant rich foods has been associated with longer protected telomeres” (33:42).

Telomeres are composed of coils of special DNA (with a protective healthy shield) containing special segments of non-coding DNA at the ends of the chromosomes (Blackburn, 2017). Cells are responsible for numerous functions within our bodies, from our heart keeping a steady beat to ensuring our immune systems is strong enough to fight bacterial, disease and viruses. As we age, our telomeres progressively shorten.

Collective research over the past 20 years illustrates that “telomere attrition is contributing to our risk of getting cardiovascular disease, Alzheimer, some cancers and diabetes, the very conditions many of us die from” (Blackburn, 2017, 5:42). In a study of chronically stressed mothers who were caregivers for children with severe conditions, Blackburn (2017) found a clear correlation between how people responded to life events and the maintenance of telomeres. The findings suggest “the more chronic stress you are under the shorter your telomeres. Meaning the more likely you were to fall victim to an early disease span and perhaps an untimely death” (12:16).

Individuals to some extents have control over the healthy maintenance of their telomeres. Evidence shows that eating habits, lifestyle behaviours and healthy relationships can have a considerable impact on the wellness of telomeres. Blackburn (2017) further outlines the impact that we can have on other telomeres, stating that “as early as childhood, emotional neglect, exposure to violence, bullying, racism all impacts your telomeres, and the effects are long term” (16:23). Blackburn (2017) also highlights how interconnected humans are whereby healthy social relationships have a direct impact on telomere maintenance, noting how “tight knit communities, being in a marriage long term and lifelong friendships even can improve telomere maintenance” (16:51).

Obesogenic environments

Obesity is a huge issue in Aotearoa with Māori representing over half the cases of children identified as obese. Obesogenic conditions relate to ways in which the built environment such as schools has a direct influence on physical activity and dietary behaviours that lead

to obesity (Townshend & Lake, 2017). Access to healthy food is an ongoing issue for whānau in low socio-economic communities. According to Vyas (2019), “unhealthy foods are profusely advertised in underserved populations, and research shows that people with lower socioeconomic status and communities of colour are more likely to have access to an abundance of unhealthy fast foods and less access to healthy foods” (p. 134). Within a modern context, kai sovereignty can be influenced by environments, places, spaces, and conditions that led to obesity and unwellness.

He hononga i te puku me te roro – gut-brain connection

This next section is concerned with the connection between the puku and the roro, often referred to as the gut-brain axis. From an Indigenous perspective, decisions are often made by trusting your puku. I recall wise words from my nannies as I struggled with making an important life decision, “what does your puku tell you” or “trust your puku”. These wise words often revisit me in difficult situations when I am contemplating the right option, decision, or pathway.

Parker, Dailey, Phillips and Davis (2020), Shen (2015), and Davidson, Cooke, Johnson, and Quinn (2018) discuss the sensory and motor pathways that exist between the gut and the brain because of shared neurons that are located in the brain. There are multiple conversations that can stem from the relationship between the gut and the brain. According to Davidson et al., (2018), “the ‘gut-brain axis’ represents a multi-directional signalling system that encompasses neurological, immunological and hormonal pathways” (p. 1).

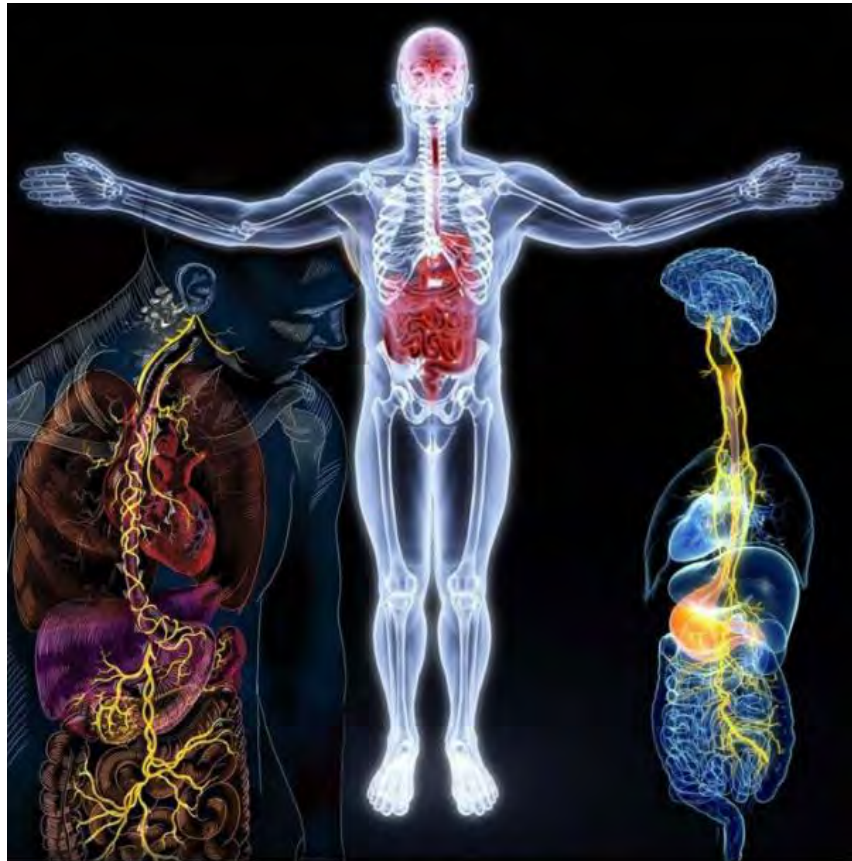


Image 6.10. The puku – roro connection, source: [Gut-brain axis : a biological reality in which the gut communicates with the entire brain through cross-talking neurons - https://debuglies.com](https://debuglies.com)

The vagus nerve.

The vagus nerves are the longest cranial nerve and main nerves in the parasympathetic nervous system. The nerves run from the top of our brains all the way to our large intestine and controls bodily functions such as digestion, heart rate and the immune system. The functions are automatic or involuntary, meaning they are difficult to control. The left and right vagal nerves shown in the image below contain 75% of our parasympathetic nervous system’s nerve fibres (Cleveland Clinic, 2023).

The word ‘vagus’ means ‘wandering’ in Latin. This describes the movement of the nerves as they travel up and down the right and left side of the body. The exit point of the nerves is in the lower parts of the brain stem, the medulla oblongata. During their haerenga throughout the body, the nerves connect with our neck, chest, heart, lungs, and abdomen

and digestive track, and kōrero whakawhiti (conversation) transpires. The neural pathways according to Porges, Doussard-Roosevelt and Maiti (1994) enable “direct and rapid communication between brain structures and specific organs”. He further explains this function is possible as “the vagus contains both efferent (i.e., motor) and afferent (i.e., sensory) fibres, it promotes dynamic feedback between brain control centres and the target organs to regulate homeostasis” (p. 169).

The automatic nervous system is a part of your overall nervous system that connects the brain to most organs in our body and controls functions we need to survive. The system is organised into two parts – our sympathetic and parasympathetic nervous systems. The key difference between these systems is that the sympathetic nervous system activates body processes, and your parasympathetic deactivates or lowers them. The sympathetic nervous system is commonly known as the ‘fight or flight’ response and the parasympathetic the ‘rest and digest’ response.

Well-being is found in the balance. Indigenous writers Pere (1997), Royal (2003), and Walker (1996) suggest that within us exists duality. As a comparison, if we look at Tūmataunga to represent the sympathetic nervous system of ‘fight or flight’ and Rongo-mā-Tāne and the parasympathetic response or ‘rest and digest.’ This is depicted in the image that follows.

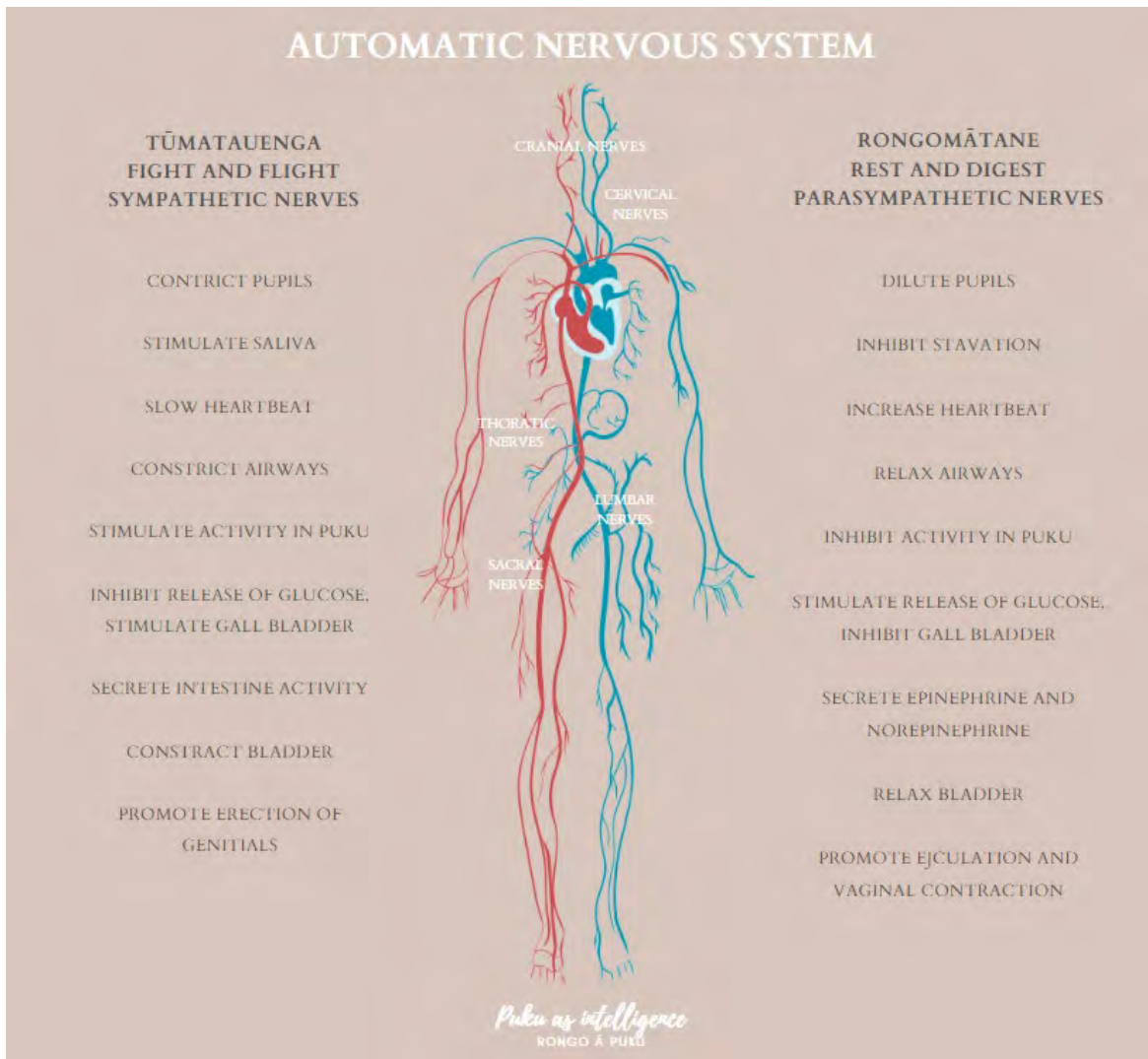


Image 6.12. The Automatic nervous system. Source: Rongo ā Puku resources.

As Māori, we understand that we have the capacity to ‘dial up’ or ‘dial down’ the atua that is required for various situations. Traditionally this was addressed through ancient rituals performed to find balance or unblock, restore, and strengthen well-being. Modern practices include using internal strategies such as mindfulness, fasting or mauri tau, and external resources such as the sun or ahi, (warmth), whenua (earthing), hā (breathing), and wai (cleansing and purifying). This notion is supported by Porges et al., (1994) who highlights that “baseline levels of cardiac vagal tone and vagal tone reactivity abilities are associated with behavioural measures of reactivity, the expression of emotion, and self-regulation

skills” (p. 186). This suggests that we can stimulate the vagal nerves to promote optimal health and well-being.

The image that follows suggests natural ways in which we can improve the vagal tone which will lead to better health outcomes (Porges et al., 1994). These include engaging with ngā atua including Tāwhirimātea (breathing), Tangaroa and Hinemoana (cold wai), Rongo-mā-Tāne (stretching), Ranginui, Tānemahuta (waiata, pūoro and oriori), Tūmatauenga (korikori tinana), Hine (whakaaro, mauri tau and noho puku), katakata (laughing), and whakararā (gargling).



Image 6.13. Whakahiko te akaaka ki a māori, Source: Rongo ā Puku resources.

Catching the gifts of Tamanuiterā

Corn is the most sacred of all Native American plants. Earlier this year, I travelled with Toi Matarua to Window Rock in Arizona. We had the privilege of spending time with Emerson Austin, a local Diné Medicine Practitioner. He shared with us the process of clearing the way to allow for blessings from the atua. One of the practices I have continued since returning to Aotearoa is to greet the sun first thing in the morning as it rises over the horizon. He says that this was an ancient tradition of his people to gain the blessing for the day they were to chase the sun to the east and catch the mighty energy of te rā as the sun rises.



Image 6.14. Mr. Emerson Austin Diné Traditional Medicine Practitioner. Photo credit, Sally Rye.

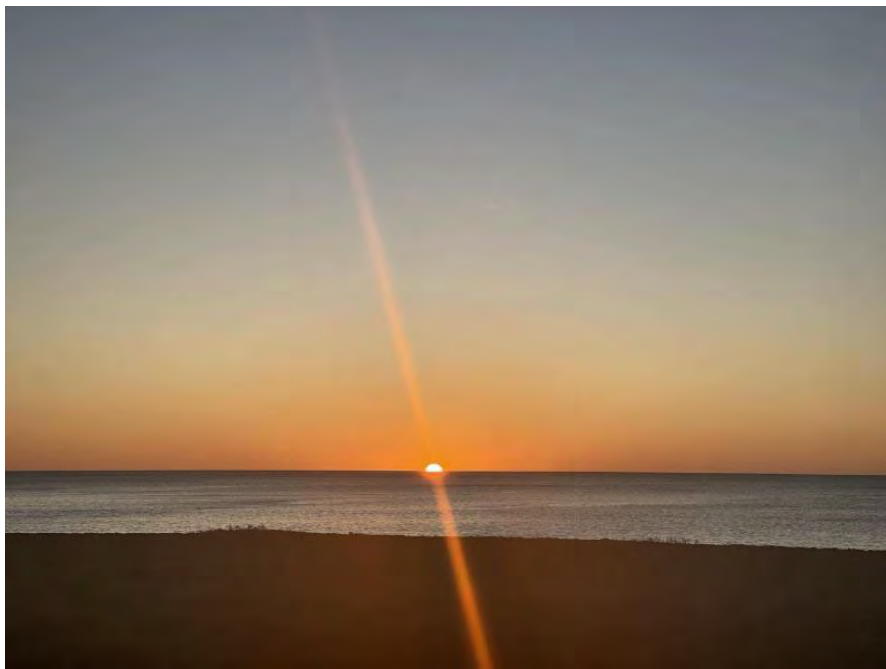


Image 6.15. My daily morning routine, 'catching the ihi' from Tamanuiterā. Source: Photo credit, Sally Rye.

The lymphatic system

The lymphatic system is worth mentioning here. The system is a group of organs, vessels and tissues with the main function being to protect against infection and keep a healthy balance of fluids throughout your body. Lymphatic system organs include your bone marrow, thymus, and lymph nodes. The following image shows the lymph nodes throughout the body (about 600–700). The largest lymphatic organ is located on your left side under your ribs and above your stomach. Tapping is a common practice that allows fluids to be shifted and moved throughout the body, keeping it in optimal performance. The lymph nodes become lethargic when our bodies are out of sync which creates blockages. Breathing and mindfulness are other ways to keep fluid naturally functioning.

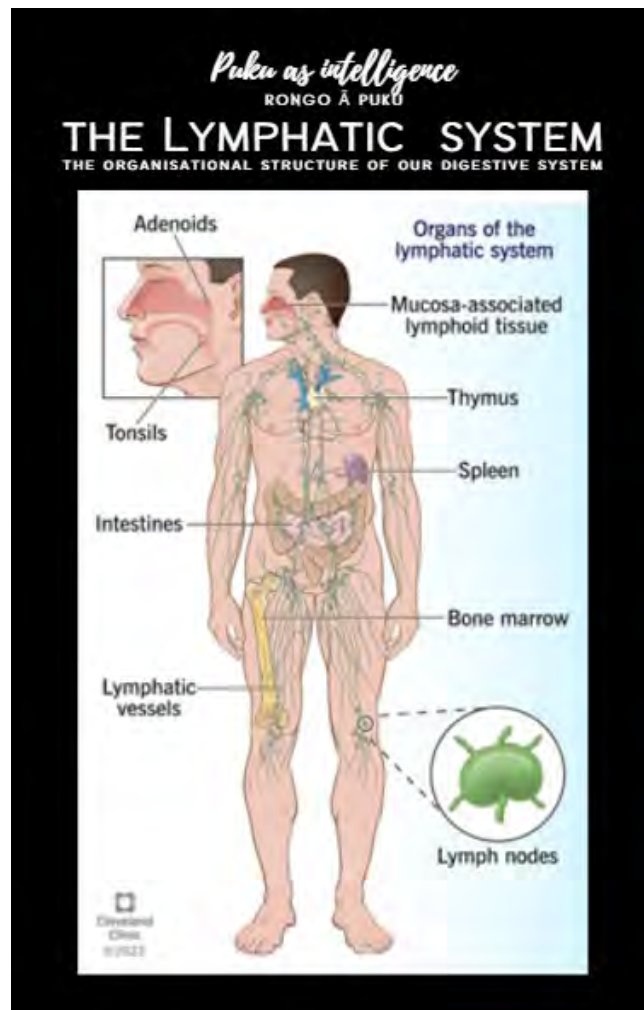


Image 6.16. The lymphatic system, source: Rongo ā Puku resources.

Noho Puku, mauri tau and mindfulness

Every season, I go through my drawers and wardrobes and clear out anything that I no longer wear, that is out of season, or no longer appropriate for the season I am about to enter. Sometimes we become so attached to things and find it hard to let go. This pattern of 'not letting go' takes up room and doesn't allow space for new, more appropriate and fit for purpose items. When we attempt to make room without clearing the way, things become cluttered and overloaded, making it difficult for us to find what we need when we need it. The same occurs in our mind. Each season that we enter, we need to go through what we have and discern what is no longer needed, relevant, appropriate, or fit for purpose. We let go of all the things in our head that are weighing us down or taking up space for new knowledge, skills, and patterns.

E ngaki ana a mua, e tōtō mai ana a muri.

First clear the weeds, then plant. (Elder, 2020)

This whakataukī reminds us to whakawātea and clear the space for new growth to occur. Weeds are a good analogy as they are typically what strangle or take nutrients from the plant inhibiting and interfering with growth. Where the plant is strong and resilient it is more difficult for weeds to enter space. The same goes for our minds. When we have a solid tūāpāpa in our mindsets, it is difficult to shift. This can be a positive or a negative thing. It is therefore good to engage in regular practices of aro so that we can recognise the difference.

Noho Puku, mauri tau and mindfulness are all excellent examples of processes that create a space to sit in reflection. Wā Hine, a movement that has been born out of this study, encourages wāhine to set time aside to noho puku. When we become stuck in the continuous 'doing' we often forget to pause and reset. We get into habits of looking outwards instead of looking inwards. Most times we already have the tools we need; however, it becomes buried in our minds, and we forget it is there. This is a common behaviour that many people fall into.



Image 6.17. Noho Puku, Wā Hine wānanga 2023. Photo credit, Sally Rye.

Fasting

According to Durie (2004), “Indigenous peoples have their own perspectives on health and well-being” (p. 12). ‘Te Whare Tapa Whā’ explores the four dimensions of a person’s taha wairua (spiritual), taha hinengaro (intellect and emotions), taha tinana (the human body) and taha whānau (human relationships) well-being. The model advocates that each dimension is interconnected, and a measure of good health exists where there is balance and harmony across the four elements.

Within the context of this study and the RāP framework, haere puku relates to raising our thinking to the highest consciousness within the realms of celestial knowledge. Although the tools and methods to enter haere puku are the same as noho puku such as karakia, beathing techniques as well as herbs, smoke, ice, stream, and water, the intention is different. The idea is to enter a state of tapu through fasting (abstaining from kai) and allowing our consciousness to transcend to a spiritual place.

From what I have observed and my own personal experiences as a wahine Māori, food is often viewed as an indulgence today as opposed to a means to sustain the body with

essential nutrients to live a well-balanced life. The devastating consequence of this approach to eating is reflected in health statistics where sadly many Indigenous People feature negatively.

Evidence shows that behavioural patterns that involve continuous eating periods throughout the day are not a part of our history. Fasting was a natural approach to eating due to variables that were mainly unavoidable. Dash (2019) explains that “ancestors thousands of years ago did not have refrigerators, freezers, and pantries to store food year-round so they might eat all hours of the day. They would rise early in the morning to hunt and fish and then they would have to skin and cook their quarry. This meant that they may not eat until noon time or even later – fasting from the day before to the meal they just prepared” (16:40).

Receiving a Nobel Prize in Physiology or Medicine for his “discoveries of the mechanisms for autophagy” Yoshinori Ohsumi was able to demonstrate the benefits of fasting. This method has been promoted in Dash (2019) as an approach to “reduce inflammation, stimulate antiaging effects, improve immune function, improve brain function, provide protection from neurogenetic disease and help men and women avoid cancer” (8:39).

From a spiritual perspective, Kent, Morton, Ward, Rankin, Ferret, Gobble and Diehl (2015) notes that “Adventists recognize the indivisible unity of body, mind and spirit, with the health of each component being so integrated and interrelated that what affects one affects the functioning of the whole being” (p. 562), concurring with the ideology of balancing all elements to promote holistic well-being.

The ‘Daniels Fast’ is another method of fasting that is encouraged within Christianity communities. Fasting in general is believed to foster a mechanism that provides clarity and understanding towards the Voice and Word of God. It is a process in which people choose to engage in when they are feeling spiritually attacked, or when they are requiring celestial guidance and intervention.

The 'Daniels Fast' involves ad libitum intake of specific foods but the food choices are restricted to essentially fruits, vegetables, whole grains, nuts, seeds, and oils. It excludes all animal products and there are no processed foods, white flour products, preservatives, additives, sweeteners, flavourings, caffeine, or alcohol (Bloomer, Kabir, Canale, Trepanowski, Marshall, Farney & Hammond, 2010).

To investigate the metabolic and cardiovascular health effects of the 'Daniels Fast' in humans, a study involving 13 men and 30 women aged between 20 and 62 years was conducted over a 21-day period. The study found that the 'Daniels Fast' diet contributed to a dramatic reduction in LDL cholesterol (often called the 'bad' cholesterol because it collects in the walls of your blood vessels, raising your chances of health problems like a heart attack or stroke). According to Bloomer et al., (2010), "the Daniels Fast will improve several risk factors for metabolic and cardiovascular disease" (p. 7).

The tapu of karakia demands the separation of food and all beverages from the act of formal teaching and learning. Many modern students would find this prohibition to be difficult. In practice however, what it means is that food and beverages are confined to the intervals. When there are long classes, such as two-hour or four-hour sessions, it is possible to schedule rest periods.



Image 6.18. Fasting as a tool for reaching higher levels of consciousness. Photo credit: Sally Rye.

This chapter examined western science surrounding kai and discussed how this knowledge aligns to mātauranga Māori and ancient knowledge relating to kai patterns and systems. It discussed kai science and how this links to nutrition to preventable disease. Recent science on gut health was presented and how this aligns to the traditional practices and behaviours surrounding kai that promote puku ora. Finally, the relationship between the gut and the brain was presented, and the hononga between the hinengaro and puku. The next chapter discusses kāi (nga) and how spaces that represent home are related to kai and well-being.

Chapter Seven | Kāi (nga)

Kāi (nga), is a play on the Māori term for home which is kāinga. It stems from the idea that kai for many people creates a sense of safety, security, and sustenance. Notions of kāinga are discussed here as a mechanism to *Remember*, *Reclaim*, and *Recall* childhood experiences and feelings surrounding kai and to *'Recover'* from the disruption or disconnect that brought oneself to a lifestyle that is not conducive to being well and staying well. It hopes to navigate thinking towards *'Refocusing'* and shifting mindsets from the colonised and western ways surrounding kai towards traditional ideology and practices that are inherently within us and *'Restructure'* by shifting current choices, behaviours and experiences surrounding kai. It encourages whānau to *'Reset'* lifestyle patterns and behaviours and *'Reconnect'* to self and surroundings.

In this chapter, kāinga is referred to as a psychic space or a place where a person thinks and feels loved and safe. It further looks at kāinga as a physical space where tikanga and kawa are practices around kai. Finally, it speaks to kāinga as a space where metaphysical connections are opened and accessed through karakia, waiata, kōrero, rituals, and practices surrounding kai.

Kai can create visceral (emotional) responses that prompt memories that stimulate and trigger 'feel good' and 'soul filling' moods. These kai correlations with people and place support the beliefs that kai is the centre of culture and religion. These kai experiences are normally associated with activities leading up to, during, and following, kai. This could include mahi tahi (refer to Hākari framework), kōrero, pūrākau, toi, waiata, kēmū, and kanikani to name a few.

This chapter describes the notion of home as being where the heart is. In this chapter I discuss the tūāpapa in terms of our foundational knowledge concerning kai. Kāinga will be discussed in terms of things that inform our kai behaviours and kai practices/tikanga. The first part of this chapter discusses ūkaipō and turangawaewae, the source of our mana as a physical place where you have a right to stand.

The second part of this chapter talks about hau(kai)nga and how we breathe and receive the vitality of life (hau) and discusses ahi kā, the place of our ancestors that we keep warm (fires burning) as a stake of claim to the whenua for future generations. The last part of this chapter discusses “hoki ki te (kāi)nga”, the importance of seeking knowledge with the intent of returning home to fill the pātaka with mātauranga.

Ū(kai)pō

Kia ū ki tōu kāwai tūpuna, kia mātauria ai I ahu mai koe i hea, e anga ana koe ko hea.

Trace out your ancestral stem, so that it may be known where you come from and where you are heading. (Quizlet, 2023)

Ūkaipō in Te Ao Māori refers to the place of your ancestors. It is the place where you have the right to stand and a place that you prepare for your mokopuna. According to Walker (1996), kāinga, ūkaipō and turangawaewae refers to the “home area of one’s ancestors where one feels she or he has a right to stand up and be counted” where kāinga is the “footstool and the place where she or he belongs where the roots are deep” (p. 50). Mead (2016) adds that “whakapapa is also the key to the next component of one’s birthright: the right to be associated with a locality”. He adds to the notion of ūkaipō and tūrangawaewae, stating it is “a place where one belongs by right of birth” (p. 42).

That place for me is Reporua, Ruatoria. It is the place where my ancestors are buried including my grandparents, Nanny Maraea and Koro Mohi. Although I can affiliate to other tribes, whenua, and marae, Tūāuau is my whare tūpuna and Whakamaumahara te tari o te ora me te whare kai. Due to multiple factors mentioned previously, my Māmā left her ūkaipō at the age of 16 years old and settled in Napier. Although she made efforts to take us back to her homelands once a year, it wasn’t the same as being immersed in your ūkaipōtanga and growing up in the community like my whanaunga (cousins). Due to this, although I acknowledge this to be my ūkaipō by birthright, I do not feel the same connection as I do with the whenua, I was raised on in Maraenui, Napier.



Image 7.1. Reporua 1912, shared from the Old Gisborne and Districts Page.

Mead (2016) states that “land was the foundation of the social system, the base, the means of giving reality to the system in the forms of residences, villages, gardens, special resource regions and so on. Continuity of the group depended very much on a home base called *te wā kāinga* where people could live like an extended family and see it on the ground as a working reality” (p. 210). For me this is Pukemokimoki marae, an urban marae established in 2006 in the manawa of Maraenui. And my extended whānau are whānau I grew up with, my sports mates, my work mates. They are the 50 plus kids I whāngai (fostered) over the years who came to stay the night and didn’t go home for weeks, months, and for some years.

A home away from home

Pukemokimoki marae was established for whānau like mine. Those who had whānau migrate to the city in the promise of jobs and houses. Whānau who were now lived away from their traditional ūkaipō. Whānau who lost fathers, grandfathers, uncles, cousins, or brothers to the war and were left with the residue of unfulfilled promises, slowly and surely pushed towards a life away from their ūkaipō, their whakapapa lands.



Image 7.2. Pukemokimoki Marae, Maraenui, Napier. Photo credit: Sally Rye.

The biggest loss from the 'Great Migration' across Te-Moana-nui-a-Kiwa and being away from your ūkaipō was the mātauranga that for generations was passed on from whānau ki te whānau. The ancestral knowledge of the place, people, and space that was carried on tribal waka from our place of origin, Hawaiiki to the new homelands of Aotearoa. This loss was more severe for whānau, hapū, iwi, through the Urban Migration between 1936-1986 from their homelands to the cities.



Image 7.3. Home is where the heart is, tōku papa kāinga in Maraenui, Napier with my sister Christine (left) tōku Māmā and my siblings Leon, Mohi and Gina, Napier city (right). Photo credit: Stephen Rye.



Image 7.4. Kai Rituals, resources for Rongo ā Puku workshops.

How challenging it would have been to live in unfamiliar spaces and places without access to traditional food supplies or knowledge. The thoughts of fear and anxiety would have sat in the minds of our ancestors as the world they knew became replaced by new ideologies, systems, and practices, many of these new ways conflicting with Indigenous values and beliefs. In earlier sections I mentioned the study of epigenetics. Epigenetics is the science and research undertaken by Dr Carolyn Leaf (2013) that found that thought patterns can be passed on through sperm and ova via DNA to the next four generations. What this suggests is that my generation and my children’s generation are impacted by the trauma of colonisation. The unsettling thing about this is that many are not aware that they are carrying the residue of their ancestors’ thoughts. Could this be why many Indigenous People are searching outward for answers to heal that unconscious mamae?

When my Māmā arrived in Ngāti Kahungunu she needed to adapt to a new environment. As she became familiar to the place and plants there were other things to consider such as

the maramataka. Like when her ancestors arrived in Aotearoa, Mum would have gone through trials and tests before gaining confidence and new knowledge relevant to the landscapes, whenua, and conditions in Napier. My Dad was a big part of this journey as well. The mātauranga I hold comes from this place of knowing, Ngāti Kahungunu, and what I have passed on to my tamariki, mokopuna, and whānau I work with.



Image 7.5. Māmā and I, joining the E Oho Kahungunu movement in 2006. Photo credit: Stephen Rye-Dunn.

In a study with migrants who have settled in Auckland, Longhurst, Johnston and Ho (2009) suggests that smells, tastes, sights, touch, and sounds trigger the cultural consciousness that draws individuals to memories of family, friends, and places as they share their stories. They noted that “food can evoke a familiar sense of taste, texture and smell as well as create a new sense of taste, texture and smell by helping people to create a new visceral association between their country of origin and their new country” (p. 333).

The women involved in the study talked freely about their personal struggles and strategies they had employed to keep connected to their homelands and culture. By growing and cooking food that was familiar to them, they avoided the fear of assimilation, and retained their identity in their private spaces. Longhurst et al., (2009) reported that by reproducing

recipes from home, the participants of this study were guarding against assimilation, asserting their cultural specificity by maintaining dimensions of their subjectivities” (p. 334). The visceral response to the use of food was a mechanism toward understanding the emotional, spiritual, and cultural experiences of women migrants. Reflecting on the history and the assimilation of Māori families into the western world, as it happened so insidiously, the traumatic process and untold stories of this process are yet to be shared.

Recognising family celebrations, religious, and cultural beliefs is a mechanism to bring family together around kai and is a significant contributor towards family rituals. Worth mentioning also is the findings of Smit (2011) that “intergenerational family rituals provide a sense of continuity, connecting not only to the past with the present, but also fusing a link with the future” (p. 364). This is a fundamental concept that supports the idea of using kai to bring the past, present and future (Inamata, onamata and anamata) together using the principles of the Hākari framework to ensure a more sustainable future for generations to come.



Image 7.6 (Left) ice cream memories with my siblings Mohi, Leon and Gina photo credit, Stephen Rye, (middle) selfie with my mokopuna Ariki Erueti making ‘dairy free ice cream’ memories, and (right) my daughter and her whānau. Photo credit: Wiari Matehe

In the past 40 years, Māori families who have migrated globally have mainly gone to Australia. My sister and her whānau left Aotearoa in the early 90s and my two brothers and their whānau followed. They adorn their homes with cultural taonga, join haka rōpū and

celebrate significant events with Māori kai and entertainment as an approach to staying connected to their Aotearoa roots. Surrounding themselves with things Māori enables them to hold fast to their cultural heritage. Smit (2011) presents themes around family connection, functioning and stability implying that rituals are what strengthen and build identity, safety, and a sense of belonging. Roles and responsibilities that family members contribute towards the rituals and how these evolve over time are also discussed by the authors.

When whānau have moved to another country, it is difficult to share the responsibilities. When Mum was diagnosed with dementia, I was fortunate to be living in the same country. Although it was not easy to leave my whare, my mahi and my whānau in Tauranga Moana, it was logistically possible. I was also grateful to be working for a Māori Organisation that responded to my situation with aroha. My Manager, Hinerangi Ngatai and Director, Shireen Maged created opportunities for me so that I could transition back to my kāinga and care for my Māmā.

The Hākari model has been inspired by the notion of kāi (nga) stressing the importance of the process that includes learning and values leading up to a feast. Traditionally, the feast was not the main event, it was the process of gathering kai, preparing, and cooking kai, and sitting together as a whānau engaging in kōrero, waiata, pūrākau, and katakata (laughing) as kai was shared across generations.

Dr Rose Pere (1997) suggests that hākari goes beyond a physical experience and crosses over into other domains of our being. She states that “hākari involves group cooperation, a working together, to give the feast a special feeling about it, a feeling that marks a special occasion”. She further affirms that “every member of the whānau is expected to make a contribution” (p. 38) warning that the spirit of Hākari is lost if all members are not involved in the hākari process.

Walker (2004) adds that the “tribal feast was symbolic of chiefly or tribal mana. The feast reflected deeply held values relating to feed, power, and prestige” (p. 76). Coastal tribes would boast delicacies specific to their region such as kai from the moana including seafood,

fish, shellfish, crayfish, and edible seaweed. Inland tribes brought eels, freshwater crayfish, and shellfish above all potted birds to the hākari. The hākari was a time of unity, sharing, and celebrating life. Breaking bread – kai memories – being aware makes you feel connected – lights of heaven.



Image 7.7 Ngāti Kahungunu Omahu whānau 1899. Source: Ref: PAColl-5584-02. Alexander Turnbull Library, Wellington, New Zealand. /records/23038526

Hau kāinga

In this section, I present the notion of hau kāinga by examining the concept as hau ki te kāinga or the home where our hau is seeded, nurtured, thrives, and revives. It is also the place where we share our hau freely with whānau. Hau in this context refers to the ‘breath’ and ‘vitality of life.’

The places where my hau is seeded, nurtured, thrives, and revives are my papakāinga which is the home and whenua where I was raised and nurtured, and my tūrangawaewae which is our marae that was erected in the manawa of Maraenui, Napier in 2006. Home is also my parents, my children, and my mokopuna. In essence, it is where and with whom, my hau is ignited, nurtured, and thriving. To me it is where you catch ‘hau’, where you seed ‘hau’, and where you share ‘hau’ with others. In relation to the idea of hau kāinga, this to me means the ‘home of your hau’.



Image 7.8 Home is where the manawa is. Mum and Dad with my daughter Charlizza. Photo credit: Sally Rye

Ahi kā

Ahi kā typically refers to keeping the fires burning. According to Mead (2016), “ahi kā required those who used the land to maintain the ability to control the land through continued use and occupation”. He further states that “the whānau, hapū and iwi were obliged to protect the land and exercise guardianship over it” (p. 77). This was to ensure that the provision of land would be available for the next generations.

Tikanga surrounding kai

As long as I can remember, I have always held a perception that the role of being a good host is essentially to feed your guests abundantly. Working within government sectors and Māori organisations for the past 30 years, the notion of ‘providing a kai’ has been an integral part of welcoming people into environments and spaces. It was considered disrespectful or rude if you didn’t provide enough kai (food) which further validated my perception concerning hosting.

According to Barlow (1991), “manaaki is derived from the power of the word as in mana-ā-ki and means to express love and hospitality towards people” (p. 63). Tā Hirini Moko Mead (2016) further adds that “while manaakitanga is closely linked to the provision of food and

lodging it is wider in its implications. For example, the principle begins before the manuhiri arrives, that is, in providing for the visitors, in ensuring the grass is cut, the place is clean, there are seats for the visitors and shelter from the weather” (p. 96).



Image 7.9. Hāngī with a large group of men, women and children gathered round. Source: Ref: 1/2-065962-F. Alexander Turnbull Library, Wellington, New Zealand. [/records/50883379](#)

I spoke to Kiwi Rameka, a caterer based in Upper Hutt about the kai provided to guests at Ōrongomai Marae. Generally, the marae has made shifts towards providing healthier kai options for guests. However, they negate some of these meals by also serving up other options such as boil up, fried bread, butter and steam pudding which are high in fat, salt, and sugar. Furthermore, they tend to fill the tables up with generous and diverse amounts of kai, enabling guests to pile up their plates and eat more than what is required (personal conversation, 1 May 2020).

This provision of these ‘marae favourites’ according to Kiwi, is tangata whenua (people of the land) way of showing love to their guests and making them excited about the food they receive. Kiwi is aware however that in the process, they could be “loving their whānau to

death” and agrees that more awareness of kai that promotes well-being is required on the marae.

Oahu based Indigenous youth worker; Leslie McKeague shared her views on kai. In her experiences, western influence has had a significant impact upon the psychology of food concerning native mea'ai (food) and the health of Native Hawaiians. Fortunate to be raised by her grandparents, the food she was raised on was still perpetuated with traditional staples and, with this, education around what they were eating and why.

Prepared by the hands of her grandparents, foods were ethnic and rich in vitamins, minerals, containing all the nutrients needed to sustain the family. She has carried this attitude and behaviour towards food throughout her life and even though over the years she has indulged in western foods, she always returns to the teachings of her grandparents, especially when she notices the physical, spiritual, and cognitive impacts (personal conversation, 28 May 2020).

I spoke to local Rangatira and Kuia, Marama Hikatanga Furlong (Māori, Te Arawa, Mataatua, Tākitimu, Aotearoa) about traditional understandings of lifestyle for the mana whenua o Tauranga Moana (personal communication, June 11th, 2020).

Growing up in Maungatapu, a small Māori settlement central to Tauranga Moana, Marama (affectionately known as 'whaea Ma' to the locals) describes her childhood during the 1930s to 1940s as enriched in tradition, culture, and habitual practices. There was a time and season for everything and every whānau member was actively involved in doing their part to contribute to the sustainability of the whānau and hapū.

From the age of five years, whaea Ma was provided her own kete (kit) to use when collecting kai from the plantations, forests, and sea. Mahi, education, and recreation were intertwined with every activity involving an opportunity for mātauranga to be seeded and evolve as she did. Remembering her upbringing, whaea Ma shared how “the land and sea were our playground, we were always outdoors and finding things to do, never sitting idle. This is why

I am so active today; it comes from when I was growing up on the Pā” (personal communication, June 11th, 2020).

Kai was always plentiful and predominately sourced from fruit and vegetables. When collecting kai, they only took enough for the day and would share amongst the tribal village. Whaea Ma explains that kai was provided for sustenance whereby you only ate what your body needed at the time. She has carried this philosophy into her adult life, and at the age of 84 years lives a full, active, and vibrant life.

Whaea Ma believes that we are the teina to our environment highlighting that “birds are our tuakana, fish are our tuakana, kūmara are our tuakana. Kai is provided by our atua on earth, each of these atua live in us and that is why we can take what we need to sustain us. Papatūānuku, Tangaroa, Tāne Mahuta, Haumia-tiketike, they all provide for us, so we need to respect and value them by taking care of the environment, take only what we need and give thanks and gratitude through karakia” (personal communication, June 11th, 2020).

Kaitiakitanga, access to kai and wai

For hapū-based marae, the tribal boundaries and roles and responsibilities are clear in terms of guardianship and the responsibility of what lays beneath their feet. According to Rewi and Hikuroa (2023) “the principles and values which underlie kaitiakitanga are centuries old. Seeking balance with natural resources is not only necessary for Māori economic survival but is an inherent obligation to the well-being of future generations. It creates a whakapapa link between the past and the future, the spiritual and the human realms, and to ensure long-term survival, the environment must be protected” (p. 1). With urban marae it is a little more complex. Roles and responsibilities are based on volunteers and who is around.

Ako, wānanga, sharing the mātauranga Māori, kai systems, maramataka, māra kai

He aha te kai o te tangata?

Knowledge is not knowledge until it is shared. (Tiwana Aranui, personal conversation, 2023).

Intentional spaces need to be created for tribal knowledge so the principles of kaitiaki can be localised, shared, and nurtured. This is the same for urban and hapū-based marae.

Rangatiratanga sustaining a healthy pae and succession.

An intentional effort to build the paepae is required in all marae. Urban marae are more vulnerable where there is no whānau whakapapa to carry the responsibility.

Ngaro atu he tētēkura, whakaete mai he tētēkura

When one chief disappears, another is ready to appear. (Elder, 2020)

The following critical areas of development are provided in kura me te wānanga, however, according to Tiwana Aranui, a platform to enact these learnings continues to be lacking. This is where urban marae can become the classroom of life (personal conversation, 2023): Whaikōrero, whaiwhakaaro, karanga, kapa haka and pūrākau.

Te manawa o te marae

Following on from the previous kōrero, the heartbeat of the marae is the people. Having the whare to hold the knowledge on the walls and floors in a physical and metaphysical sense is important. However, equally important is creating spaces for the development of physical spaces where the transference of mātauranga can occur.

E koekote tūi, E ketekete te kākā, E kūkū te kererū

It takes all kinds of people. (Elder, 2020)

People need a space to belong and to walk in life alongside the heartbeat of others. This is where the importance of spaces that enable intergenerational vibrations to connect is critical. What is also important is the provision of a physical place to invite others to come and plant their seeds and a place for them to return to in times where they feel lost and need to reconnect. For those who have been displaced from their whakapapa marae, urban marae is the best option.



Image 7.11 Thomas Nepia, Palmerston North, planting seeds in Ngāti Kahungunu. Photo credit: Wiari Matehe

Hoki ki te kāinga

Having Matariki recognised as a national holiday demonstrates a shift in the thinking of governance in Aotearoa. It suggests that leaders recognise the significant place that Māori systems of science and knowing have in the wider communities throughout the country. In receiving an honour for his contributions towards this huge milestone, Professor Rangi Mataatua hoped that Matariki would be seen as part of our national identity (Stuff, 2023). The theme for Matariki 2023 was Matariki kāinga hokia (return home to the place of your ancestors).

Nukutawhiti was a Rangatira from Hawaiki and one of the early captains and navigators who sailed to Aotearoa. His grandfather Kupe is accredited with discovering Aotearoa when he chased the giant wheke to the land of the long white cloud.

*E tū te huru mā
Haramai e noho
E tū te huru pango
Hanatū e haere.*

*Let the white hair remain here
Let the black hair get up and go
We must follow our dreams. (Elder, 2020)*

Some will set out on a great voyage with no intentions of returning to their homeland. When I migrated to Wellington in 2007, I always had an intention to return home. Over the years I was away, I believe the important factor that kept me connected to my kāinga was that I returned home every fortnight. Fortunately, I had whānau who stayed with my parents, keeping the fires burning while I was out filling my kete with mātauranga and lived experiences.

Moving away from my kāinga came with many challenges, which as mentioned earlier had a great impact on my hauora. One thing that stood out was how much I appreciated the notion of home. Each time as I would return to my whenua, my moana and my kāinga, I would feel the vibrations of hau greet me before my eyes touched any physical landmark or sign, this was a tohu that I was home.

Kimihia te mātauranga

Kimihia te mātauranga relates to the notion of exploring the world to fill your kete with the view that you will return home and adapt the knowledge to make it relevant in your kāinga for your people.

*Te manu kai miro
Nōna te ngahere
Te manu kai mātauranga
Nōna te ao.
The bird that eats the miro berries theirs is the forest
The bird that consumes knowledge
The world is theirs. (Elder, 2020)*

Hokinga ki te kāinga, ka kī te pātaka

Seeking beyond what is in front of you and applying what you have learnt is a part of filling the pātaka of mātauranga in your kāinga. This includes keeping your mind and tools sharp and returning home to fill the pātaka.

This chapter described the notion of home, where the heart is. Tūāpapa was discussed in terms of our foundational knowledge concerning kai alongside the notions of who is in your corner (wāhi), and what it is that informs our behaviours and practices/tikanga. Ūkaipō and tūrangawaewae were also discussed as was the source of our mana and the Indigenous idea of being responsible for what is above your feet. The second part of this chapter talked about hau kāinga and how we breathe life or keep the fires burning – ahi kā into the place of our ancestors as well as hokia ki te (kai) ngā – the importance of returning home.

Chapter Eight | E whitu ngā pou Hau Ora Framework in Action

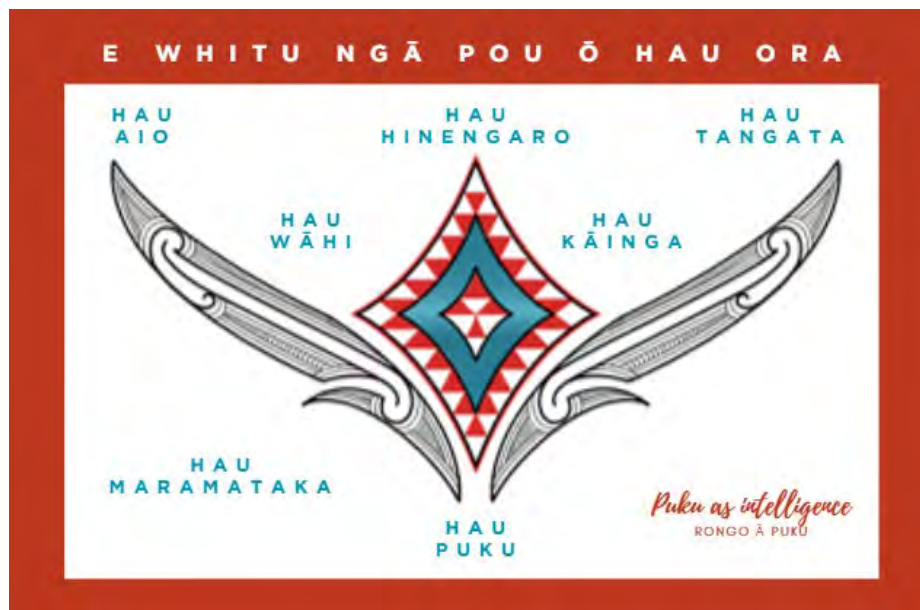


Image 8. E whitu ngā pou o Hau Ora, The 7 tenets of Hau Ora framework.

Source: Rongo ā Puku resources.

This chapter looks at RāP in action. It presents five models of how ‘E whitu ngā pou o Hau Ora/the 7 tenets of Hau Ora’ framework has been applied. These include the journey of my Māmā, Wā Hine-Making time for Us, Moko Boys, the Ellis-Thomas Wāhine – Intergenerational whānau and Kahu Scaffolders.

E kitea ai ngā taonga o te moana me mākū koe.

If you seek the treasures of the ocean, you’d better get wet. (Elder, 2020)

The journey of my Māmā

As mentioned in the beginning of this thesis, Mum was diagnosed with dementia in November 2021. Our whānau felt helpless as we witnessed her slowly deteriorate in what we thought was a disease taking her away from us. On further investigation and kōrero as a whānau, we believe it was an episode of imbalance and disconnection. Despite Mum currently living free from the symptoms and behaviours that were associated with her

diagnosis, the doctor she was seeing was not willing to re-test her, arguing that dementia is not reversible, and that she had scored in the high percentile of the condition.

We can't change the narrative that the doctors prescribed her, however, we can share her story in the hope that it may inspire other whānau.

Hau Aio – Focus on celestial connections, a metaphysical source of kaha for the tinana.

Mum has always been our prayer warrior. Actively present at the births of her mokopuna who live in Aotearoa and a few in Australia. Having Mum at the birthing provides a wairua security blanket and kaha when physically the experience hits exhaustion points. He whakaaro Māori, the spiritual element will carry the process when the tinana is weary and weak. Mum was the one who was able to tap into that space for me when I had my children and needed a wairua korowai of strength.

When Mum was told she had dementia, what we as a whānau think happened is that she believed it and started to rise to the diagnosis. It was as if her tinana was doing what the diagnosis wanted it to do. The advice from the doctors was not in line with what we would consider to be good quality of life. Basically, we were told to keep her home and comfortable.



Image 8.1. Tōku Māmā with whaea Arapera, He wahine Māori, He Mareikura. Photo credit: Sally Rye.

Mum had even stopped talking to God. So, when I came home, I asked her to start praying for our whānau and we noticed that she began to remember more and more as she wove the names and situations into her karakia. When my niece Ruby was birthing her son Ryeteous, she invited Mum in, and Mum naturally fell back into her wairua role in the birthing space.



Image 8.2. Tōku Māmā. Photo credit: Sally Rye.

Hau Puku – Puku ora, restoring the gut as a kaha for imbalance of the gut microbiome.

Changing mum's kai patterns was a significant part of her recovery. Before I arrived home and became her fulltime caregiver, she was in and out of hospital. We were told that she was forgetting to eat and doubling up on her medication. Due to the symptoms, she was enacting, she was forgetting to eat or eating throughout the day and was unaware of when she had taken her pills. We decided to try Mum on intermittent fasting. Her last meal of the day was around 7pm with her pill and her breakfast around 10am in the morning with her first pill. This seemed to make a big difference in her recovery, and we noticed the inflammation reduce in her joints, and her energy levels and motivation rise. We cut down on her meat, sugar, and fat intake, and removed all alcohol.

One of the biggest changes with Mum's kai before I returned home was her breakfast. It was important that when she was breaking her fast so that she was getting a good balance

of nutrients. Rather than change it too much however, we added and swapped out a few things. I am not a fan of cereals; however, it was the one thing Mum loved, and we decided to keep it in there (but only half of what she was having). We filled her bowl with walnuts (good fats), probiotic yogurt instead of milk, maple syrup instead of sugar, and polyphenols(berries). We noticed that there was a difference in her moods, and that Mum's breakfast seemed to sustain her until dinner (which consisted of mainly vegetables, herbs from her garden, and light meats). We (re) introduced herbs and rongoā. Rosemary became a staple in Mum's kai patterns.



Image 8.3. Toi Matarua me tōku Māmā. Photo credit: Sally Rye.

Hau Hinengaro – changing the thought patterns created by the diagnosis.

Getting Mum out and about and interacting with people was key to her feeling useful and purposeful. This was a key contributor to changing Mum's mindset and getting her out of thinking she had dementia. My daughter gave her little jobs to do such as making rongoā for rangatahi events and fundraisers and getting her involved in kai preparation at wānanga. We started to change the narrative around her condition and flipped the diagnosis on us

when Mum would remember things that we had forgotten. Ahhhh kua wareware au, we would say, we must have dementia aye Māmā. She thought it was hilarious.

Hau Tangata – Our team, communities of care for Mum

Having a team to support mum in her recovery made a huge difference. Before I returned home, the main weight of responsibility sat with my nieces Hana and Shoni. Coordinating a whānau approach to the situation enabled us to be more efficient with our time and contributions towards supporting mum.

All Mum’s mokopuna got more involved, coming to visit more often, and taking her on whānau events and kai at the beach. Mum would look forward to getting picked up and watching the mokopuna in their sports and cultural events. Even now she has recovered, the whānau still pick her up regularly which she enjoys.



Image 8.4. Mum’s 80th Birthday celebrations. Photo credit: Andrew Strickland.

Hau Wāhi – Creating spaces for remembering.



Image 8.5. Mana wāhine softball game, Akina Park Hastings. Photo credit: Sally Rye.

Getting Mum out and about and interacting with people and places was a strategic way of stimulating kōrero and getting Mum's mind turning and remembering. It reminded mum that she had a whole community in her corner and alleviated much of the burden on the whānau, allowing us to take a breath in the initial stages where Mum was fully reliant on our care. The little things that whānau did such as my partner sharing a kai with Mum once a week, so I didn't need to cook, or my niece picking her up for Sunday roast, was a huge relief and allowed time for me to reset.

Hau kāinga – Bringing the kāinga to Mum.

When the doctors told us that Mum was unlikely to get through the year, we planned a big celebration for her 80th birthday. At that time, we didn't even know if she would make it. However, as each week went by, she looked forward to her whānau arriving from Australia to share her special day. We noticed in the month of her birthday, she got stronger and stronger, in anticipation. On the day of her birthday, all her children and most of her grandchildren and great grandchildren made the effort to attend, making it a very special occasion for all of us. It was the first time in around 20 years that all my siblings and parents had been together at the same time.



Image 8.6. Tōku whānau. Photo credit: Andrew Strickland

Hau Maramatanga – Reconnecting Mum with te taiao

Mum was brought up near Reporua, Ruatoria beach. It is a mission to take her back to Ruatoria, however, we found that the memories of growing up were triggered by being on our local beach in Napier. Mum retold stories of how she lost her Māmā while collecting shellfish. She remembered the breath of Tangaroa, “I actually feel awake now”. Reconnecting Mum with te taiao has definitely played a huge part in her recovery and ongoing strategy for maintaining well-being.



Image 8.7. Awatoto beach, Napier. Photo credit: Sally Rye.

Moko Boys

Moko Boys is an initiative that was born out of several factors, including my Mum's journey. When Mum became unwell, we found it very difficult to access any support services. Although my whānau were doing their best around their other whānau commitments, Mum was often left alone for long periods of time. She was beginning to forget important things like eating and taking her pills consistently. One of the tohu that spoke to us when she was deteriorating in her well-being, was her māra. Her gardens were overgrown and not producing kai. Inside her whare the plants were drooping, and some we lost.

Moko Boys was a mechanism that reconnected Mum to her surroundings. We noticed in our community that other nannies and koro were feeling isolated and before long we had 20 kaumātua on the programme alongside Mum. The Moko Boys made themselves available to do odd jobs for local kaumātua including mowing lawns, washing windows, cleaning cars, and māra kai. It was beautiful to see the interaction between these generations as stories were shared and banter exchanged.

One of the findings of this study reveals how kai, kōrero, and kaupapa can optimise cognitive functioning. We noticed with Moko Boys that the kaumātua involved, including Mum, started to remember the names and faces of the young people. This indicated that the symptoms of dementia, Alzheimer's and memory loss can be slowed down when our kaumātua connect positively with the vibrations of people, place, and purpose. Moko Boys is a rongoā that allows this connection to happen in a natural way and is making a difference in our kaumātua quality of life.

Hau Aio – Ko wai a(hau), cultural identity as a tool for kaha and resilience



Image 8.8. Te Rākatō Marae, Mahia. Journey of knowing ko wai a(hau) involves connecting with culture and spirituality. Photo credit, Sally Rye

As part of their leadership training and development, the Moko Boys' rangatahi attend wānanga where they learn about local tikanga and kawa. Along with learning about traditional mātauranga systems of well-being, they learn about identity through a process of understanding ko wai a(hau) – knowing that they live in duality, and that within them exists flesh and a divine spirit.

In learning how to navigate between the energies of Tūmatauenga and Rongo-mā-Tāne, it is important that the rangatahi understand the 7 tenets of Hau Ora, and how their hau can impact others. The following images show their interactions in igniting, developing, and engaging with the 7 tenets of Hau Ora.

Hau Puku – mātauranga around kai



Image 8. 9 Pukemokimoki marae, learning about Kai sovereignty, kai science and kāinga.

Photo credit, Sally Rye

Hau Hinengaro-becoming architects of mental real estate.



Image 8.10. Cleaning windows at the marae. Shifting mindsets, giving purpose to our rangatahi and kaumātua and the celestial bond they share. Photo credit, Sally Rye

Hau Tāngata – Communities of care



Image 8.11. Surrounding our rangatahi with communities of care so that they can stand in their own mana. Photo credit, Sally Rye

Hau Wāhi – Creating spaces for kai and kōrero.



Image 8.12. Sharing kai and kōrero together. Photo credit, Sally Rye

Hau Kāinga – A home away from home



Image 8.13. Planting seeds at Pukemokimoki Marae. Photo credit, Sally Rye

Hau Maramataka – Learning mātauranga ways of planting



Image 8.14. Learning about the Maramataka and how this applies to well-being at Te Poho o te Tangianui Marae, Napier. Photo credit, Sally Rye

Wānanga were held throughout 2022 and 2023 connecting rangatahi to people, place, and space. Workshops on Te Maramataka, Matariki, Hākari, Māra Kai, and the 7 Tenets of Hau Ora were offered to young people, locally, nationally, and internationally.

Wā Hine

Wā Hine is a space created by Toi Matarua for wāhine to encourage engagement in noho puku. The concept was offered by Harlem Cruz Ihaia during a workshop with our first cohort of wāhine completing the seven-week puku ora challenge. Wāhine wear multiple pōtae and take on many roles and responsibilities. Before anything we are daughters, sisters, cousins, aunties, mothers, and grandmothers. In some situations, we fill the space of absent fathers and grandfathers.

What this research found in the initial stages of investigation was that the two greatest challenges to sustaining health and well-being is time and space. Wā Hine urges busy wāhine to set time aside and pause, breath, and then remember, reclaim, recall, recover, refocus, restructure, reset, and reconnect. The Wā Hine programme involves seven weekly workshops concluding with a three-day noho at Waimarama beach. Key focus areas of this study have been woven into the Wā Hine sessions that covering kai sovereignty, kai science and kāi (nga)

In the past two years, with the help of Toi Matarua and Te Wānanga o Aotearoa, we have successfully completed two Wā Hine programmes, the first held in September to November 2022, and the second in May to July 2023. Wāhine found the time invaluable and life changing.



Image 8.15. Wā Hine rōpu 2023. Photo credit: Sally Rye.

Hau Aio – connecting to metaphysical kaha.

Working with these wāhine was a beautiful experience. I was able to be a part of transformational ideology as I saw wāhine experience ‘hau moments and spiritual awakenings. It is an amazing thing when wāhine meet on a celestial plane and become in tune with the vibrations of hau. The sharing session that opened space to discuss kai experiences when growing up came from a place of familiarity and knowing. What this created was a spark of remembering around how Indigenous People act and behave toward kai. One participant shared how she was brought up on kai Māori, “growing up around kai always involved whānau and nutrition was what Mum cooked including terotero, ika, mana poaka. Whether it was roasted or fried, it was always around whānau and that was my nutrition. We knew where our kai came from and although I didn’t know at the time, reflecting on it right now, we practiced the maramataka. We had rituals for everything around kai” (wāhine participant, 2023).



Image 8.16. Workshop on the beach on mindfulness, Wā Hine 2023. Photo credit: Sally Rye.

Hau Puku – intuitive knowing

The kai was all provided by Lil Miss Ringawera and was well received. One participant commented, “Miss Ringawera and rangatahi, ngā mihi – beautiful kai, beautiful vibes, beautiful all-round Mauri Ora. I didn’t realise I followed Miss Ringawera on TikTok lol” (wahine participant, 2023). Another shared, “I was worried what we would be eating at the wānanga, but I was pleasantly surprised, I didn’t realise pai kai could be so friken delicious!” (wahine participant, 2023). One wāhine stated, “I can’t wait to try out some of the recipes we learnt in Lil Miss Ringawera’s workshop, they are so practical and the ingredients I already have in my pantry” (wahine participant, 2022).



Image 8.17. Lil Miss Ringawera, Wā Hine 2022. Photo credit, Sally Rye.

Hau Hinengaro – Shifting mind sets.

The wāhine completed the programme feeling inspired and empowered. The new mātauranga in their kete was ready to share with their whānau. One participant said, “I have learnt so much; it has really helped kick start my forever journey. Being a Mum of five, it has been hard for me to find time to work out where to start but the knowledge, resources, and support has allowed me to take control of what I am feeding my whānau. I am really excited on where this is going to take us as a whānau” (wahine participant, 2022). Another wāhine stated, “I gained an understanding of how science and mātauranga can hiki (lift up) each other within the hauora space, for ourselves, and by extension our whānau, their whānau, hapū and iwi” whilst another participant shared, “the mātauranga was appreciated. Sally, thank you for your generous koha of mātauranga and of aroha that has added to my kete of Mauri Ora” (wahine participant, 2023). A further wāhine highlighted, “I continue to sit in a space of reflection, trying to capture every aspect, every treasure, every feeling and thought” (wahine participant, 2023).



Image 8.18. Taking time to pause. Photo credit: Sally Rye.

Hau Tāngata – Communities of care

The power of bringing wāhine together in wānanga was that everyone who entered the space had something to offer. Sessions were designed to enable each participant to share their pūkenga, making this movement a shared responsibility. One wahine commented, “Sally you were an amazing conductor, I was a part of a band that contributed a beat that was instrumental for me. In synchronicity, to participate in. Hī Hā” (wahine participant, 2023). Another participant shared, “I wholeheartedly was overwhelmed with gratitude as I sat amongst giants, mana wahine, a privileged space. I felt that as Wā Hine, we shared something so unique, so sacred it was a beautiful experience” (wahine participant, 2023).

This study affirmed the power of ihi that exist in these spaces. It is powerful, inspiring and can transform mindsets. When we bring our pūkenga together, the momentum is unstoppable. Further insights into how we sustain the ihi once the group disperses is required.



Image 8.19. Wā Hine cohort 2023. Photo credit: Sally Rye.

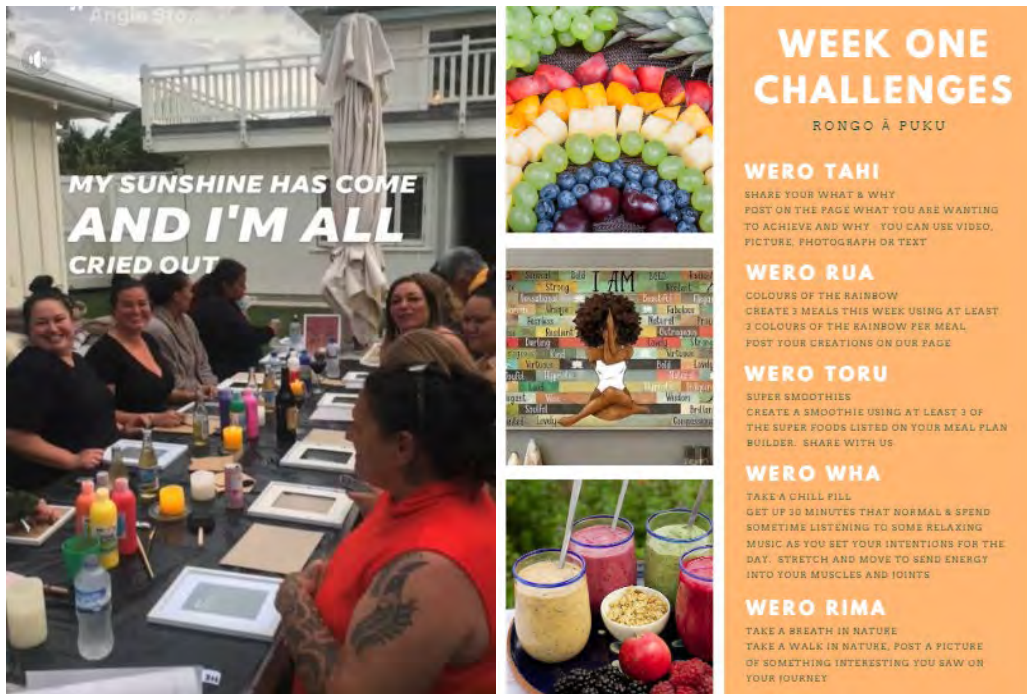


Image 8.20. Wā Hine Resources. Photo credit, Sally Rye

Hau Kāinga – the breath of home.

One wahine shared, “we grew up at Huria Marae surrounded by intergenerational whānau. I recall nan’s māra and seeing her picking and harvesting before 8.30am, a specific time for

watering gardens, I was very fortunate. Kai was plentiful and the soil was rich. Our homestead is next to the marae, and I have returned home to raise my three tamariki there. We teach them all about hunting and gathering, the skills we learnt growing up so that the mātauranga will never be lost” (wahine participant, 2023).



Image 8.21. Resources to implement at home. Photo credit: Sally Rye.

Hau Wāhi – Creating time and space.

One wahine shared, “the greatest outcome for me was the koha of time, the time we had to be Wā Hine, the time we had to just BE, the time we had with one another, the time we had in sharing, the time we had in learning, e kore e mimiti te reo o mihi kia koe me tō whanau” (wahine participant, 2023). Another said, “I’m still overwhelmed with it all. It was lovely to pause and enjoy peace, tranquillity, and just breathing. Learning how to take care of ourselves and how to be better and appreciating nature and being with other wahine Māori, just amazing to be in the moment and listen and learn. I learnt some good tips to start me on my wellness journey” (wahine participant, 2023). A further wahine highlighted, “Words cannot express what that time away in wānanga did for me. Traveling to

Waimārama and home was so awesome. I have so much to thank you for by creating the space of healing and reconnecting in so many ways and on so many levels for all” (wāhine participant, 2023).

The timing was perfect for these wāhine who were ready to engage in the process, one stating, “I have no words to describe or express how appreciative I am to have been invited into the wānanga space, a beautiful space. To be honest, divine timing was at play here” (wāhine participant, 2023). Another wāhine shared, “this is such perfect timing, I had been thinking about doing something for weeks and was really excited when I got the call to be a part of this beautiful kaupapa” (wāhine participant, 2023).



Image 8.22. Rongoā workshop, Wā Hine rōpū, 2022. Photo credit: Sally Rye.

Hau Maramataka – personal journals.

The wāhine were provided with journals to support them on their journey. The journals provided a 28-day mātakitaki reflection resource aligning to the maramataka. One participant said, “I love the journal, it helps me to track the basic things like kai and wai, sleep and mahi. What I find most useful is that it provides me the tools to noho puku, reflect on what the moon is doing and how this impacts my energy levels and all the mātauranga in the front part of the journal is gold! Having tools and strategies to help get me up when I lose momentum is amazing!” (wāhine participant, 2023).

The overall message of this kaupapa is that our hauora journey is one that has no destination. It is one that requires constant attention as conditions and situations shift and pivot.

Sarah Pihema's story, 2022 Wā Hine graduate



Image 8.23. Sarah just before she started the Wā Hine programme (left), and Sarah and her partner Jah after completing the Wā Hine programme in 2022 (right). Photo credit: Andrew Strickland.

Before doing Wā Hine I was on opioids, acid pills, and anti-depressants meds. It all started with my endometriosis three years ago and then the vicious cycle of taking a pill to fix a problem. Doctors didn't really explain to me what was going on and I just trusted that was what I had to do. My health was snowballing and immune system out the gate! I was in and out of hospital and was praying for a lifeline. After being on the programme for a couple of weeks, I noticed the change in energy, and started to gain momentum with better kai patterns.

The Wā Hine wānanga was just what I needed to really reflect on everything I had learnt and put a plan in place for sustaining my hauora. It has been a year now and I am completely off all the meds and using kai as my rongoā. My partner has just completed a rongoā course and has been making me natural remedies. The Wā Hine programme has helped me to gain sovereignty over my well-being. I have the energy and confidence to engage fully in what is important to me including a Masters in Indigenous studies. I have just successfully completed the first year of my studies and couldn't have done it without having control over my health. I have also

travelled to Hawaii and Rarotonga this year and work full-time. The best thing about Wā Hine is that the knowledge was already there, it just needed to be awakened and the tools and journal that Auntie Sally provided were relevant and easy to use. I am now passing on the mātauranga to my whānau.

The Ellis-Thomas Wāhine – Intergenerational whānau

This study involves a case example of an intergenerational whānau. The whānau selected was 53-year-old Trish Thomas (nee McKenzie) nō Tainui, 32-year-old Catherine Ellis (nee Blom) nō Tainui and Rarotonga, and 15-year-old Julia Ellis nō Tainui, Rarotonga, and South African descent.

The following images speak to their journey exploring the 7 tenets of Hau Ora.

Hau Aio – Reconnecting to culture

*Ruia taitea,
Kia tū ko taikākā.*

Strip away the sapwood, the heartwood remains.

Reveal who you really are. (Elder, 2020)

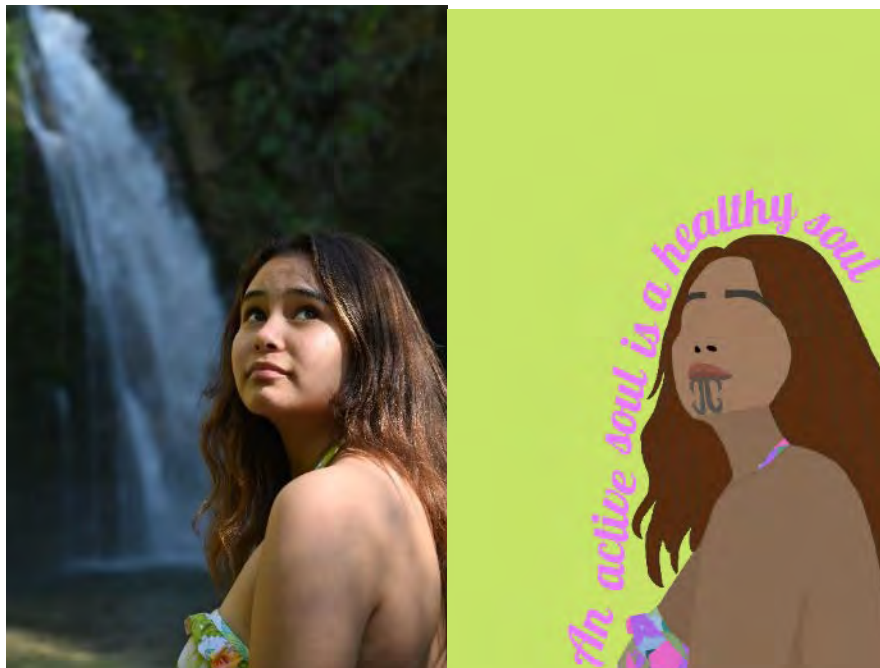


Image 8.24. Julia Ellis, unleashing the kohine within. Photo credit, Sally Rye

Julia is a third-generation non-native speaker of te reo Māori. Since engaging in the Toi Matarua leadership programme ko wai a(hau) she has reconnected with her taha Māori and developed a passion for exploring this deeper, and has started learning te reo Māori at school, and within Toi Matarua. The eldest of five siblings, her ihi has impacted her younger sisters who are now getting more involved. Her Mum Catherine and Nan Trish have also become more proactive in leaning into their Tainui whakapapa. In 2022, Trish enrolled in a Level 4 Rongoā programme at Te Wānanga o Aotearoa.

Hau Puku – Engaging in Puku Ora to break patterns and behaviours around kai.



Image 8.25. Creating space to engage in sharing each other’s vibrations. All three wāhine have been a part of the Wā Hine and Rongo ā Puku workshops and wānanga learning about kai sovereignty, kai science and kāi(ngā)kāi(ngā). Photo credit, Sally Rye

Hau Hinengaro – Shifting mindsets.



Image 8.26. Changing the narrative and mindsets around kai. Childhood traumas are being set free and new patterns and behaviours are emerging. Photo credit, Sally Rye

Hau Tangata – Communities of care.



Image 8.27. Connecting to a larger network of whānau, knowing that they can pull in support and resources when needed. Removing barriers that were held up by feelings of fear, anxiety and isolation. Photo credit, Sally Rye

Hau wāhi – creating space to connect and uplift each other.



Image 8.28. Accessing spaces to reset, reflect, and refocus as wāhine. Photo credit, Sally Rye

Hau kāinga – Home



Image 8.29. Creating positive and uplifting memories surrounding kai. Photo credit, Sally Rye

Hau Maramataka – being in the elements.



Image 8.30. Connecting with te taiao as a source of kaha, mana, and mauri. Photo credit, Sally Rye

Kahu Scaffolders

Award winning Hawkes Bay based business; Kahu Scaffolding was recently commended Hawke's Bay Chamber of Commerce for its outstanding progress in recent years. Their remarkable growth is testament to their dedication and hard work establishing a strong presence in the industry. Kahu stands out from other companies in the industry as the leadership team offers mentorship, guidance, and personal development opportunities for all kaimahi.

Using the analogy “come for the kai and stay for the kōrero” the company regularly and consistently gathers around kai to support and uplift each other in aroha. Bringing the team of 18 kaimahi together weekly, the business partners Ryan Grigsby, Quentin King and Wiari Matehe are committed to create a space where their young kaimahi feel supported, connected, and valued. The coaching extends outside of the workplace as these amazing ‘bosses’ take their kaimahi out in te taiao teaching them basic skills in mahinga kai and kaitiakitanga. They want them to be able to always be in a position to put kai on the table for their whānau.



Image 8.31. Wiari Matehe, creating positive and uplifting memories for rangatahi surrounding kai.

Photo credit, Charlizza Matehe.

Wiari was involved in this study alongside his wife Charlizza. Of Ngāti Porou and Tainui decent, Wiari was born and raised in Wellington before he moved Napier in 2018. Working in the trade since he was 18 years old, the 30-year-old Advanced scaffolder has witnessed

first-hand the detrimental impacts the industry has on the well-being of workers. Wiari lost two close friends and colleagues to suicide, one in 2015 and the other in 2019. He is driven to change the culture and along with his business partners Ryana and Quentin have created a platform for their workers to grow into confident and positive men.

Chapter Nine | Findings

The focus of this investigation was to investigate how puku could be used as a source of intelligence to inform well-being. To articulate this, an inquiry into understanding individuals, whānau/families and communities' choices, behaviours, and experiences surrounding kai was conducted during 2022 and 2023. This study gathered evidence to provide a view on how colonial constructs have contributed to the decline of well-being in Indigenous People. It further investigated how the thinking, behaviours, and actions surrounding kai can be re-Indigenised to optimise well-being.

This chapter discusses the findings which are ordered by the questions discussed during the data collection process. Methods, approaches, and questions are detailed in the Methodology chapter.

- 1. Well-being is an ongoing challenge for whānau.*
- 2. Kai triggers childhood memories, patterns, and behaviours that have carried into adulthood.*
- 3. Gathering around kai as a whānau strengthens and sustains well-being.*
- 4. Access to kai from the moana, ngahere, and māra are restricted by time, location, resources, and knowledge.*
- 5. Whānau ability to have autonomy over kai choices are impacted by environment, climate, situation, and government policies.*
- 6. Generally, whānau have an appetite to engage in lifestyles that lead to being well and staying well and have basic understanding of puku ora (gut health).*
- 7. The transference of Mātauranga is best delivered on marae, community spaces and at home.*

Well-being is an ongoing challenge for whānau.

Participants were asked to rate their current state of well-being. The range provided included: poor, average, very good, or optimal. What this study found was that the overall state of well-being is sitting between average and very good.



Graph 9.1. Online survey, current state of well-being, 2023.

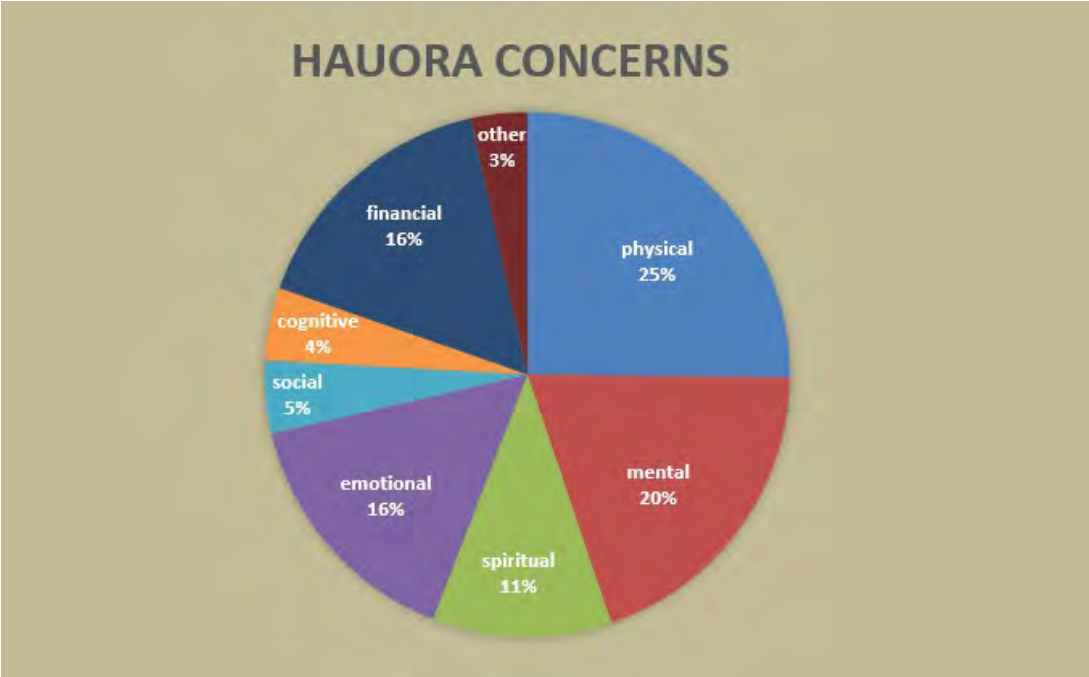
Respondents mostly describe well-being as having ‘balance’. Other descriptions included, having freedom to make good choices, having control over health, and being physically well. One respondent said, “well-being to me is when I have a work/life balance, I know this is happening when I have time to rest, enjoy nature and play with my mokopuna” (interview, 2023). Another person said, “it is about having time to make good decisions about kai, when I am out of balance, I grab at anything!” (focus group, 2023) and one stated, “my well-being is not defined by the above labels, but that which I am comfortable with achieving in my own way and time” (online survey, 2023).

There appears to be a general understanding of what type of kai and activities promote well-being. The main barrier to achieving well-being is time, affordability, access, motivation, and knowledge. Where the costs of healthy foods sit outside whānau budgets, whānau are opting for the cheaper options. One respondent noted, “I could do better, but healthy foods can be expensive” (online survey, 2023). Another reported that motivation

was an issue stating, “sometimes I feel great, eat well, exercise and other times I'm too tired to do anything” (online survey, 2023) whilst a further respondent noted “I can get lazy and tend to not look after myself” (online survey, 2023).

These responses suggest that access to kai is a main contributor to being well and staying well. A support system that motivates engagement in healthy lifestyles is also a major factor to consider in promoting well-being.

The area of health that whānau are most concerned with appears to be physical well-being. This is closely followed by emotional and mental health. This study found that health deteriorates when whānau feel disconnected or isolated. This was more prevalent during COVID-19 and the recent floods disruptions. One participant stated that “being socially isolated was really hard for my mental well-being, the people in my ‘bubble’ had a heavy energy and this had a big impact on me” (focus group, 2022). Another said, “the recent floods put me out of routine, and I have struggled to get my mojo back” (interview, 2023). A further respondent shared, “my biggest concern is my mental health, it has been hard to stay positive with all that is going on around the world” (interview, 2023).



Graph 9.2 Areas of health concerns, online survey 2023.

These responses suggest that the hau of others in whānau environments has a significant impact on whānau members. When whānau are in restricted conditions where the hau is taumaha or heavy, it appears to weigh on the mental well-being of those in close proximity. This also relates to when whānau are around positive people, their spirits are lifted, and they feel more motivated. One respondent said, “when I am with my mokopuna, I feel present and as if the world problems are insignificant” (Wā Hine focus group, 2023) whilst another stated, “when I am feeling pressure from my mental health, I need my Mum around, her hugs just make everything alright” (focus group, 2022).

Kai triggers childhood memories, patterns and behaviours that have carried into adulthood.

This study revealed a clear link between kai and childhood memories. One respondent said, “growing up, Mum was kāinga. Mum was always cooking, I don’t remember what our home looked like, but I remember what it smelt like” (focus group, 2022). Another participant responded, “Mum overfed us; she told us that she was compensating for her upbringing, but it definitely created some bad habits for me and my siblings” (Wā Hine focus group, 2023). A further participant said, “I immediately think of my Mum when someone is cooking a roast, it ignites the inner child in me” (focus group, 2022).

Participants spoke of childhood memories having been ignited by their participation in this study. One respondent said, “thank you for taking me back to the beautiful memories I had as a child. I loved going to the marae, we always had a hākari, there was singing, laughing and lots of whanaungatanga. I had forgotten about those precious memories” (Wā Hine focus group, 2023). Another respondent associated kai with a lot of mahi. Because she didn’t want to cook, she was put on cleaning duties at the marae. She didn’t mind this as she got to be in the presence of all the nannies when they would have tea in the kitchen. She states, “I have beautiful memories of my kuia gathering, sharing and cooking kai, my favourite though was when they would sit around and gossip over a kapu tī, I got to hear all the town gossip” (Wā Hine focus group, 2023).

Stories were shared with regard to growing up near marae where kai was plentiful. One respondent said, “I grew up near Huria Marae surrounded by intergenerational whānau. I recall nanny picking before 8.30am, and she had a specific time for watering gardens”. (Wā Hine focus group, 2023). Exposure to these experiences have kept whānau near marae. This contributes to kai security as the mātauranga Māori recalled from childhood memories has been adapted and applied in a modern parenting context. The respondent went on to say, “we have taught our tamariki about māra kai and how to fish and hunt, we want them to be self-sustaining when they become parents” (Wā Hine focus group, 2023).

Examples were provided around the devastating impact of moving away from marae and into the cities. One participant shared that as a child it was a traumatic transition. What was most noticeable was the change in kai. She stated, “I remember being on my nanny and papa’s farm, we never had to want for anything. Moving into the city was a huge culture shock, we never knew when our next kai would be, we had to get use to going without” (focus group, 2023). Another participant said, “we used to practice kai sovereignty and living by the moon. I remember the elders praying over everything especially kai and using kai as a koha to atua. I didn’t understand it then but this kōrero has triggered those old memories and I get what they were doing now” (whānau focus group). Another participant shared, “they(elders) never really told us about kai they just showed us. When we moved into, the city, all that mātauranga was not practiced and forgotten” (Wā Hine focus group, 2023).

One participant shared fond memories being raised by her grandparents, “kai sovereignty and science were not words that I grew up knowing or hearing at home or on the marae. Kai at home was very much tribal food, I was raised in a large extended whānau because we were a shearing family”. She continued “our circumstances and environment influenced the kai we ate, which was pretty much mutton, chops, boil up, roast meat, potatoes, cabbage, and bread was our staple diet. It was tribal eating. The only time we diversified was when certain foods would be in season, kai moana, fruits, vegetables. Although Mum would ferment most of the out of season kai, so that we could take it back to Tokomaru Bay or store it for special occasions, like a 21st, wedding etc.” (Interview, 2023).

It was evident that there were a mix of positive, and not so positive, recollections and associations in relation to kai and associated memories. This indicates the potential for the building of programmes focusing on kai as the mechanism to carry learning around kai sovereignty, sustainability, and security into future generations.

Access to kai from the moana, ngahere and māra is restricted by time, location, resources, and knowledge.

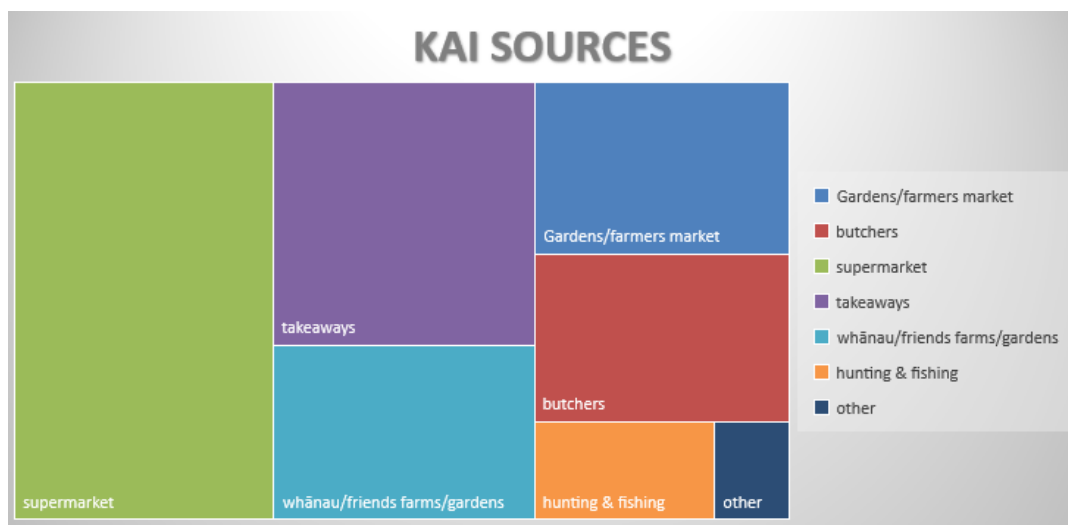
This study revealed that the main source of kai for all participants was the supermarket. More than 60% of participants stated they use takeaways and fast-food outlets at least twice per week. Around 40% access their kai from butchers and farmers markets, and a little over 40% access kai from māra that they have access to. Only 16% source their kai from hunting and fishing.

The major contributors to sourcing kai from the supermarket was time, knowledge, and accessibility. One participant said, “I would love to go out diving every night for kai, however time does not allow. By the time I get home I am too tired to even cook let alone go kai gathering” (focus group, 2023). Another person said “I used to go out catching eels, fishing, and gathering kai from the ngahere before moving to the city. I wouldn’t even know where any kai spots are in Hawke’s Bay. I don’t get to go up to the Coast much as it’s too far especially with the roads getting smashed from the recent floods” (focus group, 2023).

Whānau were more active in mahinga kai from natural sources such as the moana, ngahere and māra when they had access to local knowledge and resources surrounding kai. “Our whānau know where all the kai spots are, we keep the knowledge local as a way of kaitiakitanga and we only take what we need” (whānau focus group, rural, 2023). Another whānau shared “my husband’s business partners are all hunters and gatherers; they were fortunate to be raised in Ngāti Kahungunu ways of mahinga kai and still practice as adults. When they have kai tahi at mahi, it typically includes fresh kai from the moana or ngahere to the table. It is food for the soul and a vibe and experience the young Māori workers are

leaning into. Being raised in the city away from their ūkaipō, these young men have had limited exposure to mahinga kai. Twice a year they take them out on the boats, so they learn to gather kai for their whānau” (whānau focus group, urban, 2023).

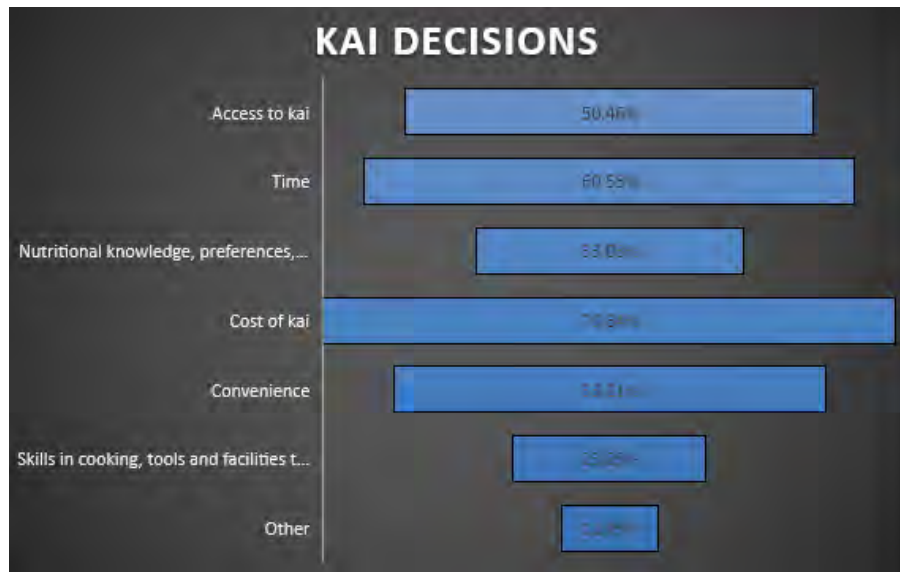
What this shows is that efforts are made to keep the traditions of mahinga kai active. A major barrier to kai gathering from the whenua, moana and ngahere appears to be access to local knowledge, experience/exposure, resources, and equipment.



Graph 9.3. Sources of kai, online survey 2023.

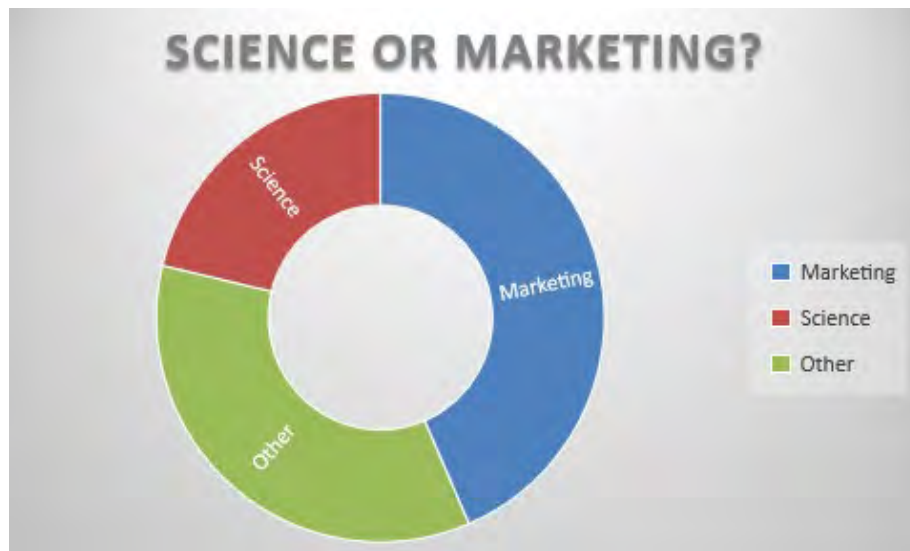
Whānau ability to have autonomy over kai choices are impacted by environment, climate, situation, and government policies.

Findings show a clear link between kai choices and affordability, with 71% of whānau being influenced by the cost of kai. One participant said, “the cost of healthy kai is so expensive both in the supermarket and dining out. Because we have a big whānau we opt for the kai that fills us up, we are aware it is not ideal, but the healthy kai is out of our reach financially” (focus group, 2023). Decisions around kai provisions are directly linked to factors that can be addressed through policy. The rising costs of kai, work schedules, access to kai, and knowledge about kai were the most significant influencing factors on healthy kai choices.



Graph 9.4. Kai decisions, online survey 2023.

Another key factor is time. One respondent said, “when I’m in a hurry I’ll think back to what is quick to make for tea” (online survey, 2023). Another said, “we are both really busy as parents, it’s always a quick kai for us a fast cook up of mince and sausages” (focus group, 2023).



Graph 9.5. Science or Marketing, online survey 2023.

This study showed that marketing has a significant influence over the decisions that whānau are making around kai. Obesogenic environments appear to be another major factor when making decisions surrounding kai. A few respondents revealed that decisions made are based on marketing rather than science. One participant stated, “my partner and I are very influenced by meals that we see online/on tele” (online survey, 2023). Another said, “if we

see something advertised on tv we will order uber eats, we don't really think about if it is healthy or not. To be honest it is normally not" (focus group, 2023).

Work environments also featured in this section as places promoting unhealthy eating habits. One person stated, "I try to be healthy; it is hard when you have a mahi that puts on morning tea stacked with all the kai I shouldn't be eating with my diabetes such as pastries, cakes and all the fatty, sugary options. It is hard to resist when it is in front of you" (focus group, 2023). Another noted, "I tend to eat what is in front of). Another is good or unhealthy, normally at mahi it is not good for me" (focus group, 2023).

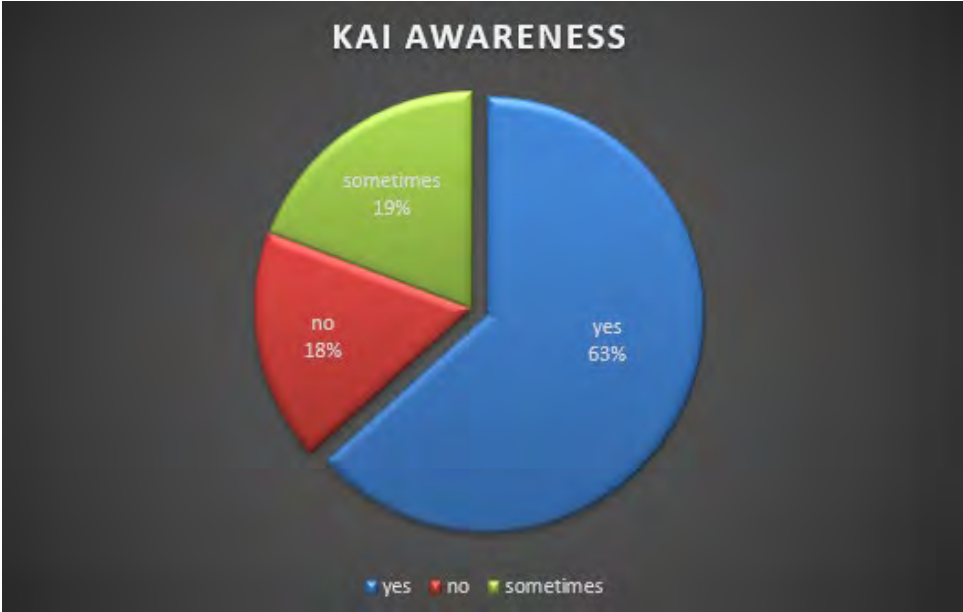
Generally, whānau have an appetite to engage in lifestyles that lead to being well and staying well and a basic understanding of puku ora (gut health).

Findings highlight that whānau are generally in tune with what type of kai makes them feel with regard to varying energies and moods. Whānau seem to have awareness of what kai makes them feel good energy or low energy. Most of this knowledge stems from upbringing but it was apparent that some whānau have also learnt along the way. It is clear that whānau tend to build good momentum around choosing pai kai when they are in balance and/or have good access to affordable kai.

Findings also suggested a preference for fresh kai, one participant stating, "I love salads and summer – chickpea salad is my go-to". (Wā Hine focus group, 2023). Another highlighted, "my kids smash our fruit bowl, we have heaps growing on the trees and they don't go pick them, but if in the bowl they will eat fruit all day" (focus group, 2023). When time is limited or there is a disruption to routines and schedules, whānau normally turn to what is easiest at the time. One person shared, "we are generally pretty good, however when something comes up, we turn to fast foods, sometimes it's hard to get back on track once the momentum is broken" (focus group, 2023).

It was fascinating to see that some whānau were aware of what kai was good for them, however, still chose other options. One person stated, "I understand how certain foods

make me feel and the energies different foods give me, but I don't always take it into consideration when choosing what to eat" (online survey). Another noted, "I do know what makes me feel good, but I will still eat things that I know bloat me" (online survey).



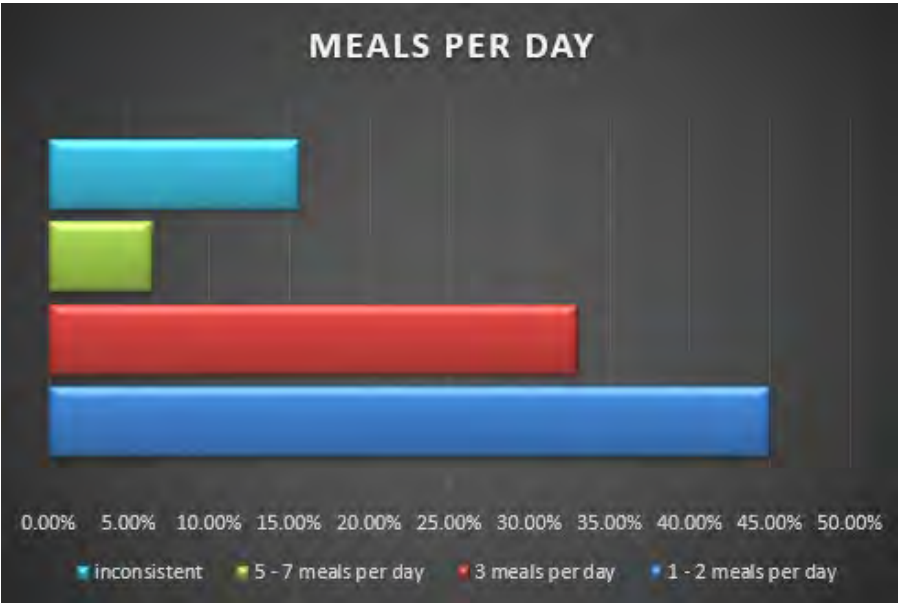
Graph 9.6. Kai awareness, online survey 2023.



Graph 9.7. Participation in Fasting, online survey 2023

Of interest, was that more than 30% of whānau were engaged in the practice of fasting. (online survey, 2023) One participant reported that she practiced fasting daily, as a source of drawing energy to sustain her for the rest of the day. She found that by fasting, she could

eat what she wanted, and maintain her well-being levels. (wā Hine focus group, 2023). Most of these participants reported consuming one to two meals per day indicating involvement in some sort of fasting method (such as intermittent fasting).

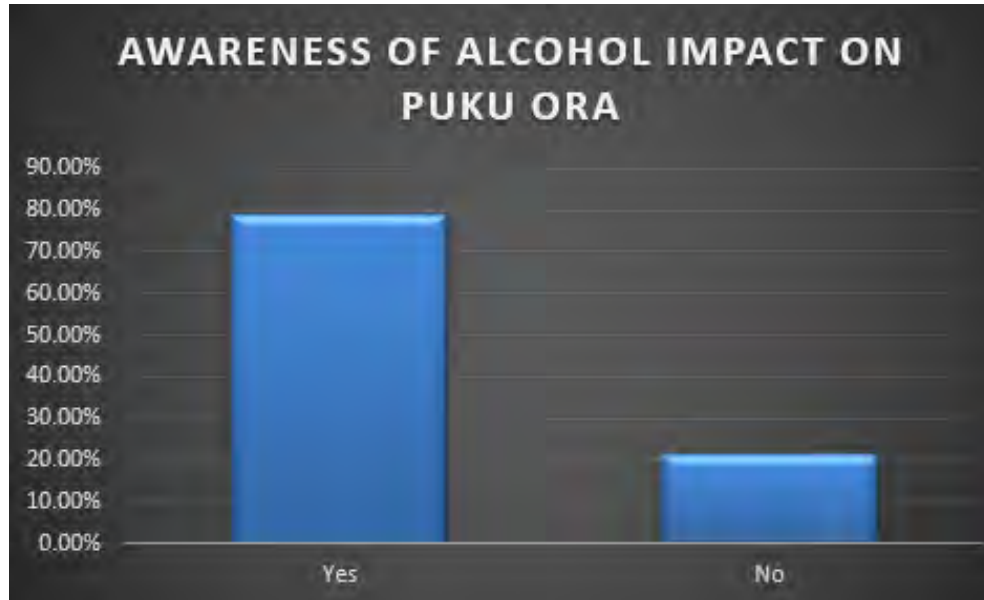


Graph 9.8. Meals per day, online survey 2023

It was pleasing to see in this study that alcohol is mostly restricted to monthly or not at all. Most participants were aware of the impacts that consumption of alcohol has on gut health, and it would be interesting to examine this further to determine if there was a conscious correlation.



Graph 9.9. Weekly alcohol consumption, online survey 2023



Graph 9.10. Impact of alcohol on gut health, online survey 2023.

Gathering around kai as a whānau strengthens and sustains well-being.

This study found that eating kai as a whānau was an important factor in maintaining the well-being of individuals, as well as the collective. In a few cases, whānau reported that they didn't always eat meals as a whānau, however, they recognised the importance of this practice and made efforts to gather around the kitchen table where possible.

A clear theme emerged from this study suggesting that eating kai as a whānau strengthened bonds between members. One respondent shared, “when we are eating together, we can have a kōrero about how everyone is doing and discern if anything is out of balance” (focus group, 2023) whilst another respondent said, “we were brought up to eat at the table and my husband and I say that a ‘whānau who eat together stay together’. My children have all left home now, but we come together at least once a week to share a meal together, it is something we all look forward to” (focus group, 2023). A further participant noted, “I am a strong believer of eating together and at the table. It's essential in my whare. We make room for all to be included. My whānau at home in Whanganui only do it when I am home because I make them” (focus group, 2023).

One whānau responded “our Dad has always insisted we sit at the kitchen table, I believe this is why we are all so close as a whānau unit. It is just a natural thing for us to eat at the

table, it is a place for kai and kōrero. We get to break bread together while we share in what is going on in our mahi, in our lives, everything” (whānau, focus group, 2023).

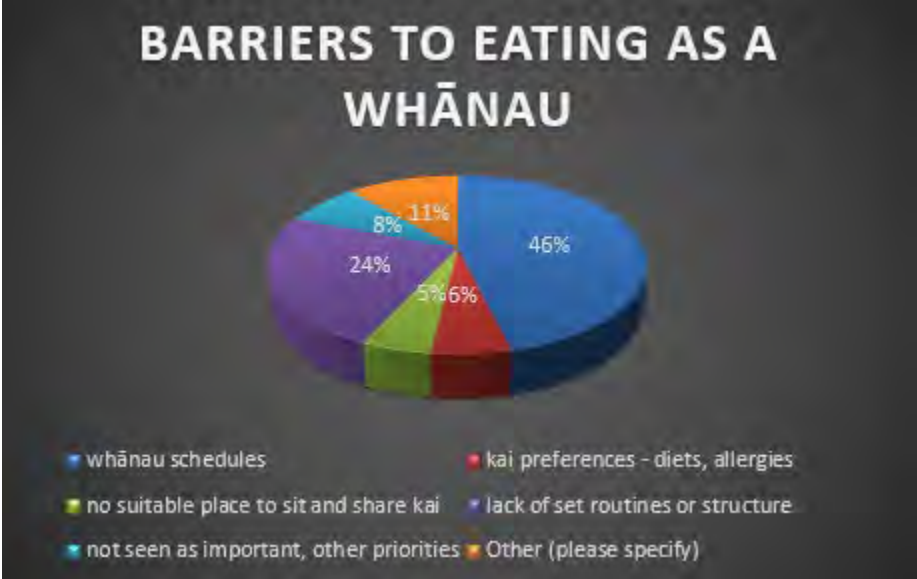
It was evident that eating at the table as a whānau was a clear strategy for keeping the whānau connected. It was positive to see that over 50% practiced this, and over 40% made an effort to come together when logistically possible. For those who responded ‘no’ it was due to living alone, or other issues (discussed in the following sections). The main benefit to eating as a whānau was centred around the space created to engage in conversations at the kitchen table. Respondents stated that this lifted spirits and created a homely feeling. One participant mentioned, “we want to create positive memories for the people who come and eat at our kitchen table, so they know we are always here for kai and kōrero. We are intentional about creating a positive vibe which is about kotahitanga, friendship, and aroha. After kai we make clean up fun too, putting on music and singing, and just enjoying each other’s hau (whānau focus group, 2023).



Graph 9.11. Eating as a whānau, online survey 2023.

Kai was also seen as a way to show people aroha and make sharing kai ‘cosher’ and normal. One whānau stated, “we whakamana the cooks, when our boys do the BBQ or any of the cooking, we make a huge deal about it. We try to encourage them to contribute to community events at the marae so they experience the feeling and importance of feeding the community” (whānau focus group, 2023).

The biggest barrier to eating kai as a whānau related to whānau schedules including work, sports, and other commitments. Another major contributor was the lack of set schedules or routine. It was interesting to see that different kai patterns across the whānau members was a barrier. Examples provided included members of the whānau having special dietary preferences or conditions such as gluten free, plant based/vegan, and more commonly expressed, vegetarian. This made it challenging to eat together as a whānau. It would be interesting to explore further whether these dietary restrictions were based on allergies, or conscious choices.



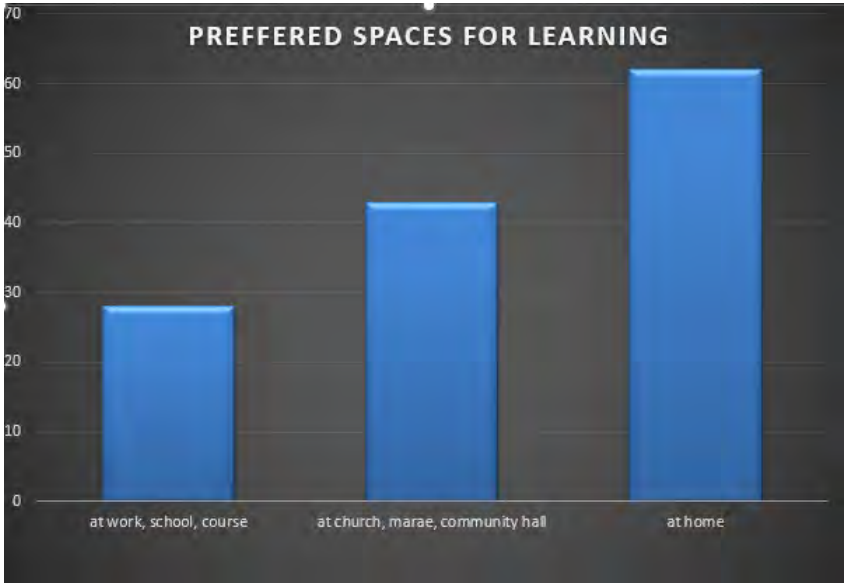
Graph 9.12. Barriers to eating as a whānau, online survey 2023.

The transference of mātauranga is best delivered on marae, community spaces, and at home.

Findings highlight that whānau preference when learning about kai sovereignty, kai science, and kāi-(nga) was preferred in spaces on the marae, within community spaces, or at home. It was also important for whānau to learn alongside one another, thereby involving all the generations existing within the whare. One respondent replied, “I learnt to cook from observation, I would just watch and learn” whilst another stated, “I don’t have time to learn in a school, if someone can come to our marae or in my home then I would do it” (focus group, 2023).

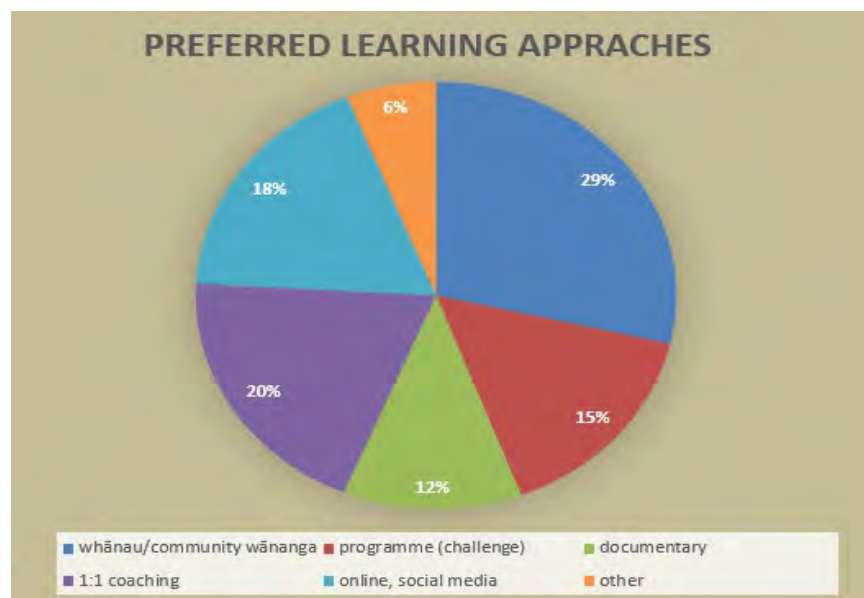
Examples provided made comparisons to those traditional ways of learning and holding spaces, where you could engage your Māoritanga. One participant said “my grandparents were raised in the era where colonisation had almost stripped our culture of its tikanga, reo and mātauranga Māori and Pākehā society had asserted its authority in all areas of life, e.g. employment, education, justice, health”, further adding, “growing up, there were only a few certain places where I felt I could unapologetically be Māori was at home, in the shearing sheds (Dad was a shearing contractor), on a kapa haka stage and at the marae” (interview, 2023).

Another theme emerged around upholding local tikanga, local Mātauranga Māori systems, and pedagogy of place around kai pointing to kaitiakitanga and kai access as important factors to consider when learning about kai. One respondent said, “the best way for whānau to learn about well-being is through wānanga with whānau or community” (focus group, 2023). Another noted, “it was our lifestyle and way of being. We were taught on our whenua, moana and ngahere when to fish, plant based on our local systems of intelligence. We were taught the why, hua mata. Our Reverand directed us when to fast and when to harvest, this is the Māori way of learning” (focus group, 2023).



Graph 9.13. Preferred spaces for learning, online survey 2023.

Preferred learning approaches were with whānau and one-on-one coaching. Wānanga appeared to be the most preferred approach to learning alongside whānau. The power of the ringawera was discussed and the importance of feeding whānau. Understanding the responsible for cooking kai and knowing about nutrition and balanced meals were also highlighted as important. Feeling comfortable, safe and trust was a big factor in the transference of knowledge.



Graph 9.14. Learning approaches, online survey 2023.

Chapter summary.

This chapter presented seven key themes that have emerged from the findings of this study. It is clear from this study that being well and staying well is an ongoing challenge for whānau. It appears from the responses that well-being is linked to feeling in balance or control of the different areas of physical, mental, spiritual, and social well-being. The areas that presented the greatest level of concern for whānau were mental health and physical health.

This study found that kai triggers childhood memories, patterns, and behaviours that have been carried into adulthood but that gathering around kai as a whānau strengthens and sustains well-being. Access to kai from the moana, ngahere, and māra are restricted by time,

location, resources, and knowledge. Whānau ability to have autonomy over kai choices are impacted by environment, climate, situation, and government policies.

This study concludes that generally, whānau have an appetite to engage in lifestyles that lead to being well, and staying well, and they have basic understanding of puku ora (gut health). The preferred method of learning about well-being is on the marae, within community spaces, and at home but it is most important to learn alongside one another as an inter-generational whānau.

Chapter 10 | Discussion and Recommendations

He manako te kōura i kore ai.

Hope won't get you the crayfish. (Elder, 2020)

Introduction

Government has a responsibility to ensure that Māori have equal rights to experience the same quality life as all other citizens of Aotearoa. This study has illuminated several pressures points that whānau are experiencing in their quest to be well, and to stay well. It appears that whānau have a desire to engage in lifestyles that optimise well-being, however in many cases their aspiration does not match their current situation. The above whakataukī reminds us that we can hope for wellness, however, if we do not make the right preparations and do the mahi, then we will not receive the hua (benefits). Further interrogation into the conditions that are preventing full engagement in how we re-Indigenise kai to optimise well-being needs to be considered. It appears from this study that national policies and constructs are not aligned to the Indigenous values and principles surrounding kai. Further inquiry into government policies is required.

Overall, participants felt that they had the will and desire to change their patterns around kai, however, they struggled to push through some of the challenges and barriers. There were many whānau who felt that access to kai and wai supporting healthy living was limited due to life circumstances (money, location, and time). Whilst there were varied responses and examples provided, the most common themes consistently raised by participants are worthy of further exploration.

Irrespective of the perceived struggles that some whānau are confronted with, it was encouraging to see all whānau fully participate and engage with open hearts and intentions. Many made life changing shifts and as presented earlier, transformative shifts. This demonstrates that there is a clear appetite and willingness for our people to live in wellness. There were some significant cultural shifts which may inform opportunities for structural changes at a national level. This chapter presents the data analysis of the findings that were

shared in the previous chapter. The discussion highlights the current thinking, practices, and aspirations surrounding kai in a modern context, and sets out recommendations in response to these points.



Image 10.1. Artist, John Philemon impression of a traditional Māori Pa site from around 1845-1908. Source: Ref: G-004. Alexander Turnbull Library, Wellington, New Zealand. [/records/22811829](#)

Te Pā

The above image was presented in an early chapter to provide a snapshot of a traditional Māori pā. The image is being (re)used here in an attempt to highlight the pedagogical points that will be raised in the upcoming sections. Traditionally, learning occurred in all spaces and places within the boundaries of the pā as well as the outskirts including the ngahere, the moana, the awa, and the maunga. Typically, on the pā there would be different constructions to house or facilitate specific kaupapa. These normally included the whare tūpuna (ancestral house), te tari o te ora (place where kai is served), te pātaka (the place where kai is stored), te whare karakia (place of prayer), and whānau kāinga (dwellings for whānau groups).

There are variations across tribes, however, for the purpose of this kōrero coming up, these whare are identified as the most relevant. Each whare within the pā had a specific purpose or mana. The following discussion points and recommendations have been allocated to each whare.



Image 10.2. Te Whare Karakia

Te Whare Karakia – Spiritual and metaphysical awareness as contribution towards well-being, recovery, and healing

This study showed the connection between a higher source of spirituality and well-being, recovery, and healing. Participants who had an active relationship with a higher source of spirituality were able to channel celestial vibrations into their well-being aspirations and challenges. Whānau who practiced karakia, haere puku (spiritual fasting) and noho puku (mauri tau, meditation, and mindfulness) found that they were more focussed and sharper when approaching health targets and goals. This relationship allowed them to draw on a higher power beyond their physical capacity and capability. A range of examples have been provided including God, Io Matua, ngā atua, tūpuna, and te taiao.

Spirituality was reported to be central to sustaining balance, acknowledging, and connecting the thought of he atua, he tangata with the importance of nurturing and feeding

both elements of being. Further to this belief was understanding of automatic, unconscious, or involuntary responses when highly stressed, or on the other end of the spectrum. Participants were able to resonate strongly with the notion of Tūmatauenga (fight or flight response) and Rongo-mā-Tāne (rest and digest response). Those who were in tune with this idea were able to navigate between each state using tools and resources provided by this study.

A few examples were provided that spoke to the place of spirituality in the 1960s and 1970s era. Contributors could recall as a child being immersed in rituals and ceremonies that involved kai. At the time they didn't know what was happening, however, they knew this to be a part of their way of being. Discussions were generated around the maramataka and cycles of the moon – when it was a good time to plan, fish, and hunt. It was evident that there had been a shift of these practices due to moving to the city and pursuing careers. The focus also appears to have been redirected to whare whānau. This refers to families within the same house as opposed to the traditional pā settings which included community spiritual leaders such as Tohunga, kaumātua, and kaikarakia.

The practice of karakia appeared to still be undertaken during mealtimes to bless kai. This was still practiced in large communal gatherings, events, and ceremonies to lift the tapu followed by kai to whakanoa (removal of tapu) the process. The kaikarakia in modern times was not restricted to a Tohunga or kaumātua, and on many occasions, depending on what tapu needed to be navigated, it was given to tamariki or rangatahi to recite. Karakia used to 'bless' the kai was typically one that was generally taught in Te Kohanga Reo, Te Whare Kura, Te Whare Wānanga or Te Whare Pakihi (workplaces).

Karakia was still commonly used in the process of harvesting as were strict tikanga practices such as when to harvest, state of being (meaning mindset, for women on their menstruation cycles), and how to harvest. Depending on the kairongoā, the structure of the karakia and whom the karakia was directed towards was varied. Some drew on the hau of the

environment as part of the karakia and others directly to Tāne or Io Matua. Karakia was also employed during preparation of the rongoā and application of the rongoā.

Many examples were provided by participants that expressed the power of karakia in the healing process. There was a range of how this was conducted, however, there was a strong belief that the healing was a result of a higher spiritual power. Karakia was also used to free a person from addictions and lifestyle patterns that were not providing quality life outcomes. Examples were also provided on how karakia was the kaha(strength) for resisting food temptations and indulgence in overeating.

There was an acknowledgement by most participants that a higher source of power and intelligence existed beyond the terrestrial realm. Clearly potential exists to access spirituality as a portal for drawing kaha and ihi, mauri, and mana for well-being. It would seem that there would be value in bolstering the positioning of spirituality in hauora plans for Indigenous People.

Recommendations include:

- Evaluate the effectiveness of the application of spirituality in practice and its link to hauora.
- Provide training for health practitioners and services on mātauranga Māori perspectives on well-being using Indigenous models that demonstrate the notion of duality, ‘he atua, he tangata’, ‘ko koe te rongoā’, ‘Rongo ā Puku’, and others.
- Support further rangahau that explores the power of karakia in relation to recovery.
- Explore how best to support aligned pedagogies that weave spirituality into best practice for health practitioners. Normalise spirituality practices across services and organisations that engage with Indigenous People, place, and space.

Te Pātaka, He Hanga Te Pātaka – Building the pātaka.

The pātaka was an important construct on the marae as it stored the kai in preparation for kai scarcity and limitations. In this context it refers to the kai in terms of mātauranga Māori and more specifically re-Indigenising our knowledge base around kai. This study revealed that

whānau have some basic understanding surrounding their well-being, however, there seems to be a lack of knowledge in terms of the connection to ancient and traditional ways of living in balance, and how kai contributes to this.



Image 10.3. Te Pātaka, He Hanga Te Pātaka – Building the pātaka.

The other areas in which the pātaka needs to be filled with relate to the knowledge, tools and resources surrounding Kai sovereignty. Although this is practiced across the motu and some great initiatives are offered, the autonomy needs to return to tribes and practiced on marae. This study revealed that many whānau intuitively knew due to having at some point in their life been exposed to systems of kai sovereignty, sustainability, and security. However, they had forgotten. This knowing needs to return to the forefront as we plan for a more sustainable future for our people, our places, and our spaces.

Recommendations include:

- Conduct a stocktake of knowledge surrounding kai sovereignty, kai science and kāi (nga) identifying the gaps and exploring opportunities to fill these.

- Evaluate the effectiveness of existing hauora initiatives specifically around kai sovereignty, kai science and kāi (nga) to capture themes to inform what is working well, and what can be scaled up and shared across marae.
- Develop accessible frameworks, tools, and resources that support how Indigenous People think around kai.
- Develop a training programme based on mātauranga Māori perspectives on well-being.
- Provide training for health practitioners and services around kai sovereignty, kai science and kāi (nga) and the link to well-being for Indigenous People
- Provide training to health ambassadors for every marae around kai sovereignty, kai science and kāi (nga) and the link to well-being.
- Keep the kai in the pātaka flowing and in season (current, relevant, and responsive knowledge and evidence based rangahau is in the storehouse).

Te Whare Tūpuna, Rangatiratanga – Autonomy over kai

The whare tūpuna is the place where all knowledge pertaining to the tribe is etched on to the walls. In a metaphysical sense it relates to the tuakiritanga and tūārongo concepts (whereby knowledge is stored in metaphysical spaces). This is the place where all the decisions are made as theoretically the whare tūpuna holds the ancient knowing.

In the context of this study, the whare tūpuna refers to structural change in terms of policies that support the way Indigenous People think and operate in relation to the kai sovereignty, kai science and kāi (nga) findings of this study.

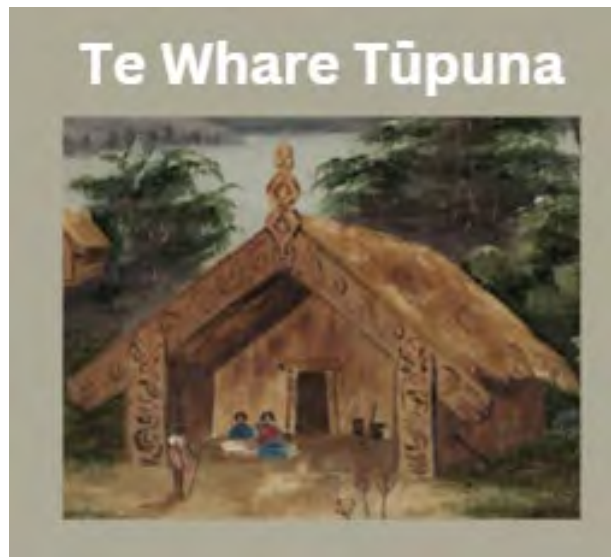


Image 10.4. Te Whare Tūpuna, Rangatiratanga – Autonomy over kai

In promotes an active relationship as the Treaty partner of Aotearoa meaning that Māori sit at the table when policies are strategised, the rational being that Māori hold the intergenerational knowledge of land, place, and people (Māori).

Recommendations include:

- Enact structural change at a national level to support cultural shifts within marae and kāinga.
- Provide training and development surrounding the principles of kaitiakitanga and the impacts on te taiao in relation to how we source and access kai.
- Undertake annual review of the Resource Management Act 1991 with regard to how kaitiakitanga is enacted, ensuring Māori have a leading voice at the table on all matters concerning kaitiakitanga as the holders of ancient mātauranga informed by the study of te taiao and te aorangi since first arrival to Aotearoa centuries before the Treaty partner.
- Explore how best to support marae, workplaces, schools, and other built environments to develop aligned practices that re-Indigenise kai tikanga, patterns, practices, and behaviours.
- Provide training and development surrounding the principles of Kaitiakitanga, and how these can be applied around kai tahi.

- Explore how to better support marae (hapū and urban based) to offer local knowledge wānanga on mātauranga systems of mahinga kai.



Image 10.5. Te Tari o Te Ora

Te Tari O Te Ora – Kai mātauranga, sustenance, and nurturing

Te tari o te ora refers to the dining room or the place in which the tribe came to be fed and nurtured. In the context of this study, it serves a similar purpose as social constructs and relationships are critical for sustaining well-being. A space needs to exist where we are able to access kai that feeds the way we think around kai sovereignty, kai science, and kāi (nga). Further to this, a place to build and support the development of hau-ora champions is warranted. It is lastly a conceptual place to provide the knowledge, resources, tools on kia sovereignty, kai science and kāi (nga) as 'kai' for well-being and prosperity.

This study has demonstrated an appetite for mātauranga Māori. Further, there is a desire for ongoing support, mentoring, and coaching to hold momentum and receive check-ins. This construct – te tari o te ora, refers to the whakatinana – embodiment of the way Indigenous People think around kai. It is a place where kai is provided, and where people are fed the knowledge of our ancestors.

Recommendations include:

- Explore opportunities to provide training and development for whānau champions on kai mātauranga.
- Investigate the effectiveness of existing initiatives that create spaces for wāhine, tāne, kaumātua and rangatahi as emerging leaders, ready to take on tribal responsibilities and roles to lean into terrestrial physical being that have the potential for scaling up for marae.
- Investigate the effectiveness of existing initiatives that create spaces for intergenerational sharing that have the potential for scaling up for marae.



Image 10.6. Whānau kāinga

Whānau Kāinga – The home as a place of planting seeds, sustenance, and nurturing

Kāinga refers to the dwellings of whānau. In the context of this study, it relates to the planting of seeds for the next generation, or kai that is taken back into the home to be shared and passed on to the next generation. It is the place where whānau take the learnings and plant these learning within their patch of whenua (māra kai).

Recommendations include:

- Investigate opportunities for whānau coaches in kāinga.

- Explore the effectiveness of initiatives that support home-based learning (māra kai, kai sovereignty) and how these can be scaled up.
- Investigate tools, resources, and training that can support the building, supporting, and maintaining around kai sovereignty, kai science, and kāi(ngā) in the home.

Chapter summary

This chapter has made a number of recommendations that have been generated by the key findings in this study. The construct of a traditional pā was used as an analogy to the recommendations under the following:

- Te Whare Karakia – Spiritual and metaphysical awareness as contribution towards well-being, recovery, and healing.
- Te Whare Tūpuna, Rangatiratanga – Autonomy over kai.
- Te Tari O Te Ora – Kai mātauranga, sustenance and nurturing
- Whānau Kāinga – The home as a place of planting seeds, sustenance, and nurturing.



Image 10.7. Whānau kāinga.

It takes a tribe to raise a child, and it takes a pā to sustain the well-being of the tribe.

Chapter 11 | Final thoughts

He aha te kaha o tōku rangahau, tōku whakapapa, tōku whānau, tōku tangata.

He aha te kai a tōku rangahau, he kōrero, he kōrero, he kōrero.

I am grateful to my whānau, for the tautoko and kōrero, most importantly for being the ihi (motivation) and (kai) fuel I needed to complete this milestone. As I reach the final chapter in this thesis, I pause and reflect on my journey. I have arrived at a destination; however, I am fully aware that this is not the final landing place. It is a location none the less, a place to pause, to celebrate, and acknowledge all those who have contributed to this voyage of discovery. Those wise, prolific, and creative Indigenous writers who have paved the way. The signpost of recognisable truths and trails of familiar realities have been a light of authentication on my personal journey through the hallways of academia.

As I close this thesis, I leave these final words of encouragement that were shared recently with me from a friend, Colonial Michael Wingate, “there is no such thing as winners and losers, only choosers”. (personal conversation, 2023). When you choose to take autonomy over your well-being, you have chosen life for yourself, your whānau, and future generations. You will not always get it right the first time. You will stumble, and you will fall. Whatever the challenge, make the choice to get back up, reflect, and learn from the fall, choose another way, and keep going.

Ahakoā whati te manga, e takoto ana anō te kōhiwi

Although the branch is broken off, the trunk remains.

Build an inner powerhouse based on ko wai a(hau), stay strong

and don't let succumb to the external distractions and obstacles. (Elder, 2020)

The following sections provide an overview of how I choose to build my hau(ora) using E Whitu ngā Pou o Hau Ora or the 7 tenets of Hau Ora.

Hau Aio – Ko au te tangata, ko au te atua

I choose to be divinely spiritual and beautifully human. I choose to embrace all the beauty our Creator has gifted us. We all have access to these gifts. I live my life as if there will be no tomorrow, taking no person for granted, and celebrating who I am and where I come from.

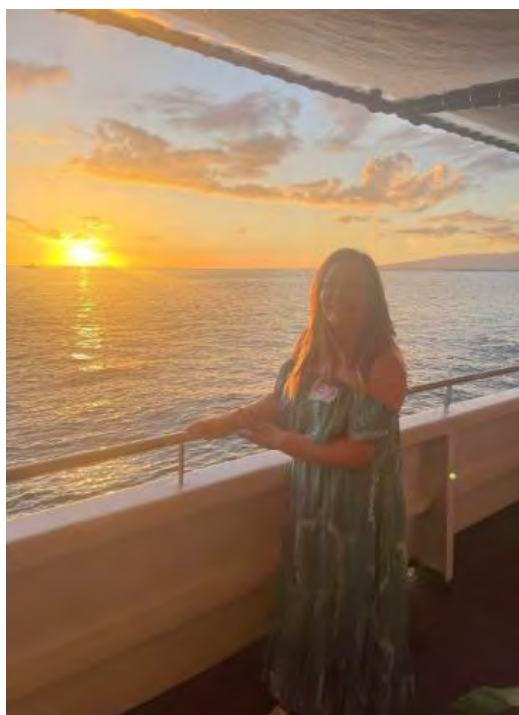


Image 11.1. Sunset, Oahu, October 2023.

Hau Puku – Ko au te rongōā

I choose to be the rongōā. I choose to be in tune with every element of my being as a wahine Māori. I choose to surround myself with people I appreciate and admire. I follow in the footsteps of my ancestors and walk alongside wise Indigenous wāhine of all ages.



Image 11.2. Āku Mareikura. Photo credits, Charlizza Matehe.

Hau Hinengaro – Ko au te raranga o tāku hinengaro

I choose to arrange my thought patterns. I choose to continually explore Indigenous ways of rewiring and sharpening my mind. I choose to raise my consciousness to places where I can access celestial knowledge, healing, and guidance. I choose to lead the way for my children, so they have the tools and knowledge to be weavers of their own thought patterns.



Image 11.3. Āku tamariki, P.G, Charlizza, (ko ahau), Wiari and Stephen, Rarotonga 2022.

Hau Tangata – Tuhia ki tāku ngākau

I choose to experience life and write my own pūrākau. I surround myself with people in aroha, sharing kai, kōrero, and being a koha to one another.



Image 11.4. Tāku tangata, Ocean Beach, 2022.

Hau Wāhi – Come for the kai and stay for the kōrero.

I choose to create spaces where people can come together and engage in community spirit.



Image 11.5. Tōku hapori, Napier Soundshell, Matariki 2023.

Hau Kāinga –Hoki ki tō kāinga

I choose to return to the place where I have been nurtured and sustained. I choose to contribute towards planting seeds of hauora in this place for today and the future generations to benefit from the hua (fruits).



Image 11.6. Tōku kāinga, Pukemokimoki Marae

Hau Maramataka – Draw from the hau of your natural surroundings.

I choose to be in tune with the natural rhythms of nature. I choose to take time to pause, reflect, and rest. I will look around and notice my surroundings, connecting to all elements of doing (puku mahi), being (noho puku), and seeing (haere puku).



Image 11.7. Tāku taiao, Napier waterfront

In finishing this thesis, do I think that my research will save the world? I am under no illusion that it will. The topic I so courageously selected to investigate is one that has layers of complexity, and in saying so, has many moving parts. I think it would be challenging for any one person to cover the whole scope of how to re-Indigenise kai to optimise well-being. I do hope that this study provides a tūāpapa for others to build from. I hope that my pūrākau, and the pūrākau of my mother and others who have shared their stories here may be a light for whānau who are currently sitting in dark places of unwellness. Finally, I hope that it will encourage and inspire my Indigenous brothers and sisters to turn the page of hopelessness and despair and create new chapters where they hold the pen to their future. I hope.

I will end here with tōku Māmā.

There are two things that are certain in this world, life, and death. It is what you choose to do in between these major occurrences that matters. My Māmā is proof that no matter how long you have been on this earth, you have the kaha, mana and mauri to turn your situation around. We were not born to choose when our time on earth is done, or when to ‘clock out’ but we were born to choose what quality of life we want to experience. Sometimes we make the wrong choices and end up spiralling down a path of unfamiliarity and darkness. As long as you have hā (breath of life) it is never too late to turn back towards your ancestors and choose to fix your eyes on them. They will guide you back to the light.

Kia mate ururoa,

Kei mate wheke.

Fight like a shark, don't give in like an octopus.

Never give up. (Elder, 2020)



Image 11.7. Tōku Māmā, at the time I submitted this thesis. Photo credit: Sally Rye.

Epilogue – Rongo ā Puku, thesis outcomes

This study has sought out to investigate the pātai: How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples? Underpinned by Kaupapa Māori theory and methodology, this study has built on existing mahi focussed on addressing the unique health and social challenges that Indigenous communities currently face. This epilogue provides a summary of how this thesis contributes to new knowledge.

A systematic background and integrated narrative are presented in this dissertation covering lived experience, mātauranga Māori, western scientific world views and the lingering impacts from the colonial project. Scaffolding from this tūāpapa, a range of models of Māori health, and frameworks for conceptualising and understanding well-being, kai, puku, maramataka etc are discussed and linked. Mātauranga-based intricate kōrero, has been employed to discuss complementary elements and similarities between world views. A key strength of this thesis is the inclusion of physiological, anatomical, scientific, metabolic, and environmental detailed knowledge, alongside both traditional and contemporary Māori knowledge and insights.

The problematic elements that were not addressed well enough in this study include.

- 1. Indigenous perspectives.** This study focuses largely on Te Ao Māori understandings on kai ora and puku ora for well-being. Given the broad scope of this topic, time, resources, and attention was placed on local knowledge and understandings of kai ora and puku ora. Some global perspectives were included, however more work can be done to strengthen a collective Indigenous lens on well-being.
- 2. Cross analysis of Indigenous perspectives.** Due to the primary focus of this study on Te Ao Māori, limited opportunities existed for comparisons and cross examination with other Indigenous communities.
- 3. Wider scope of mātauranga Māori insights.** The broad scope of my investigation alongside my decision to include an interweaving of mātauranga Māori, oral

histories, western science and lived experiences, limited the space and opportunities to include a wider range of relevant Māori contributions in this study. This is an area that is worth further exploration in post-doctoral studies.

This research is unique and innovative, bringing kai ora and puku ora conversations into the academic context, which to date has been absent in any in-depth way. It demands attention in Māori spaces and places to further wānanga the pātai: How do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples? It provides a strong tūāpapa for Indigenous conversations and comparisons globally to transpire and progress the findings presented in this dissertation. As noted above, combining multiple knowledge sources from both western and Māori worldviews and approaches is a strength, moreover this further contributes to new knowledge by providing both a unique research approach in this particular field and the outcomes as detailed below. The research methodology and methods indeed provide a new way of exploring health and well-being that is whānau centred and enhances mātauranga Māori.

The provision of further information to improve Māori health outcomes. An insight into Māori well-being that challenges the dominant theories regarding overall well-being has been offered. Positioning the holistic benefits of Indigenous hauora practices at the forefront of the study, the direct impacts to well-being are defined and articulated clearly within mātauranga Māori. Additionally, it demonstrates how kai ora and puku can be normalised as an Indigenous approach to well-being, playing a critical role in redirecting the alarming current health trajectory of Māori. This is essential and fundamental information that should be understood widely by those working in the health sector with Māori whānau. Like the revitalisation of te reo Māori, this research urges that we fight for the survival of our hauora practices before they are completely lost.

Further reinforcement of mātauranga Māori insights and potential interventions. This thesis brings critical attention to the vital role that traditional well-being practices has in

contemporary Māori contexts. It contributes a valuable combination of mātauranga Māori, western science and knowledge informed by lived experiences. It provides evidence-based data to lead and guide potential interventions for Indigenous Peoples that foster states of being well and staying well.

Framing of rangahau. Although much of the information provided in this study is not new in its individual schools of thought, what is new is the framing, consideration, and presentation of these elements together in relation to Māori well-being. This provides a unique and innovate framework for new and emerging researchers to consider. This is an expansion of kaupapa Māori rangahau as it applies to Māori health and well-being in this unique context.

This doctoral research has examined how we revitalise more traditional knowledge, practices and understandings related to kai to optimise the health and well-being of Māori and Indigenous Peoples. The new knowledge that this thesis presents is summarised in the following six findings.

1. **Treating whānau for the symptoms of their conditions rather their lifestyle is keeping them trapped in cycles of unwellness.** This research has highlighted cases where western approaches to well-being are not suitable or effective for Māori. It further highlights how these methods can impose ongoing risks and harms to Māori whānau. Case studies featured in this study show how whānau have risen to a diagnosis, rapidly deteriorating when 'labelled with a condition.' This study champions whānau approaches that have disrupted a diagnosis and reverse states of unwellness by considering traditional knowledge, practices and understandings related to kai. This study further found that when whānau address the lifestyle and not the symptoms, a return to wellness is more likely. Focusing on shifts such as changing kai patterns (kai as medicine), connecting to te taiao, returning to kāinga, using rongoā Māori, practicing karakia, waiata and spending time with whānau, can reverse serious conditions such as mate wareware (dementia), a condition that tens of thousands of Māori and their whānau are currently dealing with.

2. **Indigenous systems of well-being can cause real and pivotal effects on Indigenous well-being trajectories.** This study re-centralises traditional knowledge, practices and understandings related to kai as fundamental to spiritual, cognitive, emotional, physical, and social well-being and balance within Indigenous communities. Findings in this research show that when whānau engage with inherent systems of well-being that are familiar and natural (such as practicing kai ora and puku ora), they are more committed, and results of wellness are more sustainable. Cases presented in this study report on how whānau have interrupted conditions associated to dementia, diabetes, endometriosis, anxiety, and depression through applying Indigenous systems of well-being. This research further reports to how haere puku (the science and art of fasting) has been practiced for generations in Indigenous communities as a method for well-being. Evidence is presented to show how fasting can reverse some of the chronic diseases that Indigenous People are currently experiencing as well as improve cognitive functioning. This study further links haere puku as a technique for raising consciousness to inform well-being.

3. **Whānau thrive in collective approaches to well-being and achieve more sustainable results in communities.** This study highlights the mana and kaha that exists in whānau approaches to well-being. It is evident that Māori flourish socially, physically, emotionally, spiritually and cognitively in spaces where they belong and can walk in life alongside the heartbeat of others. This study further shows how this is even more prevalent where intergenerational vibrations connect. Kai traditions are discussed in this research as a method to connect people, place and space highlighting the interconnectivity of all things. Where individuals have struggled in their individual fight for wellness, they have overcome battles when supported, inspired, and uplifted within our own Indigenous paradigms of hauora. This study also found that gathering around kai strengthens and sustains the overall well-being of whānau.

4. **Obesogenic environments, conflicting information, cost of kai, and access to kai are interfering with whānau capability and capacity to make informed choices surrounding kai.** This study found that whānau want to engage in lifestyles that sustain well-being. However, the ability to have autonomy over kai choices (kai that supports puku ora) are often impacted by environment, climate, situation, and government policies. Whānau report that workplaces, community spaces and whānau events make it difficult to make healthy choices when the kai provision is often high in fats, wheat, and sugar. This study also found that a significant barrier to adopting kai patterns that supports puku ora is the cost of fruit, vegetables and healthy protein. This study also found that access to kai from the moana, ngahere and other natural food sources is in many cases restricted by time, distance or not having access to the knowledge (including where and how to collect kai), tools and resources required to mahinga kai.

5. **Whānau have the capability to articulate Indigenous solutions for well-being; to exercise 'rangatiratanga'.** This research found that whānau want to lean into traditional knowledge, practices and understandings related to kai ora and puku ora however mātauranga is not easily accessible. This study has provided whānau with the relevant tools, methods, techniques, and resources to exercise rangatiratanga over kai. As a result, participants reported that they experienced a greater sense of well-being including higher energy levels, less stress, and a deeper connection to self and surroundings. This research contributes to the reclamation of our own 'hauora' knowledge, practices, and values. It makes an important contribution to whānau understandings of our capacity to engage in our own well-being solutions.

6. **Our behaviours and attitudes towards kai are inherited through epigenetics.** This study found that the thought patterns of our parents, grandparents, and great grandparents, can influence the way we engage with kai. Evidence shows how unhealthy lifestyles of an individual can impact whānau members for up to three future generations. This study also found that we have the ability to reshape the structure of our brains in a negative or positive way through the process of

neuroplasticity. This study has provided participants with the tools to break cycles of trauma and insecurity surrounding kai. As a result, whānau have reclaimed rangatiratanga over kai, which is evident in this study is contributing to more sustainable health outcomes. Whānau are also provided tools and resources to create healthy traditions and practices surrounding kai, these can be passed on to future generations.

The manifestation, transforming outcomes intended from this mahi. Completing this thesis has positioned me well for post doctorate opportunities. My aspirations include using the findings of this study as a tūāpapa to further build my career/expertise as a Kairangahau Māori. I also aim to use the mahi produced here to support fellow aspiring and emerging Indigenous researchers. Following are a list of key projects that support my aspirations.

- **Marsden Grant Project.** I aim to explore the interconnectivity of traditional fasting and Rangatiratanga Māori, investigating the pātai “are we filling the paepae or the urupā?” A Marsden Grant has recently been submitted in collaboration with my colleagues at Te Manawahoukura Rangahau Centre.
- **Rongo ā Puku Curriculum.** I am in the process of developing educational resources that normalise kai ora and puku ora as an Indigenous approach to well-being. Resources are targeted at those training in the health sector to really understand that western medicine is only one of many theoretical explanations for things that happen in the world, and in our tinana. The interweaving of mātauranga presented in this thesis is pivotal to advancing Indigenous theory and approaches in this space.
- **Fast like a Tupuna APP.** I am currently working on developing an APP that will be informed by how our Indigenous ancestors wove the methods of fasting into everyday life as an approach to optimal well-being. I plan to launch this APP by May 2025.
- **Kairangahau Matua mahi.** Completing this thesis has built my confidence, strengthened my abilities, and sharpened my tools as a Kairangahau Matua (my current role), and as an emerging Māori researcher. One of the key focuses within my current role is to support our degree and higher programmes offered at Te

Wānanga ō Aotearoa. This completed mahi gives deeper credibility to my kaupapa which I plan to present widely at local, national and global gatherings including hui, wānanga and conferences.

- **Wā Hine wānanga.** I aim to continue with offering Wā Hine wānanga across the Ngāti Kahungunu region. I see these wānanga as a mechanism to share the mātauranga collated in this thesis as well as an opportunity to keep current and relevant in my field of expertise.
- **Journal Articles.** I aspire to produce individual as well as collective articles to socialise the findings of this study. I aim to re-emphasise how current and previous approaches to western interventions are not suitable or working for our whānau Māori and expose some of the risks and harms (such as the cases described in this thesis) associated with these approaches. I will also be linking this study to further international literature and aligning what is already known about kai engagement practices and preferences more deeply.

It is recognised that the findings of this thesis may also contribute to research that others choose to uptake and forward, to continue the mahi that remains. It might also provide opportunities for me as an emergent researcher to contribute to the work of senior academics in this field to answer the research questions more fully. Finally, there is an opportunity for the mātauranga Māori insights provided here, to contribute to the broader Indigenous research context and for reciprocal learning and progression in this field to occur as a result.

Kupu Māori | Glossary of Māori words

Kupu Māori have been used throughout the chapters to articulate in a more meaningful way the story I want to share. Where appropriate I have added more context for the reader. Mostly, however, I have deliberately avoided translating to allow the kōrero and pūrākau to flow. This glossary is provided as a tool for understanding kupu Māori used in this thesis. Note that these kupu can have deeper meaning and can shift depending on context, this is a basic translation organised into the following focus areas. The lists have been adapted from [100 Māori words every New Zealander should know - Te Wiki o Te Reo Māori - Māori Language Week | NZHistory, New Zealand history online.](#):

1. Gathering spaces and places.
2. Concepts and expressions.
3. People, place, and their groups.
4. . Environment and science
5. Physical, spiritual and mental well-being
6. Protocols, roles, emotions, and characteristics.
7. Food and Drink
8. Medicine
9. Artforms
10. Higher Beings

Gathering spaces and places

- Haka, chant with dance for the purpose of challenge. Reinforce messages with aggression
- Kaikōrero, speaker.
- Kāinga, home.
- Karakia, prayer, incantation.
- Karanga, the ceremony of calling visitors onto the marae.
- Kaupapa, topic, purpose, intent.
- Koha, unconditional gift
- Kōrero, speak

- Marae, meeting house
- Manuhiri, guests, visitors.
- Pātai, question.
- pūrākau, story, storytelling.
- Tangata whenua, original people belonging of the land
- Tangihanga, mourning ceremony
- Waiata, song, chant also used to reinforce a message
- Whaikōrero, the art and practice of speech making.
- Whare, house or dwelling place
- Whare kai, place of preparing and eating food
- Whakanoa, to lift sacredness and make normal
- Whakawhiti kōrero, yarn, conversation, exchange of views

Concepts and expressions:

- Atua, gods.
- Aroha, compassion, tenderness, sustaining love.
- Hā, breath.
- Haere Puku, silent, fasting.
- Hauora, wellness.
- ‘He kakano muri, He kakano mua’, ‘a seed was planted in the past to bloom in the future’.
- Herenga, connections, obligations, bond, commitment.
- Hoa Haere, companion.
- ‘Hokinga ki te kāinga’, ‘return home’.
- Hononga, connections, relationship to the bond
- Hora, to spread out, scatter.
- Horopaki, context,
- Io, the supreme being, God.
- Ihi, wehi, wana. power, authority, essential force.
- Ihu Karaiti, Jesus Christ.

- Kaha, strength.
- 'Kia mau', 'hold tight'.
- Kiko, substance, content, subject matter.
- 'Ko koe te rongoā', 'you are the medicine'.
- Oriori, song composed on the birth of a chiefly child about his/her ancestry and tribal history.
- 'Koha mai, koha atu', 'give and receive'.
- Māramatanga, understanding, enlightenment
- Mana, integrity authority, power (secondary meaning – reputation, influence).
- Manaakitanga, caring for others, guests, the process of showing respect or generosity to others
- Maramataka, Māori lunar calendar
- Matangaro, the hidden face.
- Mātauranga, knowledge.
- Mauri, hidden essential life force or a symbol of this.
- Mauri tau, settled, relaxed.
- Mohiotanga, knowing
- Noa, safe from tapu (see below), non-sacred, not tabooed.
- Noho Puku, mindfulness, reflection.
- Puku Ora, gut health.
- Puku Mahi, hard working.
- Raupatu, confiscate, take by force.
- Ringawera, the cooks.
- Rohe, boundary, a territory (either geographical or spiritual) of an iwi or hapū.
- Taki, token.
- Taihoa, to delay, to wait, to hold off to allow maturation of plans.
- Tapu, sacred, not to be touched, to be avoided because sacred, taboo.
- Tiaki, to care for, look after, guard.

- Taonga, treasured possession or cultural item, anything precious tangible and intangible.
- Tino rangatiratanga, the highest possible independent chiefly authority, paramount authority, sometimes used for sovereignty.
- Tuarongo (Pou), carved centre post on the back wall of marae.
- Whakataukā, a proverb or significant saying in Māori.
- Whenua land, homeland, country (also afterbirth, placenta).

People, place, and their groups:

- Ākonga, learner
- Ariki, male or female of high inherited rank from senior line of descent.
- Hapū, clan, tribe, independent section of a people (modern usage – sub-tribe), pregnant.
- Hoa tane, male partner
- Iwi, people, nation (modern usage – tribe), bones.
- Kaumātua, elder or elders, senior people in a kin group.
- Kaiako, teacher.
- Kairangahau, researchers.
- Ko au, self.
- Pākehā, New Zealand of European descent
- Rangatira, person of chiefly rank, boss, owner.
- Tama, son, young man, youth.
- Tamāhine, daughter.
- Tamaiti, one child.
- Tamariki, children
- Tāne, man/men
- Teina/taina, junior relative, younger brother of a brother, younger sister of a sister.
- Tīpuna/tūpuna ancestor(s).
- Tuāhine, sisters of a male
- Tuakana, senior relative, older brother of a brother, older sister of a sister.

- Tungāne, brother of a sister.
- Tūāpapa, foundation.
- Tūrangawaewae, a place to stand, a place to belong to, a seat or location of identity.
- Ūkaipo, place of nurturing.
- Wāhine, women
- Waka, canoe, canoe group. Māori identity to a waka of the voyaged the great migration to Aotearoa from the motherland of Hawaiiki
- Whāngai, fostered or adopted child, young person.
- Whakapapa, genealogy, to recite genealogy, that establish connections to the lands, the gods and our ancestors
- Whānau, immediate or non-nuclear family, to be born.

Te Taiao (environment) and pūtaiao (science):

- Awa, river.
- Iti, small, little.
- Māra Kai, food gardens.
- Marama, moon.
- Matariki, constellation of stars that mark the Māori New Year. Pleiades star cluster
- Maunga, mountain.
- Moana, sea, or large inland 'sea', e.g., Taupō.
- Motu, island.
- Ngahere, forest.
- Nui, large, big.
- Papa, flat.
- Poto, short.
- Puke, hill.
- Roa, long.
- Roto, lake, inside.
- Tai, coast, tide.
- Te Ao Māori, the Māori world.

- Te Putaiao, science
- Te Taiao, the environment
- Wāhi, place.
- Wai, water.

Physique, spirituality, mind, cognitive:

- Hau, wind, air, vital essence, vitality of a person, place, or object, personality and aura.
- Hauora, well-being.
- Hinengaro, cognitive being, mind
- Ihu, nose.
- Kauae, chin.
- Kōpū, womb, uterus.
- Manawa, heart, love
- Mauri, essence of life.
- Puku, tummy, gut, belly, stomach.
- Ringa, hand, arm.
- Roro, brain.
- ‘Tihei Mauri Ora’, ‘breath of life’.
- Tinana, physical being.
- Toto, blood.
- Tūtae, excrement, ordure.
- Ū, breast
- Upoko, head.
- Waewae, foot/feet, leg/legs.
- Wairua, spiritual being.

Protocols, roles, emotions, and characteristics:

- Aroha, compassion, tenderness, sustaining love.
- Hā, breath, tone of voice.
- Kaitiakitanga), guardian/guardianship.

- Kino, bad, naughty.
- Koha, a token, an unconditional gift
- ‘Koha Mai Koha Atu’, ‘to give and receive’.
- Ihi, positive energy within that is ignited by what is seen, heard or felt.
- Mana, authority, power; influence, reputation.
- Mauri, hidden essential life force, or a symbol of this.
- Māheahea, o clear space.
- Noa, safe from tapu, non-sacred, not tabooed.
- Pakanga, battle.
- Pūkenga, skills.
- Whaikōrero, art and practice of speech-making.
- Taumaha, heavy burden
- Taihoa, to delay, to wait, to hold off to allow maturation of plans.
- Tūākiritanga, identity, characteristics, skills.
- Taonga, treasured possessions or cultural items, anything precious.
- Raupatu, confiscate, take by force.
- Wana, the collection of energy that ignites and connects people to the environment, to the people and to the kaupapa.
- Wehi, the emotions reaction that acknowledges ihi.

Food and drink:

- Heihei, chicken.
- Hākari, feast.
- Huawhenua, vegetables.
- Hua rākau, fruit.
- Ika, fish.
- Inu, drink.
- Kai, food.
- Kapu, cup.
- Mīti, meat.

- Miraka – milk
- Mīti poaka, pork.
- Rīwai, potatoes.
- Tī, tea.

Rongoā (medicine):

- Rongoā, medicine
- Wairakau, plant based medicinal drink.
- Kawa kawa tī, plant-based tea for cleansing.

Toi (artforms):

- Toi, art.
- Waiata, songs, chants
- Kōrero tawhito, ancient stories.
- Mōteatea, traditional chants.
- Whakaari, play, skit.
- Pūrākau, stories, ancient narratives and legends

Atua Māori (mentioned in this thesis, there are more):

- Hine Turama, wife of Uru-te-Ngangara
- Io, the Supreme God.
- Mahuika, god of fire
- Papatuānuku, earth mother
- Ranginui, sky father
- Rongo-mā-Tāne, god of peace and agriculture
- Rūaumoko, god of earth quakes
- Tāne, god of forests
- Tāwhirimātea, god of wind
- Tūmatauenga, god of war
- Uru-te-Ngangana, god of light, the gleaming one. The first born of Rangi and Papatuānuku

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Appendix A: Research Information Sheet

INFORMATION SHEET



Rongo ā Puku

Rongo ā Puku is a research project that investigates the pataiHow do we revitalise more traditional knowledge, practices and understandings related to kai in an effort to optimise the health and well-being of Māori and Indigenous Peoples? Exploring theories relating to kai sustainability and traditional food rituals including karakia and our relationship with kai, this research will consider the hauora benefits of kai using indigenous ideology, methods, and practices.

Pūrākau will be employed as a mechanism to facilitate the sharing of personal stories and experiences of Hākari to inform this research. This approach will further foster a process to capture narratives and created pieces of contributors in whānau journals to be used as an ongoing resource of teaching and learning for participants and their communities.

Participant Recruitment

- Recruitment method is via expression of interest on social media, those groups interested will be followed up with an interview with researcher.

Project Procedures

- Data will be collected to inform the research question.
- Data will be analysed and presented to complete the objectives of this research project.
- Data will be stored in an ethical manner for a period of 7 years.

Participants involvement

Participants will be involved in an interview 1 -2 hours.

Participants Rights

The “Statement of Rights” must include participants right to:

- Decline to participate or answer any particular question.
- Withdraw from the study following the initial interview.
- Ask any questions about the study at any time during participation.
- Provide information on the understanding that your name will not be use unless you give permission to the researcher.
- To be given access to a summary of the project finding when it is concluded.

If an anonymous Questionnaire is used, replace the above rights with the statement:

- Completion and return of the questionnaire imply consent. You have the right to decline to answer any question.

If taping, include the right:

- Participant has the right to ask for the audio/video tape to be turned off at any time during the interview.

Support processes.

- Details of support processes in place to deal with adverse physical or psychological risks.

Project Contacts

- Participants are invited to contact the researcher and/or supervisor if they have any questions about the project.

Contact details of researcher

Sally Rye

Professional Doctorate Student

sally.ryedunn@gmail.com

WAEA (T) +64 27 5696265



TE WHARE WĀNANGA O
AWANUIĀRANGI

Contact details of Supervisor.

Professor Mera Penehira

Head of School of Indigenous Graduate Studies

Mera.Penehira@wananga.ac.nz

WAEA (T) +64 21 478194



TE WHARE WĀNANGA O
AWANUIĀRANGI

Appendix B: Confidentiality agreement

Rongo ā Puku



CONFIDENTIALITY AGREEMENT

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF FIVE (5) YEARS

I _____ (Full Name) agree to
keep confidential all information concerning the project.

Signature: _____

Date:

Full name: _____

Contact details of researcher

Sally Rye

Professional Doctorate Student

sally.ryedunn@gmail.com

WAEA (T) +64 27 5696265

Contact details of Supervisor.

Professor Mera Penehira

Head of School of Indigenous Graduate Studies

Mera.Penehira@wananga.ac.nz

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Appendix C: Participant Consent Form - hard copy

Rongo ā Puku



CONSENT FORM

THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF FIVE (5) YEARS

I have read the Information Sheet and have had the details of study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

- I agree/do not agree to the interview being audio taped. *(only include if applicable)*
- I agree/do not agree to the interview being videotaped. *(only include if applicable)*
- I agree to participate in this study under conditions set out in the Information Sheet however reserve the right to withdraw my consent at any given time.

Signature: _____ Date: _____

Full name – printed:

Contact details of researcher

Sally Rye

Professional Doctorate Student

sally.ryedunn@gmail.com

WAEA (T) +64 27 5696265

Contact details of Supervisor.

Professor Mera Penehira

Head of School of Indigenous Graduate Studies

Mera.Penehira@wananga.ac.nz

WAEA (T) +64 21 478194

Appendix D: Participant Consent Form - online version



Interview/focus group consent form

Thank you for taking the time to participate in this kaupapa. Your input is highly valued and directly impacts my rangahau.

Name

First Name Last Name

Phone Number

Email

research@whitiora.ac.nz

Address

Street Address

Street Address (cont.)

City

State / Province

Postal / Zip Code

I have read and understand the Rongo ā Puku information sheet. Sally has taken the time to kōrero with me and prepare me for my role as her Rangatahi Research Assistant on the Whāia Rā.

[Create your own document | PDF | 100% editable PDF online | \[PDF Editor\]\(#\)](#)
Jotform ¹

research project. In signing this form I understand and agree to the following:

- My participation in this focus group is entirely voluntary.
- I do not have to answer every question and can stop sharing if I don't feel comfortable.
- The focus group/interview will be recorded so that Sally and her research assistants can remember everything that was said.
- After the recording has been used for taking notes, Sally will delete the recording.
- The paper and computer files from the focus group/interview will only be seen by Sally and her assistant researchers. They will keep whatever I say private and not share information outside of our group.
- The findings from the focus group will be written up in a way that will not identify me. My name will never be used (unless I consent).
- The findings will be included in Sally's PhD thesis on Rongo ā Puku (Puku Ora, Nohi Puku, and iarene Puku) and may be included in articles, reports, conference presentations, meetings, or in the media.
- I will receive a kōrihi as thanks for helping with this research.
- If I have any worries or questions, I can talk about these with Sally on 027 568 6666 or I can email sally@whitiora.ac.nz at anytime.

Please let me know if you would like a copy of the research findings

- I wish to receive a summary of my focus group/interview notes.
- I wish to receive a digital copy of Sally's completed thesis.
- I don't mind.

Date

Month Day Year

[Submit](#)

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Jotform ²

Appendix E: Ethics Approval



TE WHARE WĀNANGA O
AWANUIĀRANGI

02/08/2022

Student ID: 2020000790

Sally Rye
27 Faulkner Street
Tauranga 3112

Tēnā koe Sally,

Tēnā koe i rata i ngā tini āhuatanga o te wā.

Ethics Research Committee Application EC2022.07 Outcome: Approved

The Ethics Research Committee has considered your resubmitted application. The committee has approved your ethics application and congratulates you on your study to date.

We wish you all the best in your research and look forward to the outcome and final result of your submitted thesis.

If you have any queries regarding the outcome of your ethics application, please contact us on our freephone number 0508926264 or via e-mail at Ethics@wananga.ac.nz.

Nāku noa, nā

Shonelle Wana
Ethics Research Committee Secretary
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The Whare Wānanga o Awanuiārangī
recognises the presence of whānau
members. Please see all our
communications.

Appendix F: Online Survey

Rongo & Puku
 Rongo & Puku is a source of intelligence to inform wellbeing.
 A rongo is a totem.
 Rongo & Puku is about being in tune with body, mind, spirit, place and time.
 My research is about understanding how our totems maintained wellbeing by looking after the health of their puku (gut health).
 Your input, both mine (Intaghi) is valued and appreciated.
 Thank you for your time.

1. Do you consent to your information being shared in the Rongo & Puku Research?

2. How would you rate your overall wellbeing?

3. What areas of health are you most concerned about? Please choose more than one if relevant.

Digestion All of it
 Mental Gut health
 Physical None
 Energy
 Other (please specify)

4. What is the best way for you to remain healthy/wellbeing?

Exercise
 Eating vegetables/fruit
 Eating whole grains like brown rice or whole wheat
 Drinking water
 Getting enough sleep
 Keeping a regular meal schedule
 Daily habits
 Other (please specify)

5. Where do you get your food from?

Supermarket
 Local shop
 Restaurant
 Local market/food stall
 Family/friend
 Other (please specify)

6. What influences your food choices?

Availability Cost of food
 Taste Food type
 How often I consume vegetables Eating when I feel hungry
 Availability of food choices Eating when I feel hungry
 Other (please specify)

7. Do you regularly sit down and enjoy meals?
 Yes
 Sometimes
 No

8. What gets in the way of you regularly sitting down and enjoying meals as a rongo?
 Lack of time
 Not often out socialising
 No convenient food choices
 No social places to sit and chat
 Other (please specify)

9. When making choices around food do you look at the science or are you influenced by the marketing/advertising?
 The marketing
 The science
 Other (please specify)

10. Do you practice fasting?
 Yes
 No
 Other (please specify)

11. How many meals do you have per day?
 2 meals per day
 3 meals per day
 4 meals per day
 More than 4 meals per day
 I never eat

12. Are you always in tune of what foods make you feel a certain way?
 Yes
 No
 Other (please specify)

13. How often do you consume alcohol per week?
 Never
 Once or twice per week
 3-4 times per week
 5-7 times per week
 More than 7 times per week
 Other (please specify)

14. Are you aware of how alcohol affects your gut health?
 Yes
 No

15. Finally, please enter your personal details below.

Name: _____
 Gender: _____
 Ethnicity: _____
 Age: _____
 Height: _____
 Weight: _____
 What is your current job?

16. What age range do you belong to?
 18-24 25-34
 35-44 45-54

University of Zimbabwe
 School of Health, Behavior and Society
 Harare, Zimbabwe