TE KUPENGA

A woven methodology for collecting, interpreting, and stor(y)ing Māori women's knowledges

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Abstract

This article explores the use of an intersecting methodology termed Te Kupenga as a philosophical approach to gathering, interpreting, and storing mātauranga wahine. The research aimed to understand the ways of being and doing of physically active wāhine Māori and relate them to characteristics of atua wāhine. A kupenga is a type of open weave net used for fishing or gathering food. In this research, it represents the weaving together of three approaches: Whakapapa, Mana Wahine theory, and physical activity. While each offers a unique way to view the world and your position in it, their intersections offer important shared qualities that purposefully shape the research, its philosophy, and its methods. As a type of interfacing methodology, Te Kupenga weaves together philosophies and methods—keeping what is needed and allowing what is not required to pass through the gaps in the weave.

Whakapapa—Introduction

Māori and Indigenous communities are often portrayed in a range of statistics that display a disempowering discourse of deficit. Whether related to health, criminal justice, or socio-economic status, this narrative is often influenced by the biases and intentions of dominant societal positions, lacking relevant context (Walter & Suina, 2019). The impact of research "on" instead of "with" Māori has influenced the way Māori engage with the research process, has shaped negative or inaccurate portrayals of (wāhine) Māori, and has indeed influenced harmful internalised ideas of identity (Johnston & Pihama, 1995; Reid et al., 2019; Walter & Andersen, 2013).

In Aotearoa New Zealand, Māori women have experienced an additional measure of the power imbalance associated with this deficit discourse, as a result of the ongoing consequence of colonisation, with its accompanying patriarchal influence. This patriarchal influence and the narratives it informs is seen to have stripped wāhine Māori of their complementing power and significance (Mikaere, 2003; Smith, 2006; Walter & Suina, 2019). Traditional Māori stories and mātauranga exhibiting the significance of wāhine have been (and continue to be) transmitted through waiata, whakapapa, raranga, or karanga (Marsden & Royal, 2003). Conversely, the arrival of Europeans to Aotearoa brought other tools for

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recording and compiling stories of Māori "mythology", cosmology, and history (Best, 1897; Grey, 1971; Shortland, 1882). Although these new tools allowed Māori history and knowledge to be recorded in written form, the resulting (mis) interpretation, (mis)representation, and distortion would build a foundation for the subjugation of wāhine, their stories, and those stories that link them with the power and significance of atua (wāhine) (Mikaere, 2003; Yates-Smith, 1998).

Aroha Yates-Smith describes in her groundbreaking thesis that the disregard of wāhine and demonising of atua wāhine by early ethnographers meant that wāhine positions within Māori society and cosmology were diminished (Yates-Smith, 1998). Her findings and the many other contributions by wāhine authors emphasise the importance of (wāhine) Māori being in control of their own stories and how they are disseminated. With this in mind, it is the intent of this paper to explore the use of a woven methodological approach in prioritising the voices of physically active wāhine Māori. Te Kupenga draws together three approaches—Whakapapa, Mana Wahine theory, and korikori tinana—to come to know the ways of being of these wāhine and to draw connections to atua wāhine. Inherent in this woven methodology is the benefit of each unique approach and the intersections where they share similarities. Each perspective allows the stories of wāhine to be told in a way that resonates with what it means to be Māori, wāhine, and physically active—in a world where it can often be difficult to be any of these.

This means that the way the research is conducted, and consequently presented, reflects what it means to be those three things.

Kaupapa—Intersecting methodology

This article explores the kaupapa and tikanga used in my PhD research (Heke, 2022). The philosophy of the research is positioned at the intersections of three methodological positions, with three unique perspectives. Although the illustration (see Figure 1) of a three-cornered kupenga appears fixed, in reality it represents a shifting and dynamic space where adaptation and flexibility are possible. Just like the kupenga, whose design reflects the type of kai it intends to collect, this research methodology is intentional about collecting, interpreting, and storing the mātauranga of wāhine Māori. It prioritises wāhine voices, but more importantly it prioritises stor(y)ing mātauranga that empowers them, their whānau, and their wider communities.

The research design was initially imagined as three intersecting lenses, each offering a unique perspective of the world and providing a space to position yourself as researcher or participant. However, intersecting lenses only afford the opportunity to view the world; the eventual kupenga methodology would come to represent an active, adaptive, and purposeful mechanism to collect, interpret, and store mātauranga.

Regardless of the illustration, not only do the three approaches provide their own distinctive qualities, but where they overlap and intersect, they share space and similarities that guide and
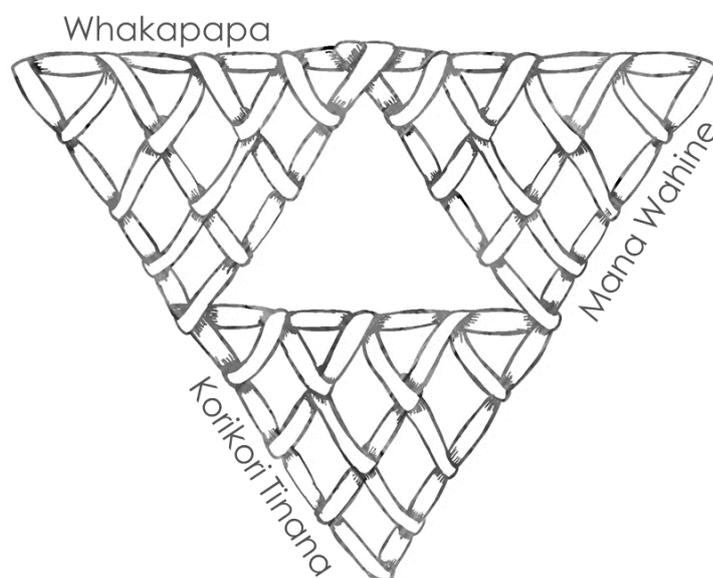

FIGURE 1 Te Kupenga methodological framework

shape the research process. They are similar in the way each approach provides a way of interacting with the world and understanding your place in it. Whakapapa is a framework for understanding the world and the interconnectedness of it (Royal, 1998). Mana Wahine defines a position at an important intersection of society for Māori women (Pihama, 2001). And physical activity is a means for navigating or negotiating those positions. Secondly, each is flexible, dynamic, and in a way, is about growth or movement from one place to another. Whakapapa describes the layering of generations, where the generations can adapt from the learnings from previous generations (Marsden & Royal, 2003). Mana Wahine is about reclamation, a movement away from a subjugated position towards empowerment (Simmonds, as cited in Hurihanganui, 2020). Physical activity, as a health behaviour, helps to move bodies towards hauora (Kokkinos & Myers, 2010). Finally, each provides theoretical and practical ways of understanding where you come from and opens the potential for where you may go. Each approach or philosophy also contributes to the practical implementation of the research, which will be outlined in a discussion of the research methods.

Whakapapa

In a broad sense, whakapapa represents a scientific method of enquiry and theoretical framework (Royal, 1998). It provides not only the structure to research design but also the blueprint to understanding my place as the researcher and that of the participants. Whakapapa is commonly referred to as genealogy, but its significance is more than tracing lines from ancestors to descendants. Whakapapa provides the relational framework that organises mātauranga Māori (Marsden & Royal, 2003). Essentially, whakapapa displays the interconnectedness of all things. Part of the intricacies of whakapapa is its ability to explain the nature, origin, and relationship of phenomena, but also how to locate and display trends, and predict future occurrences of phenomena (Royal, 1998).

In a research context, whakapapa is both method and methodology. However, it sets itself apart from the rigidity of Western approaches to research by allowing dynamic and flexible ways to view, interpret, and apply knowledge (Royal, 1998). Whether depicting genealogical frameworks of spiritual, spatial, temporal, and biophysical information (Roberts, 2012), or describing origins and relationships through linear (descent) and lateral (kinship) relationships (Heke, 2017; Roberts et al., 2004), whakapapa can help us make sense of our world, as Māori, and interpret why we are the way we are.

Within this context, whakapapa is the vehicle that allows the exploration and realisation of mātauranga (wahine) Māori. The flexibility with whakapapa means that knowledge is relational and reiterative rather than rigid and fixed. The ever-changing and rebalancing nature of relationships means that knowledge is not static, but adaptable to meet the challenges of current environments (Roberts, 2012; Roberts et al., 2004). This reiterative, relational, and adaptiveness of whakapapa offers an appealing approach to contemporary (Māori) research seeking to understand and apply mātauranga in contemporary settings.

Mana Wahine theory

As a theoretical and methodological approach, Mana Wahine theory is a Māori feminist discourse that explicitly explores the intersectionality of being Māori and being female. Mana Wahine is an expression of Kaupapa Māori that creates and uplifts the diverse narratives and experiences of Māori women (Johnston & Pihama, 1995; Simmonds, 2011). Situating wāhine in relation to each other, Mana Wahine is an important cultural concept that has the capacity to uphold and reaffirm Māori women's mana as Māori—as Indigenous (Smith, 1993). Mana Wahine is itself distinctly different from Western feminism and, like Kaupapa Māori, includes a decolonising component—allowing wāhine Māori to express and critically acknowledge their positions within society. Kaupapa Māori theory, in part, seeks to empower an anticolonial (or decolonised) critical consciousness (Mahuika, 2008) and facilitate the regaining control of Māori lives, culture, and research (Bishop, 1994). Mana Wahine extends this focus to the wahine position by acknowledging the extent to which wāhine Māori, and tāne, have themselves internalised and ultimately perpetuated harmful colonial discourses (Johnston & Pihama, 1995).

Mana Wahine, as a Māori feminist discourse, can be empowering and restorative in nature and provides an opportunity to (re)define and (re) present the diverse experiences of what it means to be wāhine Māori, in many contexts (Simmonds, 2011). In that sense, Mana Wahine underpinned and overarched this research. By default, Mana Wahine provided a space to position myself as a wahine Māori and for those who participated in the research to critically engage with our significance in contemporary society (Pihama, 2001; Simmonds, 2011) and to (re)present a narrative

that is empowering. In this research, it definitively declared that wāhine are the holders of our own mātauranga, and that its transmission and delivery into the world should be decided by wāhine.

Physical activity

Finally, in this context physical activity extends beyond being a variable of interest or health behaviour, and in this research, it represents a shared space occupied by wāhine who participated in and led the research. Physical activity was what set these wāhine apart but also what drew them together. In some ways, physical activity is about moving about a space and expending or transferring energy. For this piece of research, physical activity provided a means by which to engage with each other, moving in ways that facilitated the transfer of knowledge and experiences. Physical activity was a way of interacting with a range of environments and displaying aspects of personality or physicality.

As an important health behaviour that affects a range of health outcomes (Fogelholm, 2010; Kokkinos & Myers, 2010), the ability for wāhine to successfully navigate a physically active lifestyle, in modern life, is seen as an expression of mana. In earlier Māori life, physical activity was necessary to a range of everyday activities (Marsden & Royal, 2003); therefore, it not only contributed to wellbeing but was also integral to the continuation of whakapapa (Durie, 1999, 2004b). In contemporary society and indeed in this research, it facilitates relationships, it displays our strengths and weaknesses, it is a language that is spoken through movement, and it is a way to express our whakapapa to each other and to atua.

Interface

The intersections of this research methodology allow a unique perspective often described as interface research. These unique intersecting spaces, synthesised from the blending of distinct approaches, can be both challenging and empowering. They can offer advantages not always available to other perspectives, but also hold the responsibility of ensuring each knowledge system or perspective holds its integrity (Durie, 2004a, 2004b). In that position of standing and leaning between multiple worlds and multiple realities is the unique opportunity to take the learnings afforded from that balancing act to inform the way theory is practised, and the way narratives are presented.

The interface approach, like Te Kupenga, illustrates the creative potential of Indigenous knowledge to be applied in parallel with other knowledge systems. Such an approach allows access into both systems to use the insights and methods of one to enhance the other, or to decide which to include and which to discard. One of the benefits of such an approach to this type of interface research is that it reflects the position of many contemporary Māori, like other Indigenous peoples in first world countries, who live at that interface. The integration, and more importantly, the synthesis of approaches offer the potential to be innovative and creative in advancing Māori aspirations (Durie, 2004a). This was the intent of Te Kupenga, through which the integration and synthesis of perspectives, theoretical approaches, and methods provided a new way of understanding, implementing, and applying research.

Tikanga—Concepts to methods

The conceptualisation of this methodology evolved from intersecting lenses to intersecting threads. These threads weave together philosophies and practices that take what is needed or useful from each and filters out what is not. Inherent in the structure of these intersecting threads of the kupenga is the ability to be dynamic, adaptable, and discerning. The convenience of discarding or disregarding certain aspects of an approach or method mirrors what tūpuna would also have done. They too would have to adapt their knowledge and its application upon encountering new challenges in changing environments. They would have discarded practices that served them well in previous environments while adapting or creating new ways of doing things, based on their current resources, environments, and aspirations for their new home (Marsden & Royal, 2003).

Te Kupenga illustrates dynamic adaptability, resourcefulness, and flexibility. Each kupenga is designed and constructed depending on the type of kai that it aims to collect. The gaps in the weave determine what stays in and what is washed away (Pendergrast, 2003; Puketapu-Hetet, 1999). In this way, Te Kupenga is an ideal representation of a contemporary Indigenous methodology. It incorporates the ancient knowledge and practice of whakapapa, the structural scaffold that stores and transmits knowledge. It weaves in a contemporary critical approach to research that (re)prioritises the knowledges and positions of wāhine. And it considers how each of those approaches can be demonstrated through the movement of bodies— through physical activity.

Te Kupenga and all the threads that bring shape to the methodology of this research were

designed to explore a range of distinct but inter-woven areas. Whether identifying the traits of contemporary wāhine with active lifestyles, (re)interpreting the stories of cosmological tūpuna wahine or expressing their shared whakapapa of both, the philosophy also translated into the research practice. The research methods employed are informed by both Māori and Euro-Western approaches—kanohi ki te kanohi, mobile meth-ods, reflexive thematic analysis, and poetry, just to name a few. Each was adapted and used as a way to facilitate a Mana Wahine telling of whakapapa through physical activity. A few of the methods are outlined below.

Data collection

Korikori Kōrero is a novel mobile method of inquiry (Heke, 2023). It translates as movement discourse or physical activity conversations, and it simply brings an active component to a research interview. Instead of a conventional semi-struc-tured sit-down interview, participants were offered the opportunity to choose an activity and an envi-ronment to share with the researcher. They would be either observed or joined in their activity and then share kōrero during or after the activity. The activities and environments were diverse. As the researcher, I joined dance fitness classes, went stand-up paddle boarding, walked up maunga, went swimming, and observed sports trainings and CrossFit, among many other activities. Each activity required the use of flexible and adaptable research practices, but each produced a set of valu-able stories (or data) that incorporated aspects of the person, physical activity, and place.

Like other mobile methods, such as walk-ing interviews (Clark & Emmel, 2010) or hīkoi (Simmonds, as cited in Hurihanganui, 2020), Korikori Kōrero offers an additional dynamic through which to observe, participate in, and interpret aspects of the research participants. By bringing the researcher into an activity-based rela-tionship with the research participant, the power dynamic can be evened out (Trell & Van Hoven, 2010); participants are able to display aspects of their personality and physicality unlikely to be observed in a conventional interview (Butler & Derrett, 2014); and the researcher occupied a shared space—allowing a richer experience of the research relationship (Heke, 2023).

The application of pūrākau was also relevant in both the stories shared by wāhine and the (re)interpretation of those about atua wāhine (or the feminine representations of the natural environ-ment). Lee (2009) describes pūrākau as a way of including a decolonising process in the (re)telling of narratives. Pūrākau, like the methodol-ogy described here, are dynamic, subjective, and adaptable for contemporary times. They provide a platform for the (re)telling of well-known or lesser known stories that depart from popular translations, and instead of diminishing, they can reaffirm the power and position of wāhine (Te Awekotuku, 2007).

Pūrākau in this research provided a unique way of contextualising knowledge transmission. They provided new ways of understanding our experi-ences of communication, research, and cultural identity. Acknowledged in pūrākau, also a meth-odology of its own, is the ability to contextualise knowledge within certain physical, societal, or familial environments, which grounds mātauranga and connects it to both the storyteller and the audience (Lee, 2009). In this way, the stories or experiences that wāhine shared—through physical activity, conversations, and [natural] environ-ments—were grounded in the movements, the words, and the places that were exchanged. Pūrākau describes the stories told by wāhine, and the (re)interpretations of atua wāhine and the reflective journaling by the researcher. On each occasion, the position of the "storyteller" and the position of the audience are integral aspects of the message conveyed and received.

Data analysis

The data analysis process was derived from reflex-ive thematic analysis (RTA) (Braun & Clarke, 2019, 2020) but was adapted to align with the hierarchical learning process associated with a Māori health framework (Heke, 2014). RTA is an analytic approach that identifies "patterns of meaning across a qualitative dataset" (Braun et al., 2016, p. 1). The set of tools it employs helps to make sense of data and involves rigorous data familiarisation, coding, theme development, and revision. This translated to a repetitive physical engagement with the data—(re)listening to audio, (re)watching video, margin notes, post-it labelling, mind mapping, (re)organising draft categories, and conferring on metaphorical categories (themes).

The nature of RTA allowed a degree of flex-ibility (Braun & Clarke, 2019) to enable alignment with a Māori worldview and aspects of the Atua Matua Māori Health Framework (AMMHF) (Heke, 2014). AMMHF is based on whakapapa, which is the structural scaffolding that arranges, stores, and transmits Māori knowledge, and describes genealogy (Roberts, 2012). In AMMHF, whakapapa provides a way to conceptualise the
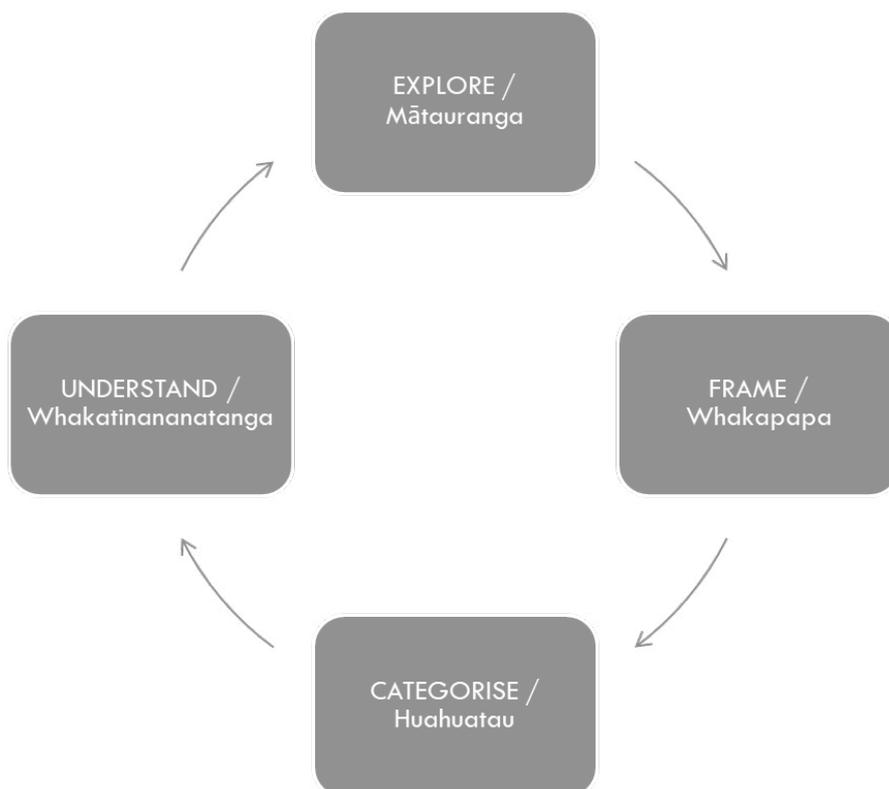
FIGURE 2 Whakaāria—Adapted reflexive thematic analysis

connection between the natural environment and human health. It does so by connecting the knowledge associated with natural environments with applied, physical activity-based learning (Heke, 2019). My own experience applying this system of learning through a personal journey of reconnecting with Māori culture and participating in a range of outdoor activities would eventually lead me to see the potential it held for acquiring knowledge of the natural environment, along with the process of making sense of "data". Therefore, the conceptual tools of RTA were employed just as tools, while the concepts of mātauranga (Māori knowledge systems), whakapapa (knowledge scaffolding), huahuatau, and whakatinanatanga (practical application) informed and underpinned their use (see Figure 2).

Mātauranga—Exploration and familiarisation

The familiarisation of data included the gathering of mātauranga from the data but was also informed by mātauranga—traditional Māori knowledge and emerging contemporary ideas. The familiarisation with interview data—reading transcripts and excerpts from the reflective journal, listening back to interview recordings, and watching or (re)

viewing visual recordings—allowed the reconciliation and reconceptualization of the experiences to the subsequent data (Braun & Clarke, 2006; Braun et al., 2016). Because the interview process included an active component, it was useful and critical to reflect on the experience as a part of the interview data analysis. Mātauranga/familiarisation is concerned with the way knowledge or information is viewed, understood, and made sense of. Mātauranga can encompass both the process of coming to know and the knowledge itself (Mead, 2016; Mercier, 2018).

Whakapapa—Framing and coding

The framing and coding phase is about creating a scaffold upon which the subsequent themes are developed. Whakapapa is that framework where mātauranga is contained, and in this case is the basis of the development of huahuatau (to come) (Braun et al., 2016; Roberts, 2012). Although it is possible to use a software programme to assist in this process, I decided to manually identify and extract codes from the data. The manual and repetitive nature of this process (mentioned earlier) reinforced the familiarisation with the data—through the continuous shifting, changing,

and rearranging of codes and potential quotes from transcripts to notes, to categories, to mind maps and so on. The process was time-consuming and repetitive but being physically engaged with the data allowed for more in depth understanding and insight.

Huahuatau—Categorising and generating themes

Huahuatau are a powerful way of broadening the meaning of data, rather than narrowing it. They allow a way to view the mātauranga within the data that is creative and encourages critical thought (Martel et al., 2021; Rameka, 2015). Although the previous process of coding could feel uncomfortable—in the way it seemed to reduce the richness of the data—the generating of themes in the form of huahuatau was a way of reconstituting the richness. Developing metaphors in place of themes allowed the findings to align with a Māori worldview, where multiple meanings are possible. The evolution of codes into themes was facilitated by the previous repetitive and tactile coding process. The intention was to analyse inductively, led by the data, and deductively, with understandings of whakapapa and mātauranga helping to uncover connections. In this case it meant that my experiences, the literature that I was informed by, and the unfolding data would all contribute to the development of the subsequent huahuatau.

Whakatinanatanga—Understanding and writing up

The final phase, whakatinanatanga, was about bringing about the realisation of the data. This involved weaving and contextualising data to existing findings and literature. Whakatinanatanga means to put into action, manifest or implement (Moorfield, n.d.). In this context, the process involves writing up the findings and bringing them back together as a whole after several stages of breaking them down and reconstituting them (Braun & Clarke, 2006). Writing up the findings included (re)structuring the conventional format of a thesis. This included a series of findings chapters, Ngā Hua(huatau), that included not only the voices of participants but also my own voice, as someone actively engaged in each aspect of the data.

Whakatinanatanga also represents the culmination of the research journey, where the key messages are embodied. Whakatinanatanga is the physical expression or interpretation of the mātauranga, whakapapa, and huahuatau, and it represents action and the medium through which

potential is realised (Heke, 2019). The whakatinanatanga or closing chapter of the thesis brought the research to a close by gathering all that it developed with the intention of representing a way forward—summarising the journey of the research and proposing potential avenues for continued applications.

Whakamāori—Discussing relevance

This methodology was designed to help answer research questions about the attributes of physically active Māori women and their connection to atua wāhine. Through the philosophical perspectives and research practices, it sought to bring wāhine voices to the fore. The intention was to celebrate the success of wāhine who were physically active by articulating it as an expression of their whakapapa to atua.

The expression of wāhine ways of being came through the development and contextualisation of metaphorical categories (huahuatau)—shaped by a series of research methods derived from both Māori and Euro-Western perspectives. Huahuatau have a unique ability to uncover understandings of ways of being as Māori that reflect the way Māori indeed view themselves or would like themselves to be viewed. And in this research huahuatau became demonstrations of how wāhine moved about their activities but also how they moved about their lives. They described wāhine as agile and able to move between spaces and roles—through *Rakanga Waewae*. They connected wāhine to the natural environment and displayed the reflections between them—*Ko au te taiao, ko te taiao ko au*. They illustrated wāhine as conduits for knowledge transmission—*Ngā taonga tuku iho*. They described the resourcefulness and creativity of wāhine—*Ahuwhenua*. And they acknowledged the latent and active potential within wāhine that was likened to a nurtured seed—*Poipoia te kākano, kia puawai*. The five huahuatau now exist as demonstrations of wāhine ways of being that depart from the deficit or reductional terms often previously used.

The korikori and kōrero of wāhine contributed to the development of descriptions about their ways of being that would eventually translate to expressions of mana wahine—expressions of the power and positions of atua wahine. Mana Wahine theory would then provide a lens from which to view and then display the newfound or (re)interpreted understandings of atua wāhine. Through it was a space to describe and translate the roles and responsibilities of atua wāhine—with consideration of pūrākau but also

of contemporary applications. This process—termed aro atua—involved immersive reading, poetry, and contemporary (re)interpretations. The understanding of significant roles and responsibilities of atua can be fundamental to wāhine identity because they provide templates for that identity to unfold, and a way to reclaim our own significance within society. Through this process of coming to know wāhine, coming to know atua wāhine, and coming to know more of myself, there came the opportunity to empower and celebrate the stories of wāhine. Providing a platform to celebrate the significance of atua wāhine also provided a platform to celebrate our own (Forster, 2019; Mikaere, 2003).

In order to "know" about something or someone, Mere Roberts suggests that it is essential to know its whakapapa (Roberts, 2012). This is relevant to elements of the environment (atua) but equally for us as wāhine Māori, whānau, hapū, and iwi as we (re)position ourselves within a contemporary society. The use of a woven methodology, using physical activity as a platform, provides some initial steps in tracing a collective whakapapa, to those atua wāhine who are the origin of our mana and our many ways of being. The challenge is always about having the agility to navigate those lines of whakapapa that were once hidden, erased, or redrawn to manipulate the stories we hear about ourselves and our histories. Taking a kupenga approach to such a journey enabled a critical lens, one that prioritised wāhine voices. It allowed for dynamic and flexible approaches to research, both method and methodology. And it used a shared language, of physical activity, to describe and display our ways of being in a more mana-enhancing way.

The research methods employed and the methodological framework developed offer a range of opportunities to engage critically. Korikori kōrero enables a researcher to engage with a research participant with a more levelled power dynamic while also engaging in an activity that highlights personality and physicality traits not always apparent in a conventional interview. This levelled and privileged position requires the researcher to observe in a purposeful and active manner, meaning they are an active observer as well as an active participant in the research relationship. The benefit of including a physical, environmental, and relational perspective—through the korikori and kōrero—is that it offers an embodied experience beyond that of conventional methods.

Using an adapted data analysis framework—derived from RTA and concepts of mātauranga, whakapapa, huahuatau, and whakatinanatanga—gave a unique but translatable method to gather meaning from data. Its tools have wide-ranging contemporary use, and their concepts are rooted in mātauranga Māori. Their interface relates the exploration or familiarisation of data to mātauranga and the framing or coding from a relational perspective—through whakapapa. It expands creative and critical thought by categorising data into the development of metaphors with broad and relative meanings (huahuatau). And finally, they are embodied and put into practice through an application and realisation resonant with the community they were derived from (whakatinanatanga).

Inherent in the design, implementation, and presentation is an acknowledgement that wāhine are inextricably connected to the power and significance of atua wāhine. The way we are designed, as wāhine Māori, is etched in our whakapapa from atua. The way we are is a reflection of how atua are (Heke, 2014; Mead, 2016; Wilson, 2021; Yates-Smith, 2003). And the way we are (re)presented through generations and to next generations can indeed influence the way we see ourselves. Therefore, it remains vital for wāhine to be in charge of telling our own stories (Pihama, 2001; Simmonds, 2011; Te Awe Awe-Bevan, 2009).

Te Kupenga, the underpinning methodological approach to gathering mātauranga wahine, also illustrates a mechanism for stor(y)ing that mātauranga. The three corner triangles of the kupenga—each representing a separate approach—intersect with each other to create a new central triangle: Aronui (see Figure 3). Where this central triangle once held the potential for mātauranga, as a net for gathering, it now holds stor(i)es and displays that mātauranga. It displays the significance of wāhine as carriers of (extra) ordinary knowledges and capacities. It illustrates how those capacities are passed to us and through us—through whakapapa from tūpuna and atua. It displays these things in that central triangle, Aronui—the pursuit of knowledge and the kete that holds it. It also displays it in the overall shape of the large downward-pointing triangle, being te whare tangata.

Our ability to traverse challenging terrain and stand in multiples worlds—*Rakanga Waewae*—is in a sense part of our physiological and metaphysical make-up. Our whare tangata is a place that connects the world of potential and its ultimate realisation. It is where the creation of new life is determined, and it connects us to our ancient feminine ancestors via generations and generations
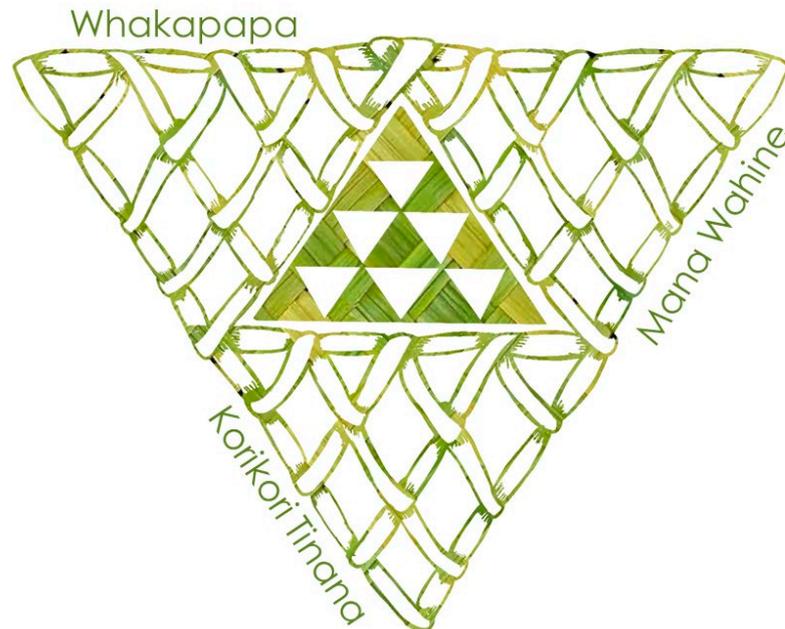
FIGURE 3 Te Kupenga—Mātauranga wahine stor(i)ed

of tūpuna. It encompasses whakapapa—both the genetic connections to tūpuna and the structures that store and eventually transport mātauranga and new life into the world. It is the site of active power and creativity. It is the place where wāhine (and their whānau) are connected to the past, present, and future (Mikaere, 2003; Murphy, 2013; Simmonds, 2009). In this way, te whare tangata is connected to each of the huahuatau developed through this research. It grounds and directs us through whenua to care for te taiao—*Ko au te taiao* and *Ahuwhenua*. It is an essential instrument of *Ngā taonga tuku iho*. It is positioned between realms and allows us to position and navigate ourselves in multiple realms—*Rakanga Waewae*. And finally, it is where latent potentiality is first nurtured. It is the site where new life is realised—*Poipoia te kākano kia puāwai*.

Whakatinanatanga—Conclusion

The methods, methodologies, and philosophies came together to form intersecting lenses that provided a view of the world, each unique but with shared qualities. Those intersecting philosophies represent a worldview that sits at the interface. The interface of ancient knowledges arranged and transmitted through oral histories, natural environments, and living beings. The interface of what it means to be Māori and what it means to be a wahine, in a contemporary time built on systems that did not value either sufficiently. These spaces that intersect to bring unique and merging perspectives allow a way to view the world that acknowledges past, present, and future. By taking the learnings that were passed on from tūpuna, adapting them to our own contemporary need, and ultimately providing a way forward for our own descendants, we are enacting and perpetuating whakapapa, mana wahine, and in the context of this kaupapa, physical activity.

In the context of this research, whakapapa provides a vehicle for understanding connection. Connection between an individual and their activity; connection from environment to ancestor; and even the connection between researcher and participant. This connection is not lineal or static. The use of whakapapa and its many iterations broadens its potential and the potential of this research. What also broadens the potential of this research is its aspiration to give voice to mana wāhine. The contributions from wāhine—participants, advisors, mentors, or academic sources—is immeasurable and inspiring. The purpose of Mana Wahine theory, in this research, is to acknowledge and whakamana the many voices of wāhine. Mātauranga wahine is mātauranga that can empower and enlighten wāhine, but also wider Māori. It is hoped that this research, through intersecting lenses, interwoven strands, and the interface of knowledge systems, can empower and enlighten wāhine, and their whānau, hapū, and iwi.

Glossary

ahuwhenua	to be industrious, busy, conscientious, assiduous, active, diligent, energetic
aro atua	giving attention to atua
aronui	finely woven cloak—with tāniko borders on three sides, with the widest border at the bottom; one of the three baskets of knowledge—this basket relates to knowledge acquired through careful observation of the environment
atua	deities
atua wāhine	feminine deities
hapū	subtribe
hauora	wellbeing, health
hīkoi	step, stride, march, walk
huahuatau	metaphors
iwi	tribe
kai	food
kanohi ki te kanohi	face to face
karanga	to call, call out, shout, summon
kaupapa	philosophy
Kaupapa Māori	the theoretical approach to doing research for Māori, by Māori, and informed by tikanga Māori
kete	basket
Ko au te taiao, ko te taiao ko au	I am the environment, and the environment is me
kōrero	conversations
korikori	to move; movement
korikori tinana	physical activity
kupenga	net, fishing net
mana	prestige, status, authority, influence, integrity; honour, respect
mātauranga	knowledge, tradition, epistemology
mātauranga Māori	Māori ways of knowing, knowledge systems
mātauranga wahine	Māori women's knowledges
maunga	mountains
ngā taonga tuku iho	the treasures passed down from ancestors
Poipoia te kākano, kia puawai	Nurture the seed, and it will blossom
pūrākau	culturally bound storying
rakanga waewae	skilful footwork
raranga	weave; weaving
taiao	world, Earth, natural world, environment, nature, country
tāne	man, men
tikanga	research practices, methods or protocols
tūpuna	ancestors
wahine	woman
wāhine	women
waiata	sing, song, chant
whakamana	to give authority to, give effect to, give prestige to, confirm, enable, authorise, legitimise, empower, validate, enact, grant
whakapapa	genealogy, ancestry, familial relationships
whakatinanatanga	put into action, manifest or implement
whānau	family, extended family
whare tangata	house of humanity, womb
whenua	land; placenta, afterbirth

References

Best, E. (1897). Te Rehu-o-Tainui: The evolution of a Maori *atua*, being notes on the origin, development, and manifestations of a New Zealand war-god. *The Journal of the Polynesian Society*, 6(2), 41–66. http://www.jstor.org/stable/20701452

Bishop, R. (1994). Initiating empowering research? *New Zealand Journal of Educational Studies*, 29(2), 175–188.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/fswdcx

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. https://doi.org/gf89jz

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, 18(3), 328–352. https://doi.org/fgmh

Braun, V., Clarke, V., & Weate, P. (2016). Using thematic analysis in sport and exercise research. In B. Smith & A. C. Sparkes (Eds.), *Routledge handbook of qualitative research in sport and exercise* (pp. 213–227). Routledge. https://doi.org/kgst

Butler, M., & Derrett, S. (2014). The walking interview: An ethnographic approach to understanding disability. *Internet Journal of Allied Health Sciences and Practice*, 12(3), 1–8. https://doi.org/kgsv

Clark, A., & Emmel, N. (2010). *Using walking interviews*. Realities—ESRC National Centre for Research Methods. http://eprints.ncrm.ac.uk/1323/1/13-toolkit-walking-interviews.pdf

Durie, M. (1999). Te Pae Māhutonga: A model for

Māori health promotion. *Health Promotion Forum of New Zealand Newsletter*, (49), 2–5.

Durie, M. (2004a, 11 March). *Exploring the interface between science and indigenous knowledge* [Paper presentation]. 5th APEC Research and Development Leaders Forum, Christchurch, New Zealand. https://bit.ly/3kVSebh

Durie, M. (2004b). Understanding health and illness: Research at the interface between science and indigenous knowledge. *International Journal of Epidemiology*, 33(5), 1138–1143. https://doi.org/dd2kw2

Fogelholm, M. (2010). Physical activity, fitness and fatness: Relations to mortality, morbidity and disease risk factors. A systematic review. *Obesity Reviews*, 11(3), 202–221. https://doi.org/chfznq

Forster, M. (2019). Restoring the feminine of indigenous environmental thought. *Genealogy*, 3(1), Article 11. https://doi.org/ggz8zd

Grey, G. (1971). *Ngā mahi a ngā tūpuna* (4th ed.). A.H. & A.W. Reed.

Heke, D. (2022). *Atua Wahine—Mana Wahine. A whakapapa expressed through the physical activity of Māori women in contemporary Aotearoa* [PhD thesis, Auckland University of Technology]. Tuwhera Open Access. http://hdl.handle.net/10292/15024

Heke, D. (2023). Korikori Kōrero: A mobile method of inquiry for moving Māori women and their knowledges. *Kōtuitui: New Zealand Journal of Social Sciences Online*. Advance online publication. https://doi.org/kgs2

Heke, I. (2014). *Introducing the Atua Matua Maori Health Framework*. http://toitangata.co.nz/uploads/files/Dr_Ihi_Heke_Atua_Matua_Framework.pdf

Heke, I. (2017). *Mātauranga Māori and systems dynamics: Where old world collides with the new*. Toi Tangata. http://toitangata.co.nz/wp-content/uploads/2017/11/Whakapapa-Systems-Comparison-29-3-17.pdf

Heke, I. (2019). *Atua Matua Health Framework: Using Māori environmental knowledge to improve indigenous well-being*. Integrated Hauora Initiatives Ltd. https://toitangata.co.nz/wp-content/uploads/2020/11/Atua-Matua-Health-Framework.pdf

Hurihanganui, T. A. (2020). Hīkoi of a lifetime: Retracing Māhinaarangi's footsteps [Interview]. *RNZ Te Ao Māori*. https://www.rnz.co.nz/news/te-manu-710 korihi/430610/hikoi-of-a-lifetime-retracing-mahinaarangi-s-footsteps

Johnston, P., & Pihama, L. (1995). What counts as difference and what differences count: Gender, race and the politics of difference. In K. Irwin & I. Ramsden (Eds.), *Toi wahine: Worlds of Maori women*. Penguin Books.

Kokkinos, P., & Myers, J. (2010). Exercise and physical activity: Clinical outcomes and applications. *Circulation*, 122(16), 1637–1648. https://doi.org/cjv3c8

Lee, J. (2009). Decolonising Māori narratives: Pūrākau as a method. *MAI Review*, (2), Article 3. http://www.review.mai.ac.nz/mrindex/MR/article/download/242/242-1618-1-PB.pdf

Mahuika, R. (2008). Kaupapa Māori theory is critical and anti-colonial. *MAI Review*, (3), Article 4. http://www.review.mai.ac.nz/mrindex/MR/article/download/153/153-877-1-PB.pdf

Marsden, M., & Royal, T. A. C. (2003). *The woven universe: Selected writings of Rev. Māori Marsden*. Estate of Rev. Māori Marsden.

Martel, R., Shepherd, M., & Goodyear-Smith, F. (2021). *He awa whiria—A "braided river": An indigenous Māori approach to mixed methods research*. *Journal of Mixed Methods Research*, 16(1), 17–33. https://doi.org/kgs3

Mead, H. M. (2016). *Tikanga Māori: Living by Māori values* (Rev. ed.). Huia Publishers.

Mercier, O. R. (2018). Mātauranga and science. *New Zealand Science Review*, 74(4), 83–90. https://scientists.org.nz/resources/Documents/NZSR/NZSR74(4).pdf#page=5

Mikaere, A. (2003). *The balance destroyed: The consequences for Māori women of the colonisation of tikanga Māori*. Te Tākupu, Te Wānanga o Raukawa.

Moorfield, J. C. (n.d.). Whakatinanatanga. In *Te Aka Māori dictionary*. Retrieved 8 July 2021 from https://maoridictionary.co.nz/

Murphy, N. (2013). *Te awa atua: Menstruation in the pre-colonial Maori world: An examination of stories, ceremonies and practices regarding menstruation in the pre-colonial Māori world*. He Puna Manawa Limited.

Pendergrast, M. (2003). *Raranga whakairo = Maori plaiting patterns*. Reed Books (NZ).

Pihama, L. (2001). *Tihei Mauri ora: Honouring our voices: Mana wāhine as a kaupapa Māori theoretical framework* [PhD thesis, The University of Auckland]. ResearchSpace. http://hdl.handle.net/2292/1119

Puketapu-Hetet, E. (1999). *Māori weaving*. Addison Wesley Longman.

Rameka, L. (2015). Whatu: A Māori approach to research. *Waikato Journal of Education*, 20(2), 39–47. https://doi.org/gzz3

Reid, P., Cormack, D., & Paine, S. J. (2019). Colonial histories, racism and health—The experience of Māori and Indigenous peoples. *Public Health*, 172, 119–124. https://doi.org/fd9r

Roberts, M. (2012). Mind maps of the Maori. *GeoJournal*, 77(6), 741–751. https://doi.org/b9rg63

Roberts, M., Haami, B., Benton, R. A., Satterfield, T., Finucane, M. L., Henare, M., & Henare, M. (2004). Whakapapa as a Maori mental construct: Some implications for the debate over genetic modification of organisms. *The Contemporary Pacific*, 16(1), 1–28. https://doi.org/d2hk22

Royal, T. A. C. (1998). Te Ao Mārama—A research paradigm. *He Pukenga Korero*, 4(1), 1–8.

Shortland, E. (1882). *Maori religion and mythology*. Longmans, Green, and Company. https://bit.ly/38CnOUl

Simmonds, N. (2009). *Mana wahine geographies: Spiritual, spatial and embodied understandings of Papatūānuku* [Master's thesis, The University of

Waikato]. Research Commons. https://hdl.handle.net/10289/2798

Simmonds, N. (2011). Mana wahine: Decolonising politics. *Women's Studies Journal*, *25*(2), 11–25. http://www.wsanz.org.nz/journal/docs/WSJNZ252Simmonds11-25.pdf

Smith, L. T. (1993). Getting out from down under: Māori women, education and the struggles for mana wāhine. In M. Arnot & K. Weiler (Eds.), *Feminism and social justice in education* (pp. 58–78). The Falmer Press.

Smith, L. T. (2006). Researching in the margins: Issues for Māori researchers—a discussion paper. *Alternative: An International Journal of Indigenous Scholarship*, *2*(1), 4–27. https://doi.org/c9cm

Te Awe Awe-Bevan, B. (2009). Mana wāhine. *Toroa-te-nukuroa*, *4*, 53–62.

Te Awekotuku, N. (2007). Maori women researching ourselves. In N. Robertson (Ed.), *Māori and psychology: Research and practice. The proceedings of a symposium sponsored by the Māori & Psychology Research Unit* (Vol. 30, pp. 1–9). University of Waikato. https://researchcommons.waikato.ac.nz/bitstream/handle/10289/882/1999%20Awekotuku.pdf?sequence=1&isAllowed=y

Trell, E.-M., & Van Hoven, B. (2010). Making sense of place: Exploring creative and (inter) active research methods with young people. *Fennia: International Journal of Geography*, *188*(1), 91–104. https://fennia.journal.fi/article/view/2522

Walter, M., & Andersen, K. (2013). *Indigenous statistics: A quantitative research methodology*. Left Coast Press.

Walter, M., & Suina, M. (2019). Indigenous data, indigenous methodologies and indigenous data sovereignty. *International Journal of Social Research Methodology*, *22*(3), 233–243. https://doi.org/gg4dbk

Wilson, J. (2021). Wairaka: Challenging the status quo. In J. Ruru & L. W. Nikora (Eds.), *Ngā Kete Mātauranga. Māori scholars at the research interface* (pp. 116–125). Otago University Press.

Yates-Smith, A. (1998). *Hine! e Hine!: Rediscovering the feminine in Maori spirituality* [Unpublished doctoral thesis]. The University of Waikato.

Yates-Smith, A. (2003). Reclaiming the ancient feminine in Māori society: Kei wareware ia tatou te Ukaipo! *He Puna Korero: Journal of Māori and Pacific Development*, *4*(1), 10–19. https://bit.ly/3tahk8R