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**Ngā mea kōaro o ngā wā tamarikitanga,
Te taumahatanga o aua mea
Me ētahi mahi whakaora hinegaro mō ngā
wāhine Māori**

**Adverse childhood experiences, HPA axis
functioning and culturally enhanced
mindfulness therapy among Māori women in
Aotearoa New Zealand.**

**A dissertation presented in partial fulfillment of the
requirements for the degree of**

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in
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**Ko Tongariro me Tararua ngā pāe maunga,
Ko Taupo-nui-ā-Tia te moana
Ko Manawatū te awa
Ko Te Arawa me Tainui ngā waka
Ko Ngāti Tūwharetoa me Ngāti Raukawa ngā iwi
Ko Ngāti Rongomai, Ngāti Hine, Ngāti Whakatere, me Ngāti Takihiku ngā hapū
Ko Rongomai, Korohe, Whakawehi-Poutu, me Kereru ngā marae
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Ko Anaru McKenzie tōku hoa rangatira
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Esther Aniwaniwa Oterangi Ketu-McKenzie
Ko Miriama Ketu-McKenzie ahau**

Tihei Mauri ora

Nā tō rourou, nā taku rourou ka ora ai te iwi

**With your food basket and with my food basket, the
people will thrive**

ABSTRACT

Chronic health conditions such as obesity, type II diabetes, cardiovascular disease, depression and anxiety are prevalent among Māori women in New Zealand, as are adverse experiences in childhood and chronic stress. Recent studies have shown a link between adverse childhood experiences (ACEs) and chronic health problems later in life. Many of those studies propose that dysregulation in the stress response system - specifically the hypothalamic-pituitary-adrenal (HPA) axis - mediates that link. Cortisol is the primary corticosteroid released by the HPA axis and is commonly used as a biomarker for assessing HPA axis functioning. Mindfulness-Based Stress Reduction (MBSR) is a therapy that uses a range of breathing techniques, stretches, formal meditations and awareness exercises designed to help regulate the stress response by changing the way the brain manages and relates to stress. Due to its Eastern roots, MBSR therapy assumes an holistic view of health that mirrors some of the key concepts promoted in Te Ao Māori. This research tested the HPA axis functioning of eight adult Māori women who had experienced high ACEs, and explored associations between cortisol dysregulation, visceral obesity (a risk factor for many chronic health conditions) and psychological distress. This research also tested the clinical effectiveness and cultural responsiveness of an MBSR course that had been enhanced to suit a Māori audience. Participants provided pre, mid and post-treatment salivary cortisol samples that measured changes to their acute stress cortisol response, as well as changes to their daily cortisol slope, their cortisol awakening response and their overall cortisol levels. They also provided pre and post-treatment waist circumference measurements. Self-report data assessing depression and anxiety levels, PTSD levels, stress eating habits, perceived stress levels and mindful awareness levels, was collected, as was qualitative data in the form of pre and post-treatment interviews. The results indicated that culturally enhanced MBSR therapy was well received with this sample of Māori women and that the participants reported a wide range of benefits as a result of practicing mindfulness meditation.

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Glossary of Māori words

<i>Māori</i>	Indigenous New Zealander
<i>Pākehā</i>	New Zealander of European descent
<i>Aotearoa</i>	The Māori name for New Zealand
<i>Te Reo Māori</i>	The Māori language
<i>Whānau</i>	Family, extended family, kin networks
<i>Tangi</i>	Traditional Māori funeral that lasts 3-days
<i>Whanaungatanga</i>	Togetherness, relationship
<i>Tangata whaiora</i>	Mental health consumer
<i>Te tiriti o waitangi</i>	Māori version of the Treaty of Waitangi
<i>Reo me ona tikanga</i>	Māori language and traditions
<i>Te kohanga reo</i>	Māori language immersion early childhood care
<i>The waitangi tribunal</i>	Entity charged with addressing Treaty breaches
<i>Tāne</i>	Men, man, male
<i>Marae</i>	Māori meeting ground
<i>Karanga</i>	Ceremonial call performed by women
<i>la</i>	He, she, him, her, it
<i>Tipuna</i>	Ancestor(s)
<i>Koro</i>	Grandfather, old man
<i>Kaupapa maori</i>	Māori approach, Māori agenda
<i>Te rau puawai</i>	Mentorship programme for Māori studying health
<i>He korowai oranga</i>	The Māori health strategy
<i>Te whare tapa wha</i>	Model of Māori health
<i>Whare</i>	House
<i>Te taha tinana</i>	The physical side of being
<i>Te taha wairua</i>	The spiritual side of being
<i>Te taha hinengaro</i>	The mental side of being
<i>Te taha whanau</i>	The social side of being
<i>Io</i>	Supreme being
<i>Mauri</i>	Life principle, energy
<i>Ātua</i>	Gods, deities
<i>Papatuanuku</i>	Earth mother
<i>Ranginui</i>	Sky father
<i>Whakapapa</i>	Ancestry, lineage, genealogy, history
<i>Hui</i>	Meeting, gathering
<i>Kaumatua</i>	Elder, wise person
<i>Tikanga</i>	Māori traditions, protocols, practices, rituals
<i>Pōwhiri</i>	Traditional Māori welcome onto a marae
<i>Karakia</i>	Prayer, incantation
<i>Mihimihi</i>	Formal way of greeting another
<i>Kai</i>	Food, eating
<i>Manaakitanga</i>	Sharing, kindness, hospitality, collaboration
<i>Awhi</i>	Support, help
<i>Whakamā</i>	Shame, embarrassment
<i>Tangata whenua</i>	People of the land (Māori)
<i>Tohunga</i>	Expert, healer

<i>Kura kaupapa</i>	Māori immersion special character school
<i>Waiata</i>	Song, singing
<i>Awhinatanga</i>	Ongoing support
<i>Pepeha</i>	Way of introducing yourself in Māori
<i>Karakia kai</i>	Blessing the food before eating it
<i>Koha</i>	Gift
<i>Kaitiaki</i>	Guardian
<i>Wharehūi</i>	Māori meeting house
<i>Hau</i>	Breath of spirit
<i>Hongi</i>	Ritual involving pressing noses together
<i>Te ao māori</i>	The Māori world
<i>Tinana</i>	Body
<i>Ha a kui ma a koro ma</i>	Breath of our ancestors living on through us
<i>Ha taonga tuku iho</i>	Breath handed down across generations
<i>Utu</i>	Reciprocity
<i>Aroha</i>	Love
<i>Hariru</i>	Greeting one another with hongī or handshake
<i>Tapu</i>	Sacred
<i>Whakamā</i>	Shame