Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.
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

Doctor of Philosophy
in
Psychology

at Massey University, Palmerston North, New Zealand

Miriama Deborah Ketu-McKenzie
2019
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
Ko Claude Turetangata Ketu raua Ko Aniwaniwa Oterangi McGregor ōku mātua tūpuna
Ko Claude Ketu rāua ko Faye Schultz ōku matua
Ko Anaru McKenzie tōku hoa rangatira
Tokotoru ngā tamariki, Ko Thomas Turetangata, Ko Rachel Ringahuia, Ko 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.
ACKNOWLEDGEMENTS

This project would have been impossible to complete without the aid and support of the Rose Hellaby Postgraduate Scholarship, the Karahipi Tumuaki Scholarship, Te Rau Puawai, Pūrehuroa and the Massey University Doctoral Scholarship committees. I was gifted support from those organisations under the premise that I would endeavour to make the way smoother for those who might follow in my footsteps. To that end, I dedicate this work to the rangatahi, me ngā tauira Māori o tenei rā.

To my early supervisors Dr. Mei Wah Williams and Associate Professor John Podd, I offer my complete and sincere thanks for the time, attention and faith you invested in me and this work. Though circumstances meant you were unable to see the project across the finish line, your gentle wisdom and guidance is still very present throughout. He mihi māhana ki a kōrua.

To my post-relocation supervision team, Dr. Michael Philip, Dr. Wendy Holley-Boen and Dr. Stephen Hill, your commitment to walk beside me as I waded through the ‘swampy lowlands’ of this project made all the difference. You joined this research team knowing only that a student was in need of supervisors, and you didn’t run away when you discovered that I was also juggling a newborn, a toddler and 5-year old. For that, I am most grateful. Your faith in my ability to see this project through to completion in spite of the challenges, was integral to maintaining my momentum. Wendy, I offer special thanks to you for encouraging me to be bold and to honour the social justice aspects of this work. Michael, I acknowledge you for being kind to my mistakes and for encouraging me to follow the path that was right for this piece, not the path that was most convenient, well-tread or most widely accepted. This work is better off because of your combined input. Thank you.
There are many, whose time, expertise, mana and networks contributed to the timely completion of this project. Specifically though, I would like to acknowledge Dr. Karl Iremonger at the University of Otago and Dr. Kingsley Nirmilaraj at Tauranga Hospital for providing expert advice and opinions on the collection and interpretation of the cortisol data. I would also like to acknowledge the team at Te Manu Tūroa Kaupapa Māori Health Care Service and Natasha & Grant Rix, for their unmitigated support during the early phases of this project. Special thanks also to Francie & Cindy Diver, Fran & Zoe at Kōhatu, Moana Theodore, Moana Wesley, King's High School, Southern DHB, Aunty Kathy, Hamish & Stephanie, Leann, Wendi Raumati and Olly Ohlson, who generously shared their networks, their wisdom and their resources in the service of this mahi. Also to Ben Hutchison, Kirby-Jane Hallum, Andrew McKenzie and Richard Huber, who contributed their time, energy and acting skills to the project, at considerable expense to their moral comfort. He mihi nunui ki a koutou katoa.

To my whānau in Shannon – Nana, Koro, Aunty Diane, Aunty Mae, Aunty Nina, Aunty Lani, Aunty Ellen, Uncle Robert, Uncle Moses and especially Dad – thank you for being my link to Te Ao Māori, Te Ao Mārama, me Te Ao Turoa. It is from you that I have drawn the motivation, courage and energy to pursue better outcomes for tangata Māori. Thank you for your quiet support over the years.

To my whānau in Morrinsville – Naomi, Nathan, David, Paiahua, Te Uru Maranga, Whetu Marama, Aunty Maxine and Mum – thank you for keeping my feet on the ground, thank you for inspiring me to keep walking when I forgot why I had set out in the first place, thank you for being a home base to which I could return whenever the journey became too difficult.

To Richard and Louise McKenzie, I owe profound gratitude for providing me with the one thing I lacked most during this process, time. Richard, your encouragement and belief has meant a great deal. Louise, you sacrificed many hours of freedom to
watch the kids while I hid away and wrote. Your knowledge of Te Ao Māori is embedded in these pages. I cannot adequately express the depth and sincerity of my thanks to you for your contribution.

To the wāhine who participated in this project, you are the heroes of this research. It is your stories, your courage in telling those stories, your faith in this process and your resilience in the face of adversity that has made this a work worth reading. To Kovido, the man who led us through unknown terrain – thank you for taking a leap of faith and fronting this challenge head on. You were a rare find and I am ever grateful to you for being someone who so effortlessly walks the talk. Finally, to my children – Thomas, Rachel, and Esther. This PhD has been in the background of your lives since before you were even born. I can never get back the time I have spent working on my computer instead of attending to your needs. I can only hope that life will be kind enough to give me many more hours enjoying your company and being present for our moments together. To Andrew, it is your friendship and love that this process has tested the most. You were a catalyst for believing I could even attempt higher education. Thank you for being there. I hope time will show that the benefits of undertaking this research outweighed the costs. I promise you will have my undivided attention for many years to come.
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### Glossary of Māori words

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<th>Māori</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pākeha</td>
<td>New Zealander of European descent</td>
</tr>
<tr>
<td>Aotearoa</td>
<td>The Māori name for New Zealand</td>
</tr>
<tr>
<td>Te Reo Māori</td>
<td>The Māori language</td>
</tr>
<tr>
<td>Whānau</td>
<td>Family, extended family, kin networks</td>
</tr>
<tr>
<td>Whangaungatanga</td>
<td>Togetherness, relationship</td>
</tr>
<tr>
<td>Tangata whaiora</td>
<td>Mental health consumer</td>
</tr>
<tr>
<td>Te tiriti o waitangi</td>
<td>Māori version of the Treaty of Waitangi</td>
</tr>
<tr>
<td>Reo me ona tikanga</td>
<td>Māori language and traditions</td>
</tr>
<tr>
<td>Te kohanga reo</td>
<td>Māori language immersion early childhood care</td>
</tr>
<tr>
<td>The waitangi tribunal</td>
<td>Entity charged with addressing Treaty breaches</td>
</tr>
<tr>
<td>Tāne</td>
<td>Men, man, male</td>
</tr>
<tr>
<td>Marae</td>
<td>Māori meeting ground</td>
</tr>
<tr>
<td>Kōranga</td>
<td>Ceremonial call performed by women</td>
</tr>
<tr>
<td>Ia</td>
<td>He, she, him, her, it</td>
</tr>
<tr>
<td>Tipuna</td>
<td>Ancestor(s)</td>
</tr>
<tr>
<td>Koro</td>
<td>Grandfather, old man</td>
</tr>
<tr>
<td>Kaupapa maori</td>
<td>Māori approach, Māori agenda</td>
</tr>
<tr>
<td>Te rau puawai</td>
<td>Mentorship programme for Māori studying health</td>
</tr>
<tr>
<td>He korowai oranga</td>
<td>The Māori health strategy</td>
</tr>
<tr>
<td>Te whare tapa wha</td>
<td>Model of Māori health</td>
</tr>
<tr>
<td>Whare</td>
<td>House</td>
</tr>
<tr>
<td>Te taha tinana</td>
<td>The physical side of being</td>
</tr>
<tr>
<td>Te taha wairua</td>
<td>The spiritual side of being</td>
</tr>
<tr>
<td>Te taha hinengaro</td>
<td>The mental side of being</td>
</tr>
<tr>
<td>Te taha whanau</td>
<td>The social side of being</td>
</tr>
<tr>
<td>Io</td>
<td>Supreme being</td>
</tr>
<tr>
<td>Mauri</td>
<td>Life principle, energy</td>
</tr>
<tr>
<td>Ātua</td>
<td>Gods, deities</td>
</tr>
<tr>
<td>Papatuanuku</td>
<td>Earth mother</td>
</tr>
<tr>
<td>Ranginui</td>
<td>Sky father</td>
</tr>
<tr>
<td>Whakapapa</td>
<td>Ancestry, lineage, genealogy, history</td>
</tr>
<tr>
<td>Hui</td>
<td>Meeting, gathering</td>
</tr>
<tr>
<td>Kaumatua</td>
<td>Elder, wise person</td>
</tr>
<tr>
<td>Tikanga</td>
<td>Māori traditions, protocols, practices, rituals</td>
</tr>
<tr>
<td>Pōwhiri</td>
<td>Traditional Māori welcome onto a marae</td>
</tr>
<tr>
<td>Karakia</td>
<td>Prayer, incantation</td>
</tr>
<tr>
<td>Mihimihi</td>
<td>Formal way of greeting another</td>
</tr>
<tr>
<td>Kai</td>
<td>Food, eating</td>
</tr>
<tr>
<td>Manaakitanga</td>
<td>Sharing, kindness, hospitality, collaboration</td>
</tr>
<tr>
<td>Awhi</td>
<td>Support, help</td>
</tr>
<tr>
<td>Whakamā</td>
<td>Shame, embarrassment</td>
</tr>
<tr>
<td>Tangata whenua</td>
<td>People of the land (Māori)</td>
</tr>
<tr>
<td>Tohunga</td>
<td>Expert, healer</td>
</tr>
<tr>
<td><strong>Kura kaupapa</strong></td>
<td>Māori immersion special character school</td>
</tr>
<tr>
<td><strong>Waiata</strong></td>
<td>Song, singing</td>
</tr>
<tr>
<td><strong>Awhinatanga</strong></td>
<td>Ongoing support</td>
</tr>
<tr>
<td><strong>Pepeha</strong></td>
<td>Way of introducing yourself in Māori</td>
</tr>
<tr>
<td><strong>Karakia kai</strong></td>
<td>Blessing the food before eating it</td>
</tr>
<tr>
<td><strong>Koha</strong></td>
<td>Gift</td>
</tr>
<tr>
<td><strong>Kaitiaki</strong></td>
<td>Guardian</td>
</tr>
<tr>
<td><strong>Wharenui</strong></td>
<td>Māori meeting house</td>
</tr>
<tr>
<td><strong>Hau</strong></td>
<td>Breath of spirit</td>
</tr>
<tr>
<td><strong>Hongi</strong></td>
<td>Ritual involving pressing noses together</td>
</tr>
<tr>
<td><strong>Te ao māori</strong></td>
<td>The Māori world</td>
</tr>
<tr>
<td><strong>Tinana</strong></td>
<td>Body</td>
</tr>
<tr>
<td><strong>Ha a kui ma a koro ma</strong></td>
<td>Breath of our ancestors living on through us</td>
</tr>
<tr>
<td><strong>Ha taonga tuku iho</strong></td>
<td>Breath handed down across generations</td>
</tr>
<tr>
<td><strong>Utu</strong></td>
<td>Reciprocity</td>
</tr>
<tr>
<td><strong>Aroha</strong></td>
<td>Love</td>
</tr>
<tr>
<td><strong>Hariru</strong></td>
<td>Greeting one another with hongi or handshake</td>
</tr>
<tr>
<td><strong>Tapu</strong></td>
<td>Sacred</td>
</tr>
<tr>
<td><strong>Whakamā</strong></td>
<td>Shame</td>
</tr>
</tbody>
</table>