

The Effects of Outdoor Spaces and Activities on the Mental Wellbeing of Adolescent Girls: A Case Study of a Surfing Programme in Mount Maunganui, New Zealand

Erin Porteous

A thesis submitted to
Auckland University of Technology
in partial fulfilment of the requirements for the degree of Doctor of Philosophy (PhD)

2026

*School of Sport, Exercise and Health
Faculty of Health & Environmental Science
Auckland University of Technology*

*Primary supervisor: Doctor Mike Brown
Secondary supervisor: Doctor Charlotte Jelleyman
Third supervisor: Professor Grant Schofield*

Table of Contents

THE EFFECTS OF OUTDOOR SPACES AND ACTIVITIES ON THE MENTAL WELLBEING OF ADOLESCENT GIRLS: A CASE STUDY OF A SURFING PROGRAMME IN MOUNT MAUNGANUI, NEW ZEALAND I

ATTESTATION OF AUTHORSHIP	VII
ACKNOWLEDGEMENTS	VIII
LIST OF TABLES (TŪTOHI)	IX
LIST OF FIGURES (WHAKAAHUA)	IX
<i>Please Note</i>	X

CHAPTER 1 INTRODUCTION 1

RATIONALE AND SIGNIFICANCE OF THE STUDY.....	1
<i>The concept of flourishing</i>	3
<i>Positioning females ‘out’ of the outdoors</i>	3
PURPOSE AND SCOPE OF THE STUDY	5
RESEARCH QUESTIONS INFORMING THIS THESIS.....	7
THE CHAPTERS	7
<i>Chapter 1 Literature review</i>	8
<i>Chapter 2 Methodology</i>	8
<i>Chapter 3 Data analysis</i>	9
<i>Chapter 4 Discussion</i>	10
<i>Chapter 5 Conclusion</i>	10

CHAPTER 2 LITERATURE REVIEW 11

INTRODUCTION: THE LAND OF THE LONG ‘GREY’ CLOUD	11
YOUTH WELLBEING	11
<i>Mental health and treatment</i>	11
THE SOCIAL CONSTRUCTION AND MODERN DRIVERS OF DISTRESS	13
<i>The implications of social media use</i>	15
<i>Navigating stress: Prevention over cure</i>	16
<i>Salutogenesis -getting ahead of the issue</i>	17
<i>Alternative mental health constructs</i>	17
THEORETICAL FRAMEWORKS FOR MEASURING & ENHANCING WELLBEING	18
<i>Thriving populations</i>	18
<i>A model for flourishing</i>	19
<i>Holistic health and flourishing in Aotearoa</i>	20
<i>Te Taiao</i>	22
<i>Summary - Wellbeing models</i>	22
WELLBEING IN GREEN AND BLUE SPACES	23
<i>Physical fitness and the outdoors</i>	23
<i>Natures impact</i>	24

<i>Blue nature spaces</i>	25
GENDER, PHYSICAL ACTIVITY, AND THE OUTDOORS	26
<i>Females and movement</i>	26
<i>Belonging in the outdoors</i>	27
<i>Summary - Gender, physical activity and the outdoors</i>	27
OUTDOOR EXPERIENCES AS INTERVENTIONS AND PLACE-RESPONSIVE PEDAGOGY	28
<i>Place-responsive approaches to outdoor learning</i>	29
<i>Summary - Interventions</i>	30
CONNECTING TO BLUE SPACES THROUGH SURFING	31
<i>Surfing and wellbeing</i>	31
<i>The ocean/human connection</i>	32
<i>Surfing as a spiritual experience</i>	33
<i>Females and surfing</i>	35
FRAMING SURFING INTERVENTIONS AND EXISTING MODELS	35
<i>Surfing as a saviour</i>	35
<i>Single sex surfing interventions</i>	38
<i>Summary - Surfing programmes</i>	38
LITERATURE REVIEW SUMMARY	39
CHAPTER 3 METHODOLOGY	41
INTRODUCTION	41
ONTOLOGICAL AND EPISTEMOLOGICAL POSITION	41
WESTERN AND Te Ao MāORI EPISTEMIC TENSIONS	43
RESEARCHER POSITIONALITY	43
<i>Trustworthiness</i>	44
RESEARCH DESIGN	45
<i>Action research</i>	45
<i>A Place-Responsive Pedagogy</i>	48
MEASURING WELLBEING	49
<i>Te Whare Tapa Whā model of wellbeing</i>	49
<i>The Mental Health Continuum -Short Form</i>	50
<i>Te Whare Tapa Whā and PERMA - a culturally connected strengths-based approach</i>	52
SURVEY DATA	52
<i>Data collection and analysis</i>	53
RESEARCH STRUCTURE AND TIMELINE	55
PROGRAMME DESIGN	58
<i>Programme development</i>	58
THE PROGRAMME - AN OVERVIEW	58
<i>Surfing progressions</i>	58
<i>Surf lifesaving and other safety equipment</i>	59

RESEARCH CONTEXT	60
<i>The school</i>	60
<i>Research participants</i>	60
DATA COLLECTION METHODS	64
<i>Focus group and individual interviews</i>	64
<i>Surveys</i>	65
<i>Journaling</i>	65
DATA ANALYSIS METHODS/TECHNIQUES	66
<i>Quantitative data</i>	66
<i>Qualitative data</i>	67
<i>Methodological limitations</i>	68
METHODOLOGY SUMMARY	70
CHAPTER 4 FINDINGS	72
<i>Hua Oranga survey results</i>	72
<i>Mental Health Continuum – Short Form survey results</i>	76
<i>Summary</i>	80
QUALITATIVE DATA	80
<i>Participant contributions</i>	81
ROUND ONE: EARLY EXPERIENCES	81
<i>Taha Tinana/Physical wellbeing</i>	81
<i>Taha Hinengaro/Mental wellbeing</i>	84
<i>Taha Whānau/Social wellbeing</i>	86
<i>Taha Wairua/Spiritual wellbeing</i>	87
ROUND TWO: EXPERIENCES DURING THE PROGRAMME	89
<i>Taha Tinana</i>	89
<i>Taha Hinengaro</i>	91
<i>Taha Whānau</i>	95
<i>Taha Wairua</i>	99
ROUND THREE: POST PROGRAMME REFLECTIONS.....	103
<i>Taha Tinana</i>	104
<i>Taha Hinengaro</i>	105
<i>Taha Whānau</i>	109
<i>Taha Wairua</i>	112
SUMMARY OF FINDINGS	116
CHAPTER 5 DISCUSSION.....	119
SUMMARY OF KEY FINDINGS.....	119
A FRAMEWORK FOR DATA SYNTHESIS.....	120
INTERPRETING THE FINDINGS THROUGH TE WHARE TAPA WHĀ	121

<i>Taha Tinana: Challenge to growth - the role of physical activity in wellbeing</i>	122
<i>Taha Hinengaro: From discomfort and fear to increased confidence and self-esteem</i>	125
<i>Taha Whānau: Belonging and supportive connections</i>	127
<i>Taha Wairua: Nature exposure - presence and connection</i>	132
<i>Holistic wellbeing: Reframing wellbeing and flourishing beyond the taha</i>	138
RECOGNISING THE BARRIERS	141
<i>Gendered barriers</i>	141
<i>The family</i>	142
IMPLICATIONS OF THE FINDINGS	142
<i>Connection matters</i>	143
<i>The development of agency</i>	144
<i>Girl time</i>	144
<i>Mindfulness and the impact of nature</i>	145
<i>The reconstruction of mental wellbeing</i>	146
PRACTICAL IMPLICATIONS	146
<i>The importance of people</i>	147
<i>Place-responsive</i>	147
<i>Agency in activities</i>	147
<i>Education on wellbeing</i>	148
A FRAMEWORK FOR FLOURISHING: A PLACE-RESPONSIVE GUIDE TO YOUTH WELLBEING	149
RESEARCH QUESTION REFLECTIONS	153
<i>Summary- Research question reflections</i>	156
THEORETICAL AND PRACTICAL CONTRIBUTIONS	156
<i>Theoretical contributions</i>	156
<i>Practical contributions</i>	158
LIMITATIONS AND CRITICAL REFLECTION	160
<i>Contextual limitations</i>	160
<i>Critical reflections</i>	162
DISCUSSION SUMMARY	162
CHAPTER 6 CONCLUSION	164
AIMS AND OBJECTIVES	164
APPLICATIONS FOR USE	165
IMPLICATIONS FOR FURTHER RESEARCH	166
<i>Blue spaces and mental wellbeing in female youth</i>	166
<i>Positive psychology models</i>	166
<i>The Impact of a flourishing youth population</i>	167
<i>The power of place</i>	167
<i>Wider school impacts</i>	167
<i>Mentors</i>	168

<i>Tuakana-teina cycle</i>	168
<i>Other gender programmes</i>	168
<i>Female participation</i>	168
<i>Summary</i>	168
FINAL THOUGHTS.....	169
<i>The calm between the waves</i>	169
REFERENCES	171
APPENDICES	191
APPENDIX A: ETHICS APPROVAL	191
APPENDIX B: PROGRAMME TIMELINE.....	192
APPENDIX C: INDICATIVE FOCUS GROUP AND INDIVIDUAL INTERVIEW QUESTIONS	194
APPENDIX D: HUA ORANGA SURVEY	195
APPENDIX E: MHC-SF SURVEY	196
APPENDIX F: LEARN TO SURF PROGRESSIONS.....	197
APPENDIX G: GLOSSARY OF MĀORI TERMS	204

ATTESTATION OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor used artificial intelligence tools or generative artificial intelligence tools (unless it is clearly stated, and referenced, along with the purpose of use), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signed:

Date: 26/01/2026

Student I.D. number: 21135626

ACKNOWLEDGEMENTS

There are many thanks to be made, given the support provided from many good people (and one very good dog).

Firstly, I would like to thank my primary supervisor, Mike Brown, who has been a constant throughout this process. From the first walk (in nature!) where I shared my idea, having no clue that you would gently push me into a five-year journey, through to the very end, your support and guidance have been invaluable.

Thank you to my secondary supervisors, Charlotte Jelleyman and Grant Schofield, for your thoughtful contributions, particularly regarding the quantitative data and reflections. You both provided excellent advice and support whenever needed.

I have a huge appreciation for the young wāhine in the stories that are shared. To the research participants, thank you for your courage, openness to sharing, and vulnerability in learning a new skill. And to the student facilitators, your willingness to share your skills in the ocean made the programme both safe and enjoyable.

Thank you to the school, Mount Maunganui College, for allowing the students to participate in this programme, and for providing support with resources and time.

Thank you to Dani Shepherd from Surf Lifesaving New Zealand for reviewing the safety management of this programme, contributing thoughts and experience to ensure best practice.

Ngā mihi to Maureen Legge for proofreading this work and for the advice and support in the final stages.

And to family and friends – my partner, kids, and mother, to the ‘sunshine girls’ and many other friends who have collectively listened and provided space for me to grow alongside and within this mahi. I appreciate you more than you know.

AI tool (Microsoft Co-Pilot)

The use of AI in this thesis is outlined below:

- As a grammar and spelling checker, with the use as a thesaurus.
- Literature searching to support finding up-to-date research
- Data and other visualisation suggestions for ideas to get information clearly across.
- To help develop appropriate subtitle ideas.

LIST OF TABLES (TŪTOHI)

Tūtohi 1 Overview of data collection timeline	56
Tūtohi 2 p-value (p) ranges	66
Tūtohi 3 Effect size(r) ranges.....	67
Tūtohi 4 Overview of Hua Oranga results	72
Tūtohi 5 Overview of changes in MHC-SF results.....	76
Tūtohi 6 Participant numbers in languishing, moderate and flourishing categories	79
Tūtohi 7 Overview of discussion themes over time	117
Tūtohi 8 Overview of five core themes	121
Tūtohi 9 Reflective summary of Taha Tinana subthemes from the data rounds.....	122
Tūtohi 10 Insights from: Challenge to Growth – the role of physical activity in wellbeing ...	122
Tūtohi 11 Reflective summary of Taha Hinengaro subthemes from the data rounds	125
Tūtohi 12 Insights from: From Discomfort and Fear to increased Confidence and Self-esteem.....	125
Tūtohi 13 Reflective summary of Taha Whānau subthemes from the data rounds	127
Tūtohi 14 Insights from: Belonging and Supportive Connections.....	128
Tūtohi 15 Reflective summary of Taha Wairua subthemes from the data rounds	132
Tūtohi 16 Insights from: Mindfulness and Presence through Nature Exposure	133
Tūtohi 17 Insights from: Holistic Wellbeing: Reframing Wellbeing and Flourishing.....	139
Tūtohi 18 Implications of the findings - key concepts	143
Tūtohi 19 Complementary overarching wellbeing principles	150
Tūtohi 20 Guiding questions for planning (Modified from Wattchow & Brown (2011))	151
Tūtohi 21 Overview of data collection timeline	192

LIST OF FIGURES (WHAKAAHUA)

Whakaahua 1 Kemmis and McTaggart's Action Research model	46
Whakaahua 2 Te Whare Tapa Whā Model of Wellbeing	49
Whakaahua 3 Overall wellbeing scores according to the Hua Oranga	73
Whakaahua 4 All taha pre- and post- test results	74
Whakaahua 5 Overall wellbeing scores according to the MHC-SF	77
Whakaahua 6 All MHC-SF domains pre- and post-test results	78
Whakaahua 7 A framework for flourishing - a place-responsive guide to youth wellbeing model	150
Whakaahua 8 A framework for flourishing - a place-responsive guide to youth wellbeing model	165

ABSTRACT

Youth mental health in Aotearoa New Zealand is declining. Current approaches to address this decline focus on illness management and pharmaceutical interventions, despite much evidence suggesting lifestyle-based, culturally responsive strategies may better wellbeing. Families are increasingly time-poor, digital engagement is rising, and youth spend less time outdoors than ever before, particularly young females. The worrying statistics for females have been exacerbated through a phone-based upbringing and a withdrawal from health-enhancing nature spaces. These negative trends highlight the need for responsive, accessible, and culturally grounded wellbeing initiatives.

This study develops and evaluates a female-only, school-based surfing programme grounded in Te Whare Tapa Whā and positive psychology principles. Surfing was selected as a place-responsive activity that leverages local blue spaces and fosters connection to te taiao (the natural environment), while promoting physical, social, emotional, and spiritual wellbeing. The programme created a model, suitable for replication, to foster wellbeing among young wāhine-females.

Data were gathered using a mixed methods approach. Two quantitative surveys - the Hua Oranga and Mental Health Continuum- Short Form (MHC-SF) - were used as pre- and post-programme measures. In addition, lived experiences were captured through semi-structured interviews with participants conducted at the beginning, mid-point, and end of the programme, with final interviews several months later. Journal entries from the researcher and participants were also included.

A Wilcoxon signed-rank test was used to analyse quantitative data. Key findings found that all four taha from the Hua Oranga survey showed statistically significant improvements, with an overall effect size of $r = .91$. MHC-SF overall scores improved significantly ($M = 9.63$, $SD = 6.81$, $p = .042$, $r = .74$), with 50% of participants moving into the “flourishing” category post-intervention. Consistently large effect sizes suggested that the surfing programme produced meaningful shifts in wellbeing.

The qualitative results reinforce existing evidence on the benefits of nature and blue spaces, highlighting the importance of connection to self, others, and the environment. Participants reported increased confidence, sense of belonging, and emotional balance, alongside a deeper appreciation of the ocean and its restorative qualities.

The discussion provides evidence of surfing and the ocean as wellbeing enhancers in addition to the documented benefits of rehabilitation-focused interventions. This research contributes to understanding how place-responsive, nature-based programmes can foster flourishing in youth and mitigate the impacts of modern stressors such as social media and sedentary lifestyles.

The thesis concludes with practical implications, including a guideline for developing a place-responsive, nature-based wellbeing programme for schools. This research makes an original and substantive contribution to the body of knowledge in the area of youth wellbeing, ultimately offering a template for schools to adapt. This research offers a pathway for reframing youth mental health not as a problem to be treated, but rather as a potential to be nurtured through connections, care, and nature.

Please Note

Aotearoa New Zealand has three official languages of English, Māori and New Zealand Sign Language. For this thesis, there is some use of te reo Māori (Māori language) throughout. The kupu, or words, will be used in both English and Māori initially, and from there on, either language may be used. A full glossary of Māori terms is available in the appendices.

Chapter 1 Introduction

Rationale and Significance of the Study

Take care of our children. Take care of what they hear, take care of what they see, take care of what they feel. For how the children grow, so will the shape of Aotearoa.
- Dame Whina Cooper (1895-1994)

Being a 'kiwi kid' in Aotearoa, New Zealand, means growing up against a backdrop of one of the most beautiful countries in the world. However, looming beneath the maunga (mountains), in our deep roto (lakes) and our swiftly moving awa (rivers), the negative mental health outcomes of youth remind us that the beauty of our country may only be skin deep. As a prominent Māori leader and tireless advocate for equity and social justice, Dame Whina Cooper's words serve as a compelling reminder that youth wellbeing is foundational for shaping a resilient and flourishing Aotearoa.

In line with global trends, rapid societal change has impacted the lifestyle and habits of many New Zealand youth, contributing to a changing health and wellbeing landscape. Modern-day living has taken a toll on physical and mental health outcomes, with a reduction in physical activity, sleep, and embodied social interactions coupled with an increase in poor nutrition choices (Hidaka, 2012). This has led Hidaka (2012) to suggest that mental illnesses such as depression and anxiety are diseases of modernity and are therefore often preventable. There is a raft of factors that have contributed to the reduction in wellbeing, such as the increase in the use of digital and social media, paired with a reduction in unstructured free time and variable parental involvement (Calin et al., 2021; Menzies et al., 2020; Nesi, 2020). In Western societies, Louv (2005) observed a broad withdrawal from time spent outside, meaning youth are encountering a loss of connection with nature that was fundamental in previous generations upbringings. This loss of connection, termed by Louv (2005) as nature deficit disorder, has in part led to a generation who are less socially and environmentally connected, as well as being less physically and emotionally healthy than their parents (McAnally et al., 2018; NZARE, 2018).

Spending time in nature has been shown to enhance wellbeing in different ways, such as inducing positive emotions, buffering against stress, and enhancing social connections (Barton & Pretty, 2010, 2010; Capaldi et al., 2014; DeVille et al., 2021). As well as these positive personal impacts, time in nature also acts to connect humans to their environment and enhance a sense of belonging. The reduction in unstructured outdoor time has led many

youth to lose awareness of local outdoor spaces and the activities available to them, decreasing their sense of environmental stewardship (DeVille et al., 2021).

In Aotearoa New Zealand, the term *kaitiakitanga*, or guardianship, refers to humans' relationship with nature and our responsibility to preserve it for future generations from a Māori worldview (Roberts et al., 1995). When we spend time in nature, either in stillness or doing an activity, we are more likely to take on the role of environmental steward for that place (Britton & Foley, 2021; Georgiou et al., 2021). In *The Biophilia Hypothesis*, Robert Ulrich suggests we have a positive emotional response to nature due to our parallel evolution, akin to growing up together (Ulrich, 1993), highlighting nature's potential to contribute positively to human wellbeing.

According to the *Youth19 Rangatahi Smart Survey*, the number of New Zealand youth who report good emotional wellbeing has dropped significantly in the last 20 years (Fleming et al., 2020). The impact of this has resulted in a reduction in the number of young people who can cope with everyday stressors, and an increase in the likelihood of 15-24 year-olds having long-term psychological issues such as anxiety and depression (Menzies et al., 2020). Fleming et al. (2020) found that young wāhine (females) were over-represented in indicators of negative mental health outcomes. According to this research, "more wāhine reported significant depression symptoms (29%) than males (17%)" (Fleming et al., 2020, p. 2). The survey showed young females with significant depressive symptoms rose from 14.5% to 28.9% in the period from 2001 to 2019, while reported suicide attempts were at a worrying 7.3% in 2019. The 2024 World Happiness Report (WHR-24) also showed that females in New Zealand have more negative thoughts than males across all age groups, with females under thirty years of age reporting experiencing one-third more negative emotions than males (*World Happiness Report*, 2024). The research (Fleming et al., 2020; *World Happiness Report*, 2024) indicates that a high number of young women are diagnosed with mental illness, and they generally have poorer mental health outcomes. In response to this, frameworks such as positive psychology offer strength-based approaches that aim not only to prevent illness, but to promote flourishing and emotional wellbeing (Gable & Haidt, 2005; Seligman, 2010).

Throughout my twenty-plus-year career in secondary school education in New Zealand, I have gained firsthand knowledge of the societal landscape youth are exposed to. The complexities of New Zealand society largely mirror those of other Western countries such as Canada, Australia, and England (Eckersley, 2006). However, when informed by mātauranga Māori (Māori knowledge), New Zealand culture offers a distinctive and rich perspective. I identify as both Māori and Pākehā (New Zealander of European descent), with whakapapa

linking me to early Irish settlers and Māori ancestry. Through this bicultural lens, I understand that humans' relationship with nature is considered both reciprocal and highly protective. In Māoridom, tikanga refers to ways of behaving and interacting with others, and while the term is indigenous, the underlying concept is not exclusive to Māori. Many cultural concepts, such as Kaitiakitanga (guardianship over, and our relationship with the environment), are used commonly within the New Zealand Curriculum (2022). Over my career, as an outdoor educator through to deputy principal, I have seen the negative consequences of reduced physical activity and outdoor time and an increase in poor health behaviours. Young females have similar negative outcomes as their male counterparts yet also have unique circumstances that alter their experiences and opportunities. The impetus for this thesis is to support female youth in connecting with the outdoors and sharing positive psychology strategies for enhancing and strengthening their own wellbeing, using nature as a strong buffer against current negative outcomes.

The concept of flourishing

In contrast to enhancing wellbeing, mental wellbeing often focuses on 'deficits' (i.e. illness as opposed to wellbeing), however, newer discourses have arisen with a focus on how we might enhance positive outcomes and come to flourish. In contrast to mental illness, Martin Seligman, a leader in positive psychology, defines flourishing as having the five key characteristics of positive emotion, engagement, relationships, meaning, and accomplishment, or PERMA (Seligman, 2011). The literature exploring negative experiences of mental health is comprehensive, but there appears to be less focus in the literature on young females struggling to attain a positive outlook, or who may be thought of as not having the opportunity to flourish.

Nature has the potential to be part of the wellbeing solution and support flourishing. The benefits of time spent in blue and green spaces are profound and increasingly well documented, and are shown to produce an ongoing protective element to health and wellbeing (Capaldi et al., 2014; Hunter et al., 2019; Twohig-Bennett & Jones, 2018). To compound the positive impact of time spent in nature, it has been found that the physical activity completed in natural settings is even more beneficial for human flourishing (Turecek et al., 2025).

Positioning females 'out' of the outdoors

Young females have been impacted by parallel oppositional forces that work to keep them from accessing wellbeing enhancing nature spaces. The emergence of "stranger danger" phenomenon in the 1970s (Wodda, 2018) cultivated an ongoing fear of victimisation of females, the solution of which was to remain in the safety of the indoors, avoiding the

apparently inherent dangers of the outdoors (Scott, 2003). The recent high prevalence of social media use has seen curated images guiding females in constructing a reality built from what are often unrealistic and unreliable sources (Leonhardt & Overå, 2021; Office of the Surgeon General, 2023a). Constructivist theory (Ankers et al., 2023; Horwitz, 2022) posits that when reality is socially constructed, it is often driven by the most powerful social force in deciding what's 'normal' and 'abnormal'; in this case, the power belongs with social media (Borch-Jacobsen, 2009; Horwitz, 2022). Females are gaining an understanding of where they belong, and don't, from the predominantly external inputs and social forces of social media. The result of these powerful forces is the disconnection of young wāhine from the outdoors, both physically and psychologically, as both safety and digital culture shape their understanding of where they belong (Parsons & Halstead, 2022).

Since its inception, the proliferation of the smartphone in youth culture has had an impact on mental health (Calin et al., 2021). The U.S. Surgeon General released findings from a longitudinal study that found youth who spent more than 3.5 hours per day on social media doubled their risk of anxiety and depression (Office of the Surgeon General, 2023b). New Zealand youth spend an average of 42 hours a week on devices, one of the highest rates in the world, and females spend much of this time on social media (Cullen, Marsh, et al., 2024; Cullen, Muntz, et al., 2024). Despite arguably having access to one of the most beautiful countries in the world, time on devices is crowding out other activities, such as having synchronous, real-time, in-person, physical outdoor experiences.

By the time they are teenagers young females in Aotearoa are less likely than males to participate in physical activity or sport (Sport New Zealand - Ihi Aotearoa, 2023). Young females are most at risk of reduced free play, according to Parson and Halstead (2022), as they begin to construct their role in physical activity, free play and the outdoors from a very early age. There are factors at every stage of a female's life that contribute to the overall message they receive about outdoor play and physical activity experiences. Gendered play is seen from a young age in primary school playgrounds, and young females also encounter older female 'gatekeepers' more likely to share negative experiences or views on the outdoors, all contributing to a female's belief as to whether they should be in the outdoors themselves (Parsons & Halstead, 2022). Females are less likely to see female role models in these blue and green spaces, which adds to their construct of whether they belong there and what they should be doing in these spaces (Evans et al., 2020; R. Pearson et al., 2025). Zhou et al. (2024) found that physical activity can support females towards flourishing, helping to induce positive feelings, meaning, accomplishment and engagement, especially when engaged in the outdoors. When females are restricted, by self or other forces, in their

outdoor endeavours, they reduce their exposure to the health-enhancing and stress-reducing impacts and the additional ongoing benefits that lifelong positive habits can provide.

Purpose and Scope of the Study

In response to the rising rates of anxiety and depression, and general low emotional wellbeing of Aotearoa New Zealand's female youth, this study aims to investigate the impact of a challenging outdoors-based programme in providing mental health promotion strategies and awareness of factors that impact overall wellbeing. The age group categorised as youth is defined by the World Health Organisation, aged 15-24 years (*Adolescent Health - SEARO*, 2025). The literature reveals that youth are impacted by reduced emotional wellbeing and resilience to daily stressors, with negative mental health outcomes most prevalent in this age bracket (*World Happiness Report*, 2024). There is much less research on the salutogenic or protective impact of providing nature-based, challenging outdoor activities to youth and understanding the impact of this on wellbeing outcomes. Positive psychology practices support the notion that embodied experiences can bolster us in finding meaning, engagement and accomplishment, and can assist us toward flourishing and fulfilment in our lives (Seligman, 2010, 2011). Strategies to increase our ability to flourish include mindful practices, accomplishing challenging activities, and improving our connection to others and the environment. Young females are the focus of this study because, as highlighted, they are particularly impacted by a reduction in physical activities and use of outdoor environments, which restricts their ability to flourish. The choice of focus on young females is based on my concerns, as an educator, realising that young women need more kinds of support from the school system.

This research is a case study focused on a place-responsive (Wattchow & Brown, 2011) learn to surf programme with adolescent females aged 15-16 years. The measurement of the impact of the programme was on overall wellbeing. Whilst the context is learning via the challenging outdoor activity of surfing, the broader programme included elements of social wellbeing, kotahitanga (unity or togetherness), environmental awareness and kaitiakitanga (guardianship). The impact of the programme was measured quantitatively through data from two surveys, and qualitatively through participant journalling and interviews.

As research into human health increasingly stretches beyond managing illness and into areas that promote wellbeing, the concept of prescribing nature and nature-based activities, such as surfing, is being investigated at the practitioner level (Juster-Horsfield & Bell, 2021). Several intervention-type surfing programmes exist in New Zealand, such as One Wave (Fluro Friday, n.d.) and Surfing for Farmers (Beautrais, 2018), and are mirrored globally, such as in England's *The Wave Project* (Britton et al., 2020; The Wave Project, 2025). However,

as we increasingly understand the profound impacts of blue spaces, through an outdoor activity such as surfing, the impact of these as both protective and enhancing of wellness is less well researched. In a range of studies surfing has been described by participants as providing balance and a sense of identity in life (Fuchs & Schomer, 2007), providing self-management and self-improvement (Wheaton et al., 2017), opportunities to be 'present' (Wheaton et al., 2020), and an ability to slow down and be mindful (Fox et al., 2021). The benefits of being mindful, or being present in the moment, are increased positive emotions and emotional regulation, and the potential to relate to others more positively (Davis & Hayes, 2011; Hulsheger et al., 2012). The more obvious benefits that surfing provides to physical health may be vastly outweighed by the emotional and spiritual experiences of its participants.

The aim of this research was to:

- Develop an evidence-based, place-responsive outdoors programme that positively impacts the emotional wellbeing of young wāhine.
- Provide participants with the opportunity to better understand the factors that influence their hauora and personal wellbeing.
- Examine lifestyle-based strategies where young wāhine experience resilience and growth in a positive, challenging environment.
- Equip participants with knowledge to develop sustainable models of outdoor activity that support long-term mental health and flourishing.
- Offer non-pharmaceutical approaches to mental and emotional wellbeing for professionals working with adolescent females.

The ten weeks learn to surf programme was developed by the researcher and facilitated by senior female students from the same kura (school) as the participants. The student facilitators were experienced surfers and surf lifeguards who compete as athletes in their sport, while the surf lifeguards also volunteer on the local beaches. The researcher was present at each session of the programme, and a full safety management plan was in place. The student facilitators were able to use the ninety minutes per week to contribute towards their required time as part of the school's community service project.

This study draws on Te Whare Tapa Whā (Durie, 1984) as an Indigenous model of wellbeing, with the understanding that many youths can identify with this framework through its use in the New Zealand Health and Physical Education curriculum (Ministry of Education, 2007). Participants were able to measure their wellbeing against the four wellbeing domains of Te Whare Tapa Whā. The domains or taha (sides/aspects) are taha wairua/spiritual wellbeing, taha whānau/social wellbeing, taha hinengaro/emotional wellbeing, and taha tinana/physical

wellbeing. This model of wellbeing is representative of the Māori concept of Hauora, roughly translated as holistic wellbeing. The Hua Oranga (Kingi & Durie, 2000) wellbeing measurement tool, which uses the language of Te Whare Tapa Whā, was used as a quantitative measurement tool for data collection. A second measurement tool, the Mental Health Continuum - Short Form (MHC-SF) (Keyes, 2002) was used as a survey. The two measurement tools were both completed by the research participants pre- and post-programme to identify their subjective wellbeing.

The surf programme was underpinned by a place-responsive approach to outdoor activities (Wattchow & Brown, 2011), where localised and accessible options were used. A place-responsive approach created a framework for a low-cost, low-risk activity that could be facilitated using the expertise of the researcher and with senior students as facilitators. As well as providing a surfing programme for the research participants, this thesis aims to develop a template for a localised outdoors-based programme. The hope is that the framework developed would be contextualised for other areas in Aotearoa New Zealand. Some examples of where the framework could be applied to other challenging outdoor activities could be tramping/hiking in our native forests, stand-up paddleboarding on our lakes, or mountain biking on local trails.

Research Questions Informing this Thesis

This research was guided by the following questions, framed to support the aims of the thesis and inform practice.

- What positive shifts in hauora are experienced by participants during a place-responsive outdoor programme?
- How does participation in a place-responsive outdoor programme influence participants' sense of kaitiakitanga?
- In what ways does the programme help participants identify and apply personal strategies for mental wellbeing?
- How does participation in the programme impact positive psychology constructs? (For this research, Martin Seligman's PERMA model is used, identifying the elements of Positive Emotions, Engagement, Relationships, Meaning, and Accomplishment as integral to human flourishing (Seligman, 2010))
- What elements of the programme do participants identify as the most impactful for their emotional wellbeing and ongoing mental health?

The Chapters

This section provides an overview of each chapter, as a guide to the structure and focus of each section. It provides a rationale for each chapter and how they contribute to

understanding current negative youth mental health outcomes, and the role of nature-based outdoor activity in enhancing youth wellbeing.

Chapter 1 Literature review

The literature review takes a journey through youth mental health outcomes in Aotearoa New Zealand, the factors impacting these, and a snapshot of the changing world youth are exposed to. The intent is to provide an understanding of the current negative mental health outcomes occurring in Aotearoa New Zealand. In the literature review, I introduce the concept of flourishing, and how positive psychology models can impact participation.

The various inputs that impact New Zealand youth are exposed, including withdrawal from free play, and the impact of changing family dynamics. There is a closer investigation into female-specific factors, including social forces within social media and the social acceptance of females in physical activity and outdoor spaces. This section highlights the important role nature can have on enhancing wellbeing, and how females have withdrawn from engagement in these spaces.

I then move through a comprehensive review of the profound impacts that exposure to green and blue nature spaces can have on human health. There is specific research into blue spaces and surfing as an activity, with an outline of some existing programmes that primarily focus on rehabilitation. This helps to highlight the lack of research into programmes with a focus on protective positive psychology mental health elements.

The Te Whare Tapa Whā model of wellbeing is introduced as a framework for categorising factors that impact youth wellbeing. This Indigenous Māori health model was developed in 1984 and outlines a unified or holistic understanding of wellbeing (Rochford, 2004). The model features four taha, or walls, of a whare (house) as four equal and interconnected aspects of human health, each supporting and integral to the other.

Chapter 2 Methodology

This thesis firmly places mental health as a constructed notion with the perspective that our mental health is socially constructed by societal norms and expectations (Ankers et al., 2023). Within this approach, the intention is to discover the meanings assigned by the participants to their experiences within the programme by gathering their interpretations through interviews.

The case study surfing programme was developed through a place-responsive lens, where experiences are localised, low cost, low risk, and use the expertise of the researcher

(Wattchow & Brown, 2011). The all-female environment created a non-competitive, inclusive space focused on personal growth and accomplishment, as well as important role modelling of older females in leadership roles (Culp, 1998; Evans et al., 2020).

The surfing programme participants are introduced as a group of Year eleven (15-16 years old) who were recruited from the local school/kura. The programme was ten weeks in duration, with a surfing session for 90 minutes once a week. Sessions were scheduled during non-curriculum study periods to ensure students did not miss any regular classroom learning time.

A mixed methods approach combined the clarity of quantitative data with the stories of the participants. Two surveys were used to measure subjective wellbeing at the beginning of, and immediately after the surfing programme. The Hua Oranga is a 5-point Likert scale survey measuring the four taha of Hauora on a scale of 'extremely good' to 'very bad'. As mentioned, this tool uses the language of Te Whare Tapa Whā, which participants were familiar with.

The Mental Health Continuum-Short Form (MHC-SF) is a 6-point Likert scale, with indicators from 'Never' to 'Every day'. The MHC-SF ultimately places participants within a category of 'flourishing', 'moderate' or 'languishing' mental health. The MHC-SF has been validated through use in various studies (Keyes, 2007), and the reduced 14-question form enables better understanding by youth.

Qualitative data was gathered through interviews and journals. Two focus group interviews were conducted, one at the start and once after the surfing programme. These were about 40 minutes long, and all nine participants attended. Each participant was also interviewed individually twice. The first time was several weeks into the ten-week programme, and the final one was six months after the programme concluded. The interviews all followed a semi-structured guide of questions, with the final individual interviews focusing on any shifts in wellbeing indicated from the surveys.

Chapter 3 Data analysis

The qualitative data is unpacked through a comprehensive thematic analysis coupled with statistical data gained from the surveys. The data is analysed using the four taha of Te Whare Tapa Whā as parent, or deductive codes. The transcribed interview data contributed a rich narrative to each round of results presented in the findings. These are supported by the researcher's own weekly journal and participant journal entries, with direct quotes presented to demonstrate support of the themes.

The quantitative survey data was analysed manually using NUMIQO software, specifically the Wilcoxon signed-rank test. The non-parametric test was chosen to compare the pre- and post-test scores and determine whether there were any statistical differences between them, and if so, the direction of change.

Chapter 4 Discussion

The discussion opens with an overview of the findings. The emerging core themes were framed using the four taha of Te Whare Tapa Whā as deductive themes, with further inductive insights emerging. The language of positive psychology, specifically the PERMA model, (Seligman, 2011) was used to develop these subthemes and capture the nuances within each domain of wellbeing.

The five key themes follow the participants' journey through the learn to surf programme, as they developed a more complex and nuanced understanding of their own holistic wellbeing. Their experiences and growth are framed against current literature, contributing evidence further to support the wellbeing-enhancing properties of nature and blue spaces.

The findings are brought together to suggest a place-responsive, holistic framework for schools to use as a template for their own wellbeing programme. The intention is for schools to use this within their context and 'place', providing opportunities to explore local areas and activities.

Chapter 5 Conclusion

The final chapter outlines the overall impact of the research and new evidence gained to contribute to the growing body of research on wellbeing and blue spaces. The implications outline how agency, and equity and sustainability can address existing barriers within wellbeing practices. Evidence-based recommendations for those working with youth are presented, with the intent that they can be employed by those within the education sector and beyond. Final thoughts are guided by the experiences of the participants, with insights around holistic wellbeing, and the role of nature in our potential to flourish.

Chapter 2 Literature Review

Introduction: The land of the long 'grey' cloud

The Māori name for New Zealand is Aotearoa, translated as the land of the long white cloud. However, it could be argued that a dull grey cloud of poor mental health covers much of our land instead. It's difficult to ignore the alarming rates of negative mental health statistics across the world, with the World Health Organisation (WHO) estimating that 1 in 4 people will be impacted by poor mental health in their lives (WHO, 2022). The population of Aotearoa New Zealand, are not immune to this, with adults following a similar trajectory as the rest of the world, but it is youth who continue to prominently feature in our negative mental health outcomes (Fleming et al., 2020; Menzies et al., 2020).

The WHO's definition of mental health is a state of mental wellbeing that enables people to cope with the stresses of life, realise their abilities, learn well and work well (WHO, 2022). This definition highlights that while many in the population may not meet the threshold of a diagnosed condition, their ability to flourish may be hindered. Flourishing can be defined as having fulfilment and purpose in life, accomplishing worthwhile and meaningful tasks, and being able to connect with others on a deeper level (Seligman, 2011). Martin Seligman developed the PERMA positive psychology model, where he listed the elements that were needed for an individual to attain positive mental health: Positive emotions, Engagement, Relationships, Meaning and Accomplishment (Seligman, 2010, 2011).

This chapter examines the nuanced nature of mental health in youth, focusing on the complexities and the changing nature of flourishing in the modern world. Based on the literature review, which discusses what is known about flourishing and the factors that enhance wellbeing, I will suggest a programme to encourage flourishing, marrying Seligman's model with the uniquely New Zealand wellbeing model Te Whare Tapa Whā and embedding the attributes of a place-responsive outdoor activity.

Youth Wellbeing

Mental health and treatment

Anxiety, worry and stress are all emotional states that are part of everyday life, yet spending too much of our emotional time in these states can lead to negative health outcomes, including chronic conditions such as hypertension and sleep disorders (Szuhany & Simon, 2022). According to the New Zealand Mental Health Foundation, anxiety is an excessive and overwhelming worry about potential future events; stress is a natural physical and emotional response to pressure which can become harmful if prolonged; and depression is a persistent

and severe mental health condition usually characterised by depressed low mood or loss of interest in activities (Mental Health Foundation of New Zealand, 2025). A recent NZ Ministry of Health survey shows young people with moderate to high stress has nearly doubled since 2016/17, and that even though over a quarter of our young people experience high mental health need, the percentage who can't access support when they need it has risen by 77% (Mental Health Foundation, 2025). The recommendations from this survey, released in March 2024, warned that the area of health with the greatest need for young people is their mental health.

The New Zealand Health survey has been running continuously since 2011 and is an important tool in monitoring the health and wellbeing of the population (Ministry of Health - Manatu Hauora, 2024). Although many young people experience good mental health, this survey shows that the mental health of young people has declined over the past decade. The report found that 22.9% of youth in New Zealand report experiencing high or very high levels of psychological distress, the highest of all the age group categories surveyed (Ministry of Health - Manatu Hauora, 2024). Over 11% of New Zealand's youth population also sit in the area considered as low mental health, or perhaps more easily described as not flourishing or fully realising their mental health capacity.

A worrying statistic identified in an analysis of the New Zealand Health Survey showed that females are most significantly impacted by negative mental health outcomes (Lillis, 2025). This study analysed survey findings between 2011 and 2023, and found that high and very high classified psychological stress increased from 6%- 30% in 15-24 year old females over this duration (Lillis, 2025). However, the use of self-reported measures in this study (Kessler Psychological Distress Scale) may also be reflective of an increased willingness to report symptoms or shifting awareness of mental health, and the study did not investigate supportive factors such as family support. Nonetheless, female youth are being impacted by negative mental health outcomes, and the protective solutions for this are limited at best.

Options for mental health care in Western medicine primarily include the class of drugs known as selective serotonin reuptake inhibitor (SSRI) antidepressants, as well as counselling, with the former gaining traction. In modern societies, which Lundberg (2005) characterised as featuring a rapid pace of life, high demands, efficiency and competitiveness in a global economy, the convenience of antidepressant drugs as a solution for youth mental health disorders has led to their prescription as an increasingly common early intervention. According to Deacon (2013), the biomedical model posits that brain disorders are diseases, and they require pharmacological treatment to target abnormalities. However, critical analysis also shows that the adoption of this model has not improved either the diagnosis of or the

severity of symptoms, since its inception (Deacon, 2013). According to Te Hiringa Mahara, the Mental Health and Wellbeing Commission, the rate of youth being prescribed antidepressant medications rose 53% between 2018 and 2022 (Te Hiringa Mahara—Mental Health and Wellbeing Commission, 2023). A previous study found that females are prescribed medications at over twice the rate of use as young males (Bowden et al., 2019). When investigating the efficacy of these drugs, analyses point to not only their ineffectiveness but also the potential worsening of symptoms in teenagers who are prescribed SSRI medications (Cipriani et al. 2016; Newport Academy, 2019; Lock et al., 2005).

Against this backdrop, the interest in protective lifestyle-based solutions as both affordable and effective against mental health treatments is growing (Marx et al., 2021). Evidence suggests that a focus on sleep, diet, and exercise, while mitigating risk factors such as smoking and substance abuse, may be more effective as a primary treatment option, rather than being viewed as merely complementary to pharmaceutical therapy (Marx et al., 2021; Sarris et al., 2014).

The Social Construction and Modern Drivers of Distress

Mental health may be socially constructed, as initially suggested by Szasz (1960) and later Borch-Jacobsen (2009), who suggested mental health was invented by society to stigmatise behaviours not considered the 'norm'. As suggested by Ankers et al. (2023), mental health problems are a social phenomenon, shaped and influenced through social hierarchies and collective norms. Horwitz (2022) further suggests that mental illness definitions are socially produced and deeply influenced by cultural and institutional contexts.

These notions have been expanded to suggest that those with social power are the ones who decide what is normal and therefore abnormal (Ankers et al., 2023; Horwitz, 2022). When tracking the historical evolution of mental illness definitions, it was found that the American Psychiatric Association (APA) effectively controlled these through cultural values, professional debates and institutional power (Vacca et al., 2025). When these crucial definitions are so heavily shaped by external forces, it is undeniable that youth are significantly influenced by them. From this perspective, social norms and those who have the power to define them play a significant role in what is considered 'normal' and 'abnormal' within mental health discourses (Ankers et al., 2023; Horwitz, 2022).

According to Denicolo et. al, (2016), we use constructs such as gendered expectations and media representations to help us understand and navigate life, making sense of the events and experiences that occur around us or within us, including the status of our mental health

in comparison to what is 'normal'. In her book on social constructivism, Burr (2015) cautions us to be suspicious of how we believe the world to be, including accepting that life may have some 'grey' areas that are not defined in binary terms. Within the context of mental health, the binary notion that we 'have' or 'don't have' good mental health is perpetuated by these social norms and potentially leads us to a reductive definition and placement of self within these two options. When youth are trying to understand their mental health and locate themselves within it, they can be influenced by these perceived norms, perpetuating self-selective negative mental health attributes.

Youth are influenced by a raft of relatively new contributors in their construction of reality, including what can be accessed digitally. Social media platforms expose them to images of how they are supposed to look, feel and behave in the world. In this way, aspects of how youth construct their mental health are influenced by the internet and its easily accessible sources of (mis)information. Social media users predominantly share positive moments and carefully curate content to dismiss or at least remove any unpleasant emotions, ultimately hoping to increase social currency by gaining the attention of others. Stress, worry and anxiety, in fact, most 'negative' emotions, become viewed as abnormal by the power inherent in social media through algorithmic curation and positive bias, a space where wellbeing is increasingly defined by youth (Borch-Jacobsen, 2009).

The world that youth are currently exposed to is highly complex, and experiences are often disembodied through digital interactions. Emerging research (UNESCO, 2024; Calin et al., 2021) and a recent public health message from the U.S. Surgeon General frame youth mental health issues as diseases of modernity driven by an increase in social media, nature deficit and fragmented in-person, synchronous social interactions (Office of the Surgeon General, 2023b). The rise of self-reported and diagnosed mental health distress in young people also coincides with other external factors such as variable parental control and a lack of unstructured free time, resulting in reduced play and time in the outdoors (Carpenter & Harper, 2016; Hunter et al., 2019; Larson et al., 2019). All these factors within society are contributing to our constructed sense of reality, and in this case, to mental health. Females spend significantly more time on social media than their male counterparts, who prefer to spend their online time gaming (Leonhardt & Overå, 2021). Social media platforms such as Instagram and Snapchat allow individuals to select their online presence and the content they wish to share, which is typically not representative of the reality they may be facing. A construction of mental health and wellbeing through these platforms is biased towards unrealistic standards, with UNESCO releasing a report stating social media amplifies unrealistic beauty standards and is leading to negative mental health consequences in young females (UNESCO, 2024).

The implications of social media use

In the modern world, where technology has become ubiquitous, the use of social media has had a profound effect on the perception of threat to our future happiness or threat to our self-esteem (Calin et al., 2021). Social media platforms enable selective self-presentation, to which youth are particularly susceptible because of modelling by influencers and other idealised role models (Nesi, 2020). Evidence indicates that spending more than three hours a day on social media is linked to poor mental health (Nesi, 2020), yet many youths dedicate much more time than this to these platforms. A 2024 study on the impact of digital technologies on New Zealand youth found that Kiwi kids are among the highest users of technology in the world, spending on average 42 hours a week on devices, including social media (Cullen, Muntz, et al., 2024). It is important to highlight that social media in this context is defined as content that can be interacted with, rather than just observed, such as watching a television.

Digital use affects adolescents differently depending on the developmental stage they are in, trying to establish their place and build connections (Nesi, 2020). This desire can lead to surrogate virtual connections, established through online friends and gaining 'likes' for images or stories, and the following of others, which in turn can create a damaging 'comparison culture' (Calin et al., 2021; Leonhardt & Overå, 2021). A contrasting theory explores the connections that youth can attain through digital interactions such as gaming, with some youth finding they can find solace from distress and bring their emotions back to baseline when dysregulated (Nagata et al., 2026). This same study found that moderate gaming helped increase social connection, psychological safety and teamwork, supporting Livingstone & Pothing's (2022) that digital environments can provide a creative space for youth to engage in free play and develop identity.

While some research indicates potential for positive impacts from digital interactions, substantial evidence continues to target the negative implications on youth. Large-scale research in the U.S. on youth participants (aged 13- 18 years) has shown that the impact of digital use- including all screen-based activities- began its fruition around 2010, and this correlated directly with increased depression, anxiety, and suicides (Twenge et al., 2018). This study was over five years and found that females were overrepresented in the negative findings, rising 58% in depressive symptoms between 2010 and 2015 (Twenge et al., 2018). Haidt (2024) also identified this worrying trend and contrasts the 'play-based childhood' many previous generations experienced with the new phone-based childhood. His book *The Anxious Generation* outlines the devastating implications of replacing free play, including its

riskier elements, with the prolific use of smartphones and other screens. Females are again highlighted as displaying worrying behaviours, in particular the high use of social media platforms that have worked to both increase feelings of connection and decrease mental health outcomes (Haidt, 2024; Twenge et al., 2018). In contrast, Twenge et al. (2018) found that an increase in non-screen behaviours, such as time spent outside, homework and in-person social interactions, served as a protective factor for youth, contributing to better mental health outcomes and highlighting the importance of embodied experiences for youth.

Navigating stress: Prevention over cure

As previously defined, stress and anxiety are both necessary and fundamental to our survival, as healthy amounts allow us to identify and react to threats and challenges. However, with continual low-level stressors, or overreaction to common stressors, the human stress response is constantly being stimulated without the opportunity to completely recover, and this constant state of stress can cause long-term negative outcomes to our mental wellbeing, and eventually, physical health (Huberman, 2021). Those who spend prolonged lengths of time in the stress response phase often experience persistent negative emotion, irritability and difficulty relaxing, which can increase the risk of both chronic anxiety and depression (Khan & Khan, 2017). Chronic anxiety, most commonly diagnosed as Generalised Anxiety Disorder (GAD), is when the state of perceived threat becomes long-term, intense, and there is a loss of control of this feeling (Te Hiringa Mahara—Mental Health and Wellbeing Commission, 2023). While stress and anxiety respond well to coping mechanisms such as good nutrition, sleep and exercise, chronic anxiety often requires further intervention.

GAD can also morph into depression in various ways, including through disrupting relationships and routines, increasing unhealthy coping mechanisms and the initial low mood, which can generate further stress (Boyes, 2013). Dobson (1985) describes a key factor in depression as “...one of avoidance, withdrawal, and diminished activity” (p.309), which in turn exacerbates social withdrawal and inability to access positive experiences and personal coping mechanisms. GAD and depression are recognised as mental illnesses, and the diagnosis is often followed by a pharmaceutical intervention.

A recent Mental Health and Wellbeing Commission report (2023) found that many young people view their future as bleak, reflecting a declining sense of optimism. While much research continues to centre on diagnosable mental illnesses such as GAD or depression, these findings highlight that a significant group of youth may be experiencing reduced hopefulness and may not meet the diagnostic thresholds, but are nevertheless not flourishing

in their lives (Stubbing et al., 2023a). There is a growing number of adolescents who are experiencing overwhelming emotional distress and low motivation, but will not fall within a range where mental illness is diagnosed and treated (Fleming et al., 2024; Ministry of Health - Manatu Hauora, 2024; Stubbing et al., 2023b). This may not manifest into a mental illness, but the Ministry of Health reports this outlook of languishing can lead to increased risk of poorer mental health outcomes going into adulthood (Ministry of Health - Manatu Hauora, 2024; Stubbing et al., 2023a). My research aims to address this gap in evidence through introducing a strength-based solution to youth with the goal of developing a holistic approach to wellbeing. Positive psychology frames this state as flourishing, where potential is reached and meaning in life anchors good health across all dimensions (Keyes, 2007; Seligman, 2010, 2011).

Salutogenesis -getting ahead of the issue

Salutogenesis can be defined as a focus on the origins and assets of health and wellbeing (Antonovsky, 1987), mirroring the traits of positive psychology through enhancing the strengths and characteristics of individuals. This is in opposition to a focus on both disease and illness management, and could be considered a lifestyle-based approach (Mittelmark & Bauer, 2017). Antonovsky suggested a move from investigating disease and sickness in understanding health to investigating the salutary, or health-promoting factors that could be explored to achieve and maintain overall good health (Fries, 2020). Before COVID-19 youth mental health was declining, however, the impact of COVID and the disruption to how New Zealand society was able to function in the following years continues to negatively impact young people with a slow but steady decline in mental health outcomes (Stubbing et al., 2023a).

The predominance of research into mental health is focused on diagnosis and treatment but leaves a significant gap in our understanding of how to support youth before they reach clinical levels of distress. The focus remains on mental health recovery versus health promotion initiatives that could arm young people with the skills to strengthen their own mental wellbeing. In making sense of their own mental health, youth can misunderstand and even pathologise their own anxiety, rather than recognise the complex and nuanced states of human wellbeing (Ahuvia, 2025).

Alternative mental health constructs

There is extensive research seeking to understand the negative impacts of excessive digital use, such as social media time, but less so in identifying clear pathways to reframing how youth could or should spend their time, given that societal structures and pressures remain. The impacts of modernity mean many families do not have the time, confidence or financial

resources (Aotearoa, 2023; Cribb, 2009) to spend in pursuit of activities that may positively impact their overall health and wellbeing. With young people constructing their mental health through unrealistic standards of being, further investigation is required into how we can provide youth with accessible options for their wellbeing needs. This may begin with providing youth with a better understanding of what positive mental health is, and of the lifestyle factors they are able to control to thrive. The growing concern of youth mental health sets the stage for exploring alternative, culturally responsive models of wellbeing.

Theoretical Frameworks for Measuring & Enhancing Wellbeing

Thriving populations

The World Health Organisation (WHO) describes holistic health as a state of wellbeing in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community (Galderisi et al., 2015; WHO, 2022). In contrast to some previous social understanding, the focus is not on the absence of illness, but rather the ability to flourish. To measure wellbeing, a raft of measurement tools has been developed, such as WHO's Five Well Being Index (WHO-5) (WHO, 2020), and the 8-point Flourishing Scale (Junça & Caetano, 2011) have been developed. The Flourishing Scale encompasses items regarding human flourishing in relevant areas such as purpose in life, relationships, self-esteem, feelings of competence, and optimism (Junça & Caetano, 2011). This scale is mostly used in adult populations and has not been validated in terms of youth. WHO's Five Wellbeing Index is widely used and simple to complete and understand, but with its focus on assessing hedonic wellbeing, lacks acknowledgement of the broader aspects of wellbeing, such as social concerns and spiritual awareness; rather, the focus is on measuring hedonic wellbeing. For both surveys, the quantitative measurement of wellbeing on any continuum is inherently subjective and reductive, so understanding the subjects lived experiences can require further investigation.

The construction of family units and how they spend both time and money has evolved over time. It is increasingly common for families to have two working parents, or maybe a single parent or blended family situation (Cribb, 2009), with family dynamics impacting time constraints from a young age. Youth are often enrolled in organised activities meaning they are busy with after-school and weekend activities. Previously unstructured time in the neighbourhood or beyond has been replaced by highly organised 'playdates', or music lessons, sports practice, and academic tutorials, which contrasts with the importance of unstructured play for positive emotional, social, motor, and cognitive development (Dankiw et al., 2020). The more traditional lifestyles are centred around physical activity within the day, such as gardening, walking, and free play. In line with Jonathon Haidt's (2024) research on

the impacts of reduced free play, this highlights how the factors required for flourishing are those that have been diminished, and in many cases, completely crowded out by over-scheduling.

The 2024 World Happiness Report (WHR-24) placed New Zealand just outside the top ten countries in terms of overall happiness. The WHR is an international measure of happiness based on the individual's placement of self on a ladder from 0-10. The participants are asked to consider information about their country, such as the GDP per capita, social support, healthy life expectancy, freedom, generosity, and corruption, while ultimately generating a ranking for 156 countries. While the Aotearoa New Zealand ranking initially presents positively, once the data is broken down to broad age brackets, the 15-24 youth classification yields poorer outcomes, plummeting to a ranking of 27th (*World Happiness Report*, 2024). Not only are there increases in mental illness and high psychological distress, but there are also significant declines in overall life satisfaction. Put simply, it appears that despite having reasonable access to factors that could be considered similar to many happy populations, youth in Aotearoa are not flourishing.

A model for flourishing

Flourishing can be defined as having the traits of both high hedonic wellbeing, with a focus on pleasure, happiness and avoidance of pain, and high eudaimonic wellbeing, focusing on meaning and self-realisation (Schotanus-Dijkstra et al., 2015). An individual who flourishes will seek out pleasurable activities and experiences, while simultaneously seeking out purpose, meaning, connection, and contribution beyond simple pleasure. This is supported by Seligman's theory in the context of positive psychology, to encompass Positive emotions, Engagement, Relationships, Meaning and Accomplishment (PERMA) as pillars of flourishing (Seligman, 2011). These five elements are described by Seligman as:

- Positive Emotion (P) includes subjective reports of happiness, hope, joy, and satisfaction.
- Engagement (E) is an element that represents flow, and refers to focus, interest, or absorption in an activity.
- Relationships (R) include closeness and connection with family, friends, or colleagues. These relationships are important throughout a person's lifespan and contribute to well-being in many ways.
- Meaning (M) is belief or membership in something larger than oneself and may be derived from religion, spirituality, or advocacy.
- Accomplishment (A) refers to pursuits that occur throughout life for the sake of 'winning.', and often requires perseverance and resilience, and may include academics, athletics, or career achievements.

(Kovich et al., 2023; Seligman, 2011).

The concept of flourishing was initially discussed by Keyes (2002) as the presence of positive mental health, versus the absence of negative mental health, termed as languishing. Keyes developed a tool for measuring mental health named the Mental Health Continuum (MHC), and later developed the Mental Health Continuum - short form (MHC-SF) (Keyes, 2002; Lamers et al., 2011), which reduced the initial longer form from 40 points to a shorter 14-point subjective questionnaire. Flourishing was defined by Keyes (2002) as a complete state of wellbeing, incorporating emotional, psychological and social components, and the absence of mental illness. Turecek et al. (2025) also include environmental mastery within their definition of flourishing, which better explains the embodiment of human experiences within the natural environment.

Some limitations have been identified, with the positive psychology concept of flourishing being criticised for being overly westernised and not reflective of other cultural concepts of wellbeing (Christopher & Hickinbottom, 2008). By prioritising Western notions of individual health, the models often overlook alternative cultural worldviews and indigenous perspectives on mental health, which is countered in this thesis through the use of a Māori model of wellbeing as a complementary framework.

In the MHC-SF, the use of the binary terms 'flourishing' and 'languishing' may be viewed as restrictive categories for wellbeing, with critics highlighting the nuanced nature of mental health. Within the three sub-scales (hedonic, eudaimonic social and eudaimonic psychological), a low score in one area can still result in an overall 'flourishing' end score, leading to further research into the weighting of areas to ensure accurate results (Forgeard et al., 2011). A 2009 meta-analysis found that some previous positive psychology interventions had only modest and short-term benefits for mental health outcomes, particularly when broader sociocultural factors of the participants were not considered (Sin & Lyubomirsky, 2009). The PERMA model also lacks attention to connection to land and nature, which is integral to New Zealand culture and indigenous models of wellbeing. This highlights the need for mental health interventions that are both culturally sensitive and contextually grounded.

Holistic health and flourishing in Aotearoa

Aotearoa New Zealand has a legally binding bi-cultural foundation, with the predominant recognised cultures being Māori and Pākehā. Māori are the indigenous people and Pākehā the term for non-Māori New Zealanders of European origin. In 1840, Māori engaged with representatives of the British Crown and signed Te Tiriti o Waitangi (Treaty of Waitangi), formalising a bi-cultural relationship that continues to shape the culture of Aotearoa today.

However, different interpretations of the Treaty have led to ongoing dialogue, and despite efforts to honour its principles, there remains some tension around the rights and responsibilities of New Zealanders, and shared understanding around Te Āo Māori (Māori worldview).

In Aotearoa, the Māori term 'hauora' broadly describes an individual's complete wellbeing. Sir Mason Durie developed a visual interpretation of hauora in the form of a house, or whare, where the four walls represented a different aspect of wellbeing, encompassing social (taha whānau), mental/emotional (taha hinengaro), spiritual (taha wairua) and physical (taha tinana) aspects of holistic wellness (Durie, 1985). Working as a psychologist in the 1970s, Sir Mason Durie identified the limitations of narrow methods of diagnosis and treatment within mental health. He began to consider all factors in a person's wellbeing as inherent to health issues and integral to a rounded treatment plan. It was at a Māori health workers' hui (meeting) in 1982 that professionals spoke of whānau and wairua being integral to treatment and recovery (Rochford, 2004). Te Whare Tapa Whā as a framework, was introduced and tested by Durie in a range of settings (Heaton, 2015) before its inclusion as a wellbeing model in 1984 (Durie, 1985; Durie, 1994; Heaton, 2015; Mental Health Foundation, 2022).

The New Zealand Mental Health Foundation later adopted te Whare Tapa Whā and described each taha to broadly cover the following: Taha Whānau: the importance of relationships and social connections, vital for a sense of belonging; Taha Wairua: the spiritual aspects of life including values, beliefs and finding meaning, in understanding ones identity and purpose; Taha Tinana: the physical body, growth, development and the ability to move, including physical activity, nutrition and rest; Taha Hinengaro: our thoughts, feelings and ability to communicate, including mental health, self-awareness, emotional balance and ability to cope with changes (Ministry of Health - Manatu Hauora, 2024).

The Hua Oranga tool was developed using Durie's model, for use in the healthcare sector to gain a holistic sense of how best to treat an individual suffering from mental illness. This tool gathers input from the subject, their whānau and the treating practitioners, each completing the same form to collect their perspective on the wellbeing of the subject. Practitioners using the Hua Oranga tool ask for an assessment of each taha of wellbeing on a Likert scale. The model reflects the holistic nature of wellbeing and asserts the notion that mental health is more than a psychological condition (Kingi & Durie, 1997).

Te Whare Tapa Whā was developed through a Māori lens of health but has inclusive qualities enabling its understanding beyond Aotearoa. Other indigenous models, such as the Pacific Fonofale model (Mental Health Foundation, n.d.) and Canada's First Nations Mental

Wellness Continuum (Canada, 2019) have similar holistic approaches to wellbeing, where culture, community, and interconnectedness are valued. Te Whare Tapa Whā provides a holistic view of human wellbeing, and the connectedness of all aspects of health. The use of it as a model of wellbeing is well documented through New Zealand schools and in healthcare, such as by the Ministry of Health (Ministry of Health NZ, 2025; Tāhūrangi, 2022).

Te Taiao

One criticism of Te Whare Tapa Whā suggests the simplistic concepts of the four walls/taha do not fully encapsulate the Māori understanding of wellness (Mcneill, 2009). In reducing wellbeing to four areas, other areas considered integral to holistic health, such as the relationship to the stars and the natural environment, may be difficult to place within a taha. The NZ Mental Health Foundation model of wellbeing extends the metaphor of the four-walled house to include Taha Whenua, representing our relationship with the land and environment (Mental Health Foundation, 2022), which had been originally included and is subsequently described as a foundational concept (Durie, 1994). Beyond our connection to whenua, a broader term better explains the Māori view of humans' connection to the environment. The term Taiao represents the natural world that both contains and surrounds us, as acknowledged in the saying "Ko au Te Taiao, ko Te Taiao ko au" (I am nature, and nature is me). Our connection to whenua, the places we visit, how we care for and use the land and spaces around us is interwoven with the human need to be nourished from time spent in nature.

Human health and wellbeing are enhanced through meaningful connections between people and places (Carpenter & Harper, 2016). The concept of kaitiakitanga, deeply rooted in Te Aō Māori, embodies a distinctive approach to guardianship of the environment and protects this as the precious source of food and shelter. Kaitiakitanga is bound closely to whānaungatanga (family connections) and whakapapa (ancestral line of descent), where generations care for the land, ocean or lakes around them. Māori use the term tangata whenua, or 'people of this place', to refer to the guardians or custodians of the land, and their role in kaitiakitanga of that place is paramount. In this study the term kaitiakitanga is used when discussing enhanced connection to place, and how deepening this relationship contributed to changing attitudes for participants.

Summary - Wellbeing models

Wellbeing is measured at national and global levels, and our understanding of human flourishing has shifted from purely economic measures to encapsulate social and environmental connections (Keyes, 2007; Turecek et al., 2025). While some wellbeing modellers have worked internationally to gain a consistent metric (*World Happiness Report*,

2024), there remains a need for culturally sensitive models with localised understandings, acknowledging that different cultures idealise different forms of wellbeing (Krys et al., 2022).

In my view there are gaps in the research about wellbeing that highlights the need for culturally responsive, sustainable programme development that can support youth in flourishing within their local context and the natural environment. The use of local green and blue nature spaces as an integral factor to the wellbeing programme setting provides a platform for understanding the interconnectedness of human wellbeing within the environment. Green spaces may be an integral factor in supporting youth in their wellbeing journey towards flourishing.

Wellbeing in Green and Blue Spaces

Physical fitness and the outdoors

Those who spend time in nature also report higher levels of physical fitness, though it is unclear whether this is because people are more inclined to exercise and be social in or near green spaces or if they seek out green spaces to exercise (Twohig-Bennett & Jones, 2018). Participation in physical activity is closely tethered to emotional wellbeing and positive mental health characteristics (Brennan, 2021; Jacka et al., 2011; Nixdorf et al., 2021). Jacka et al. (2011) found that there is a direct link between the level of physical activity done as a youth and the relationship with decreased depression rates as an adult, with physical activity as a child being a strong protective factor for the adult. Before the introduction of the playdate and the busyness of today's society, much of the previous generations' physical activity would have occurred in outdoor spaces such as parks, beaches and forests.

In addition to physical wellbeing benefits, Capaldi (2014) noted that those who strongly identify with and feel connected to the natural world also had positive behavioural and wellbeing differences. The sense of connection to nature was noted as a positive and significant indicator of happiness in individuals (Capaldi et al., 2014). A 2025 study found that participating in physical activity in nature-based outdoor settings significantly enhanced mental wellbeing, including self-acceptance, life purpose, positive relations, personal growth, environmental mastery, nature-relatedness, thriving, and flourishing (Turecek et al., 2025). This study concludes that the benefits of physical activity on mental health and wellness can be greatly enhanced by being in nature, and the recommendation for nature-based activity could flow into education, public health and urban planning.

Natures impact

Green spaces and the positive impacts of being in nature are well researched and profound (Barton & Pretty, 2010; Capaldi et al., 2014, Shuda et al., 2020, White et al., 2014). A recent Harvard Medical School study found that just 10 minutes in nature a day lowers the stress hormone cortisol, while 20 minutes offers an improved level of perceived wellbeing (Hunter et al., 2019). Twohig-Bennett and Jones (2018) conducted a meta-analysis of 143 studies about the benefits of going into green spaces and identified a raft of physical and emotional benefits. These include reduced heart rate, lower blood pressure and a decreased likelihood of chronic illness and disease. Indeed, nature exposure is increasingly being accepted as essential to human health and wellbeing (Carpenter & Harper, 2016).

Ulrich et al. (1991) discussed the positive impact of spending time in nature as stress recovery, or as having restorative properties, culminating in the evolution of the Stress Reduction theory. This theory suggests the buffering effect of nature experiences against common life stresses such as excessive crowding and general work or life stress (Ulrich, 2023; Ulrich et al., 1991). His research found that nature exposure consistently and quickly reduces stress indicators in different physiological systems, including activating the parasympathetic nervous system to directly reduce the stress response (Ulrich, 2023). This has been in part evidenced by Ulrich through faster patient recovery times for those who had a nature-based window view versus those whose beds looked out to other buildings or urban sprawl.

Urbanisation is one factor that has reduced many people's everyday exposure to nature, and Capaldi (2014) notes that not only are children spending less time outdoors playing, but many in developed nations are spending their time predominantly indoors. A 2019 study of American youth found that screen time now far exceeds time in nature, and the inverse relationship between these is continuing (Larson et al., 2019). This is a striking correlation, but it is likely there are more factors at play, such as broader cultural and societal factors. Urbanisation does not necessarily eliminate access to nature for all young people. 'Grey spaces', or areas more prone to buildings than trees, can constitute nature to many, with the areas providing access to spaces for rich, challenging and affordable play (Stenning, 2025). These experiences cannot be discounted as being beneficial for young people, as they also provide many opportunities for social interactions in places that parents likely consider safe.

In his seminal book, Louv (2005) documents the decreasing amount of time children are spending in the outdoors and the associated consequences and coined this 'nature deficit disorder'. He directly links the lack of exposure to nature to the increase in common childhood issues such as obesity and depression. However, his work has been criticised for

relying largely on anecdotal evidence and should not directly imply causation. Empirical evidence, such as Wells and Evans (2003), identified that children who lived in proximity to nature were better able to reduce or buffer life stresses. However, not all people who live by nature are necessarily accessing it. Nature exposure is not the desired antidote to stress for those who perceive natural spaces as a source of anxiety, discomfort or even threat (Bixler & Floyd, 1997). The contrast in our views on nature exposure serves to contribute to our understanding of the nuanced relationship between humans and the natural environment.

Blue nature spaces

While the impacts of time spent in green spaces are widely researched, there is less known about how the multitude of blue spaces affect our wellbeing. This study defines blue spaces as all bodies of water, including the ocean, lakes, and rivers. In Aotearoa New Zealand, we seek out blue spaces for recreation (such as surfing, boating, and swimming), as a source of food, or kaimoana (food from the sea), and for some as a place of respite and connection (Georgiou et al., 2021; Jelleyman & Humberstone, 2024). Through this lens, blue spaces are noted as places that can support emotional regulation and identity formation, and in addition, participation in blue space activities can enhance resilience and personal agency (Wheaton et al., 2020, 2021). This use of blue spaces for human wellbeing does not dismiss our reciprocal responsibilities, in particular when viewed through Te Ao Māori (the Māori worldview). Through this cultural lens, nature (including blue spaces) is viewed as part of humans, and humans as part of nature, bestowing upon us the responsibility to protect it for future generations rather than take from it simply what we need and want (Rangiwai, 2018; Roberts et al., 1995).

Despite 65% of New Zealanders living within 5 kilometres of the ocean (Ministry for the Environment, 2019) and many more living in proximity to lakes or rivers, there remain barriers to access and inclusion in these spaces. Blue space accessibility in Aotearoa New Zealand is complex, and despite Māori retaining customary rights and spiritual connections to ancestral coastlines and rivers, coastal gentrification and escalating real estate values increasingly alienate lower-income communities from these environments (Frawley et al., 2026). Women face gender-specific barriers to blue space engagement, including body scrutiny, physical vulnerability, and often masculinised water-sport cultures (Booth, 2001; Culp, 1998).

Gender, Physical Activity, and the Outdoors

Females and movement

By the time New Zealand females are teenagers, they spend one less hour per week engaged in physical activity than young males in Aotearoa (Sport New Zealand - Ihi Aotearoa, 2023). Sport New Zealand (2023) also found that despite nine out of ten young females in New Zealand wanting to increase their participation in physical activity, there remained several barriers. A startling 68% reported they would avoid activities when they didn't feel confident in their bodies, and three out of four young women are concerned about how they look every single day (Sport New Zealand - Ihi Aotearoa, 2023). Participants also report that school-based sport and physical education tend to have a competitive focus and that they prefer to participate for fun and to feel good, and in an environment where they do not feel judged.

Parsons & Halstead (2022) found that the gendered role of the female within play and physical activity starts early in life. This is seen in the school playground where female students are less likely to spend their break times in active free play and are often unconsciously bound by the constraints of the 'female' school uniform, which inhibits free play. Parsons & Halstead surmise there are several 'gatekeepers' between young females and experiences in the outdoor activities, which can include parents, teachers, community or group leaders. These gatekeepers are placed between the child and their experiences in the outdoors, and depending on their own relationship with the outdoors, may not allow access, or certainly not free access, to these spaces (Parsons & Halstead, 2022).

It has been found that young females spend considerably less time outdoors than their male counterparts, with key factors contributing to this being social gender norms, lack of exposure, and fear (Evans et al., 2020). The concept of 'stranger danger' was coined in the 1980s in response to a rash of missing children in the United States of America (Wodda, 2018), and has contributed significantly to women's fear of victimisation, producing behaviours of avoidance and risk management for many females (Scott, 2003). The response was that females were widely driven away from the outdoors and to the safe, protected environment of the indoors, where risk could be controlled, even eliminated (Scott, 2003; Wodda, 2018).

In contrast to previous constructs that young females should stay safely indoors and away from risks (Twenge et al., 2018), 16-year-old Jessica Watson voluntarily took on a significant risk and, in doing so, challenged the construct of a 'typical teenage girl' and their capabilities (Brown & Penney, 2014). The 2009-2010 solo sailing circumnavigation by Jessica sparked

an interesting narrative about the roles of young women and the responsibilities of parents (Brown & Penney, 2014). Despite her parents' support, other gatekeepers became involved in Jessica's journey, raising broader societal questions about risk and responsibility, particularly given her youth and gender, with some questioning if she belonged in this risky place (despite her success).

Belonging in the outdoors

Females interpret their place and role in the outdoors in part based on others, and they see fewer role models as participants and leaders than their male counterparts (Culp, 1998). Evans et al (2020) found that a significant factor impacting young females' experiences in the outdoors was to include females as leaders, which plays a role in breaking down traditional gender roles and gender typing inherent in outdoor activities. An all-female environment cultivates a space where young females are more likely to have the confidence to try new activities and feel supported and without judgment (Evans et al., 2020). Warren et al. (2019) found that gender stereotypes continue to be acted out in outdoor settings, in part through the representation of men in technical roles and women in communicative leadership roles. Gender roles were removed when in an all-female setting, where female leaders were "free to embody roles outside their gendered expectations" (Warren et al., 2019, p.145).

There have been some inroads into mitigating the lack of research into females in outdoor spaces, including a review of Outdoor Adventure Activities (OAA) out of the United Kingdom (Pearson et al., 2025). Key findings suggest that young females benefit from a nature-based, single sex, small-group environment, where risk (real or perceived) is evident. The outcome of this study provided an overarching model that "communicates the key components important for OAA interventions which aim to strengthen female youth resilience" (Pearson et al., 2025, p. 15). However, a limitation of these findings is the frequent use of spaces and external providers who provide an element of removal from everyday life-the participants are often 'taken away' and then returned to their normal lives -with the expectation that some transfer of skills or knowledge will occur.

Summary - Gender, physical activity and the outdoors

Although existing research shows positive impacts for young females when in the outdoors and engaging in risky activity, there remains a limited availability of both female role modelling and all-female opportunities for them to do so. The proven ability of nature and outdoor activities as stress reduction and empowerment seems to be denied many females before they even have the opportunity to try them. There remains a lack of integrated options for young females, where social contexts are shared and the transferability of learned skills can be maintained. There also remains limited evidence on whether skills and confidence

gained through outdoor programmes transfer to other areas of life. A disparity continues to exist between research on the use of the outdoors as an 'intervention' versus a health promotion space.

Outdoor Experiences as Interventions and Place-Responsive

Pedagogy

Alongside the well-researched impacts of stress reduction and emotional wellbeing, the emergence of utilising outdoor green and blue spaces as 'therapy' has rapidly increased in recent years (Barton & Pretty, 2010; Britton et al., 2020; Britton & Foley, 2021; D. G. Pearson & Craig, 2014). The general concept is not new, with outdoor based 'adventure' camps, focusing on personal development or self-improvement, being long-standing (e.g., New Zealand's Outward Bound, based in Anakiwa). The concept behind this and other such outdoor experiences is to provide teens (and adults separately) an opportunity to step outside their comfort zones and challenge themselves through outdoor activities to show people their real potential. Traits such as resilience, perseverance and self-responsibility are promoted, and courses extend for as long as 21 days. The long-term impact of courses such as this has been extensively reviewed (Gassner & Russell, 2008; Hattie et al., 1997; Ramirez, 2020), with many participants expressing a positive long-term impact but being generally unable to state exactly what that is.

Another example is Project K, a New Zealand positive youth development programme that targets Year 10 students (13-15 years old) who have been identified as displaying low self-efficacy. Project K is a 14-month programme that involves wilderness experiences, mentoring and community service, with a focus on building confidence, teaching life skills, promoting good health, relationships and encouraging a positive attitude (Graeme Dingle Foundation, n.d.). A 2017 study on participants found that while overall wellbeing improved, there was no difference in their level of connectedness, which remained low (Furness et al., 2017). While the positive impacts of the programme are significant, low connection to place and nature may be attributed to the remoteness of camping locations, rendering them difficult to revisit.

A similar programme is provided by Adventure Specialties Trust, based in both the North and South Islands of New Zealand, with 'adventure therapy' opportunities, including specific all-female youth opportunities. The 6-day, 5-night experiences combine outdoor adventure, connection with nature and group work/discussion, led by experienced outdoor instructors and qualified mental health professionals (Adventure Specialties Trust, n.d.). Adventure Outdoors offers a similar 5-day programme in the central North Island, aimed at youth experiencing issues such as stress, pressure, anxiety, body image, boredom, and low motivation (Outdoor Adventures, 2025). The intended outcomes for these programmes are

similar, with a focus on increased wellbeing and enhanced social and environmental connection.

Another key feature of most of these programmes is that they are created to target groups that are already in emotional distress or have mental health or behavioural challenges. They have an element of rehabilitation, and participants are often attending to be healed (Amrhein et al., 2021). The nature of the programmes means individuals can be brought together, but post-programme connections may not be prioritised or possible. There is also a variable connection to the place or natural environment where the programmes have taken place, as it may not be feasible for participants to revisit or replicate the activities. My thesis addresses the need for place-responsive approaches to outdoor experiences, where participants are not sent 'away' to programmes for rehabilitation, but rather can gain an understanding of enhancing their wellbeing through outdoor spaces right on their doorstep.

Place-responsive approaches to outdoor learning

There is a growing movement towards using local areas for recreation, and making even better use of what's available, accessible and affordable in our locale. Wattchow & Brown (2011) looked at the possibilities within school outdoor education programmes and challenged the assumptions that activities needed to be perceived as high risk to be worthy of inclusion. Contrived, instructor-led scenarios and activities remain an easy though often expensive option for schools, but some schools are learning to venture out into their local environment, or place, to seek out accessible options that youth can revisit and replicate. These connections have the potential to motivate individuals to not only see what is possible, but also to take others with them and be prompted to take further care of the environment when visiting.

Most schools in Aotearoa New Zealand have a tradition of some type of 'school camp', but the variances between the experiences each school provides make the impact of these difficult to quantify. The importance of providing youth with experiences they can access more readily and that take place in their local environs (Gassner & Russell, 2008; Hattie et al., 1997; Ramirez, 2020) has been acknowledged by the New Zealand Ministry of Education, with schools given the opportunity to attend workshops to provide localised planning options. Wattchow & Brown's work on place-responsive pedagogy advocates for schools' outdoor education and broader education outside the classroom (EOTC) experiences as being locally based, low-cost and low-risk, all with the premise that participants will have opportunities to connect with their place and the opportunities within it. The concept of place is described by Wattchow & Brown (2011) as how people develop and experience their sense of attachment to locations and how they are both impacted by and

impact these places. Spending time at the beach is a common pastime for many New Zealanders, with a large variety of activities that include water and land-based options. For many, surfing becomes a natural extension to their beach visits, with a 2021 study estimating there are 315,000 surfers in New Zealand across a broad base of age, sex, and cultural backgrounds. (Furness et al., 2021).

Informed by Wattchow & Brown's (2011) four signposts for place-responsive outdoor education, the surfing programme for this research was developed to foster meaningful relationships between participants and the environment. These signposts are:

1. *Being present in and with a place*
2. *The power of place-responsive stories and narratives*
3. *Apprenticing ourselves to outdoor places*
4. *The representation of place experiences* (2011, p.182).

These signposts have helped to guide my professional practice and shape programme development of outdoor education through my career and represent much of my philosophy when developing outdoor experiences. Signpost three -*Apprenticing ourselves to outdoor places* - offers a scaffold for appropriate context and significance for participants. To guide this process, four reflective questions were asked during programme design:

- *What is here is in this place?*
- *What will this place permit us to do?*
- *What will this place help us do?*
- *How is this place interconnected with my home place?* (Wattchow & Brown, 2011, p.192)

In a practical sense, outdoor educators are more commonly trained in the practical aspects of their curriculum area, equipped with skills in multiple outdoor settings. A true place-responsive pedagogy requires educators to have an understanding of the history and past uses of the places they visit for these activities and be aware that place is rarely neutral. In this way, the practical benefits of a place-responsive approach are likely to be used more readily than deeply connecting to the area and its historical and cultural significance.

Summary - Interventions

The place-responsive approach allows participants the opportunity to revisit and replicate their experiences rather than the "one-off" model many programmes use. This approach reduces or removes barriers to ongoing participation by using the local environment as an accessible resource. The co-construction of a programme with the current environment and sustainability in mind has not been well researched. In this study, I utilise a local blue space that can be revisited by participants. The participants in my study reside in a coastal town with access to many beaches, often within walking distance. Access to this blue space, and

the previous use of this space in some context by all participants, provides a springboard for new activities to be introduced and the feelings produced by this space to be explored.

Connecting to Blue Spaces through Surfing

In alignment with a place-responsive pedagogical approach, surfing was utilised as a medium for this study. Mount Maunganui, where this study is situated, has a rich history of surfing and its significant coastline dotted with surfers whenever the waves permit.

Surfing and wellbeing

The history of surfing is rich and well documented, with the origins of surfing in Polynesia stretching as far back as 3000 BC (Fuchs & Schomer, 2007). According to Te Ara, The Encyclopaedia of New Zealand, Māori were riding waves on various pieces of equipment before the arrival of Europeans in the 19th century. Early colonisation decreased the popularity of surfing, and it wasn't until Hawaiian Duke Kahanamoku toured the country demonstrating modern surfing in 1915 that it really took hold. The rise of surfing has morphed from an almost rebel status to mainstream recreation and, most recently, to an Olympic sport, which has impacted both the perception of surfing and those who now participate (Doering, 2018). Surfing as an activity enjoys a subculture that has spread beyond previous negative associations and has experienced growth into mainstream culture. In contrast to early associations of being male-dominated, surfing is now enjoyed by a more equitable number of females (Booth, 2001; Roy & Caudwell, 2014). Along with this rise in female participation comes a shift in culture as both a full embodiment of surfing as a 'lifestyle', and as something everyone can 'give a go'.

To those who surf it seems to be more than a mere sport or activity, but rather the concept of being a surfer helps shape identity and spills into other areas of life (Fuchs & Schomer, 2007). Wheaton et al. (2020) describe the state a surfer enters as being in 'the zone', defined as complete presence and focus on surfing and awareness of the ocean in that moment. Perhaps this feeling helped surfing brand Billabong develop their famous slogan, "only a surfer knows the feeling". Anderson (2014) found that many surfers find it difficult to articulate their experiences of surfing to non-surfers, and when questioned, one of his study participants stated, "I don't think another surfer would ask this question (Interview Respondent)" (Anderson, 2014, p.28). This captures a sense of the ethereal nature of surfing that many feel and struggle to communicate.

Britton and Foley (2021) investigated how surfers perceive feeling healthy, being well, and their sense of wellbeing and found that they had a strong sense of both emotional wellbeing and that being in the ocean or a 'place' could enhance their wellbeing positively. Fuchs &

Schomer (2007) found that when surfing, the participants felt a return of a sense of balance to life and thus can understand the restorative nature of the activity and the environment for themselves. This strong identification of a stress release indicates the individual understands surfing as a mechanism for reducing feelings of anxiety or other stressors felt during the day. Fuchs & Schomer (2007) realised that the diversity of experiences in the surfing community is fully understood and accepted by most participants as being as important as the aesthetic and environmental aspects that are enjoyed. Wheaton et al (2017) identified through a range of interviews with surfers that surfing not only offers the opportunity for self-improvement and self-management opportunities -through increasing resilience, overcoming fears and building confidence - but it can be a spiritual experience for some, with a sense of awakening and some level of personal transformation. In a 2024 study, 569 Australian surfers were administered an online survey, with 75% agreeing that surfing has a positive impact on their physical and mental health (Manero et al., 2024). Surfing, however, should not be idealised, as it is not immune to broader societal issues. In some instances, surfers can have an enhanced sense of localism, where they feel a sense of place-based rights and ownership over their local surf break (Olive, 2019). This can make it difficult for newcomers to feel welcome to the area and to the activity, creating a barrier to participation that they may never overcome.

This ability of the ocean in providing an emotional and spiritual haven places surfing as an ideal context for wellbeing enhancement. Many of the findings (Amrhein et al., 2021; Fuchs & Schomer, 2007; Wheaton et al., 2017) establish the significance surfing, exposing its potential as a context for interventions focused on buffering against stress. Understanding how surfing can shape identity and foster emotional and spiritual connection provides a foundation for exploring its role in enhancing youth wellbeing.

The ocean/human connection

Fox et al. (2021) noted that surfing is a form of informal environmental education, and that surfers develop good ocean literacy in both environmental awareness and appreciation, termed a 'culture of care' for the ocean. Surfers describe their connection to the ocean as a fundamental aspect of their surfing experience, gaining a sense of participation both 'in' the activity and 'with' the ocean through a reciprocal relationship (Fox et al., 2021). Larson et al. (2018) also identified that surfers in their study were more likely to join local environmental groups and engage in small acts of care, such as picking up litter, and this type of behaviour increased the more often they surfed in the area. These acts of care and contribution point to surfing being not just an activity pursued for hedonic pleasure, but as an embodied and synchronous experience that participants are compelled to protect and treasure.

These pro-environment behaviours do not translate into all surfers, with some considering the ocean simply as their play space or being incongruent in their actions around care of the ocean. Hill & Abbott (2009) describe environmentalism as a “slippery term” (p.158), finding that many may agree with environmental responsibilities but will fail to act on these beliefs. So, while surfers may feel a deep connection to the ocean, there is perhaps a tendency to, for some, conflate their own actions in preserving this natural space.

Beyond this connection to nature and the environment, surfing offers a unique connection to other participants (Booth, 2001; Fuchs & Schomer, 2007; Roy & Caudwell, 2014). Surfers appear to share a depth of understanding that goes beyond surfing as an activity and into many other aspects of life. In their recent study, Charlotte Jelleyman and Barbara Humberstone interviewed migrant women who had started to surf shortly after arriving in New Zealand. They found these women developed a strong connection to place, people and the ocean, and quickly identified themselves as ‘locals’ (Jelleyman & Humberstone, 2024). Their transition from outsider to New Zealander was expedited by engaging with surfing as an activity, with the women highlighting outcomes such as getting to know people, connecting to their new place, the ocean’s role in stress release, and the positive impact of learning a new and challenging skill.

Surfing as a spiritual experience

The participants in Jelleyman & Humberstone’s (2024) research describe various impacts which cover a range of wellbeing areas, or hauora as a whole. As discussed, this Māori concept of an individual’s holistic wellbeing highlights the need for social, physical, spiritual and mental wellbeing to be aligned. Surfing touches on each of the four taha through physical exercise, social connections, sense of accomplishment, emotional satisfaction, and connection to the environment. Not only are participants experiencing personal growth through learning and being challenged, but they are also gaining an understanding of how to improve their surfing, which is entwined with understanding how the ocean works and what our capabilities and limits are within that environment.

Perhaps the most challenging dimension of hauora to explore is taha wairua, defined as a concept of our spiritual wellbeing. The New Zealand Mental Health Foundation describes taha wairua as our faith or belief that there is a higher power, or for some, an internal connection to the universe. Beyond a tendency to describe spirituality in terms of religious beliefs, Amrhein et al. (2021) discuss spirituality as a connection with beliefs and values, connectedness to others, and essentially a connection to practices that add meaning to our lives. In this way, the parallels between the Māori concept of wairua and Seligman’s theory of flourishing begin to become apparent (Forgeard et al., 2011). Surfers have long documented

the feeling of surfing in a spiritual sense (Amrhein et al., 2021; Fuchs & Schomer, 2007), with one participant in Fuchs' study even referring to surfing as his 'church'.

Mindfulness practices have become more popular in recent years as the technological and social media revolutions compete for our attention and reduce the time spent on developing connections with people and places. Mindfulness could be described in various ways, but common ground suggests the elements of attention and awareness (Shapiro et al., 2006; Shapiro & Carlson, 2009), both essential characteristics for an individual to have when surfing. Benefits of mindfulness have been reported as emotion regulation, decrease in rumination and increase in positive emotions (Davis & Hayes, 2011; Hulsheger et al., 2012). In a study by Fox et al. (2021), 249 surfers completed a questionnaire that produced rich evidence of the link between surfing and a sense of mindfulness. One participant stated, "Reading waves slows me down, makes me more mindful of my surroundings and of nature, and takes me out of all of the other stuff in my head" (Fox et al., 2021, p. 10). Whilst this study was designed to gather information on ocean care by its users, the connection to an enhanced sense of wellbeing and perhaps unintentional use of mindfulness was directly attributed to surfing and being in the ocean environment. Fuchs and Schomer's (2007) study of surfers concluded that surfing is an "...intensely captivating activity that has the capacity to ground and balance individuals in a demanding modern world" (p. 22).

Surfing, whether in the learning phase or as a more advanced practice, offers a completely different experience with every wave. Sometimes there is success resulting in standing up, riding along the face of the wave, or even performing manoeuvres, but other times waves are missed, wipeouts occur, or even standing up cannot be attained. Each wave forms differently, with some long and slow, and others creating a powerful barrel effect. On top of this, there is learning to paddle 'out the back' through oncoming waves, negotiating other surfers and swimmers in the area, and understanding the environment, including the wind, sun, rips, and tides.

Each surfing session requires a focus on the 'now', or being mindful, and the participant must stay in this state to both be safe and to improve. This full attention also creates naturally occurring moments of uncertainty and a certain level of stress. Kathryn Berkett (2021) suggests that creating multiple moments of tolerable stress will increase emotional resilience and wellbeing in humans, from infants through to adults. In this context, the stress is created through negotiating the constantly evolving and dynamic situation of both being in the ocean and undertaking a challenging activity, and in keeping this to a tolerable level, there is potential to enhance our sense of accomplishment, satisfaction and overall general sense of wellbeing through showing resilience. However, surfing as an activity for enhancing wellbeing

also has the potential to 'backfire' if it proves too difficult or scary for the participant. Having a personal understanding of one's own limits and capabilities is a precursor to the balance between enjoyment and challenge.

Females and surfing

Whilst females have enjoyed an increase in participation in surfing over recent decades (Booth, 2001; Roy & Caudwell, 2014), there is arguably a way to go in terms of how the surfing media represent women in a more sexualised way than they do males, a practice that stems from the middle of the last century (Booth, 2001). Although this climate of misogyny still exists (Booth, 2001), it appears to be slowly being overcome. Whilst female participation in surfing has been investigated (Booth, 2001; Roy & Caudwell, 2014), there is little published research as to whether young females-wāhine are more likely to become fully immersed in surfing and the culture of care for the ocean environment if they are not with their male counterparts.

Young wāhine in Aotearoa New Zealand may be less likely than their male counterparts to participate in an activity such as surfing due to the way it has been represented, and how they interpret surfers to 'look' and 'act' as well as the equipment and clothing required to participate (Booth, 2001; Sport New Zealand - Ihi Aotearoa, 2023). Again, social media and the culture of comparison could be highlighted as a barrier to involvement. Other barriers to engaging in outdoor activities, such as surfing, include highlighted gender issues, - 'stranger danger'- and a lack of confidence in learning new activities. However, Evans et al. (2020) report compelling evidence that young females who participate in outdoor recreation have higher levels of self-esteem, self-worth, confidence, and body image, as well as a greater sense of stress relief through interaction with the natural environment.

Young females require removal of the barriers to their participation, and a depth of activities and programmes to support their wellbeing. Existing frameworks are not purpose-built to provide young females with the ability to flourish, and, in my view, a more targeted approach is required to positively enhance wellbeing for this at-risk group.

Framing Surfing Interventions and Existing Models

Surfing as a saviour

Amrhein et al. (2021) concluded that while an ocean intervention programme (defined as utilising the ocean-based activities of surfing to enhance wellbeing) is effective in supporting our response to stress and increasing feelings of general wellbeing, it is important to consider the roles of both nature and culture when looking at the activity. The study found

that new surfers experience a significant increase in spiritual wellbeing, but the programme did not have a significant impact on depression, though low baseline scores could have moderated this impact (Amrhein et al., 2021). Additionally, incorporating the natural environment and local culture into programme design is essential; in this case, the proximity of a consistent surf break was a key factor that made the programme viable. As mentioned, Aotearoa New Zealand is rich in green and blue spaces in which to spend time if we choose and have the time and ability to access. Whilst New Zealanders predominantly live in urban areas, these are geographically close to an ocean, lake, river or stream. As well as general proximity, surfing itself is prolific in tourism advertising, and has become accessible for most people who would seek it out.

There remain barriers due to equipment cost, issues such as transport, and any cultural issues, such as how groups of people use and perceive the ocean due to historical, religious or individual reasons. Literature such as Wheaton et al. (2017) has identified the benefits of taster or 'have a go' programmes for young people in schools where there would normally be barriers to participation, such as transport, parental involvement, and financial barriers. These are coined as 'intervention programmes', with the intention that one to multiday programmes may have an impactful and lasting effect, introducing young people to the activity, overcoming challenges and taking measured risks. However, the scoping review by Benninger et al. (2020) outlines that broader research in surf therapy often has methodological limitations such as small sample sizes and an overreliance on short-term data rather than long-term tracking.

Other studies (Hignett et al., 2018; Taylor, 2013) found that many factors that have put the youth at 'risk' are the very ones that will be less likely to have any future involvement in the activity. These factors are the inability to access equipment, transport or support from parents or family. This directly aligns with gaps highlighted by Benninger et al. (2020) regarding a lack of economic factors and feasibility studies for accessible and ongoing surf therapy. An integral factor in developing a sustainable lifestyle strategy is that it is replicable and feasible for the participant (Turner et al., 2025). Whilst there is room for 'have a go' activities, the importance of being able to return to 'place' seems an important factor to lasting success and requires more attention and understanding. The development of this concept comes in identifying factors that positively impact our wellbeing but are also readily available to the participant in an ongoing and accessible manner.

Several ocean-based mental health initiatives use surfing as a medium. In the sections below I outline several examples, beginning with 'Fluro Friday', an open-entry programme focused on mental health support. Fluro Friday was born from the founder Grant Trebilco's own

experience with mental health challenges. The programme is based on “salt water therapy, surfing and fluro” (OneWave, n.d.) and began on Australia’s Bondi Beach. After a serious mental health breakdown, Grant used the power of just ‘one wave’ as being all it takes to make some progress. Under the banner One Wave, he began a movement called Fluro Friday, where anyone can attend a free morning surfing and yoga session and be able to talk about the invisible mental health challenges impacting them. This has grown to over 200 beaches around the world, where every Friday morning, groups of people dressed in fluro take to the surf and sand with the freedom to talk about mental health free of judgment.

Another such programme, ‘Live for More’, and run out of Mount Maunganui, New Zealand takes 17–25-year-old males with the entry criteria of past involvement in drugs or alcohol and criminal activity, who must live locally. The programme offers “holistic and ongoing support to help them move forward in life, make positive changes and achieve the goals they have” (Live For More, n.d.). The participants are predominantly Māori, who are overrepresented in Aotearoa New Zealand’s criminal justice system (Policy, Strategy and Research Group, 2007), and the vehicle for the programme is surfing, having been coined surf therapy by founder Krista Davis. Participants are taught about the ocean and the skill of surfing, while concurrently being provided with practical support like getting a driver’s licence, seeking jobs and learning ‘life navigation’ skills. Participants report such feelings as reduced anxiety, improved confidence, perseverance, and increased likelihood to ‘give things a go’.

An additional programme run in Cornwall in the United Kingdom similarly offers a surfing programme to youth in an effort to overcome mental health and other social difficulties (Taylor, 2013). This programme has been running for over three years and targets those with identified emotional wellbeing issues. The 6-week programme uses surfing as the vehicle to enhance self-confidence, wellbeing and self-esteem, measured using comprehensive pre- and post-scales. Taylor’s (2013) evaluation demonstrated that participants improved their scores over the length of the programme, and many noted other benefits such as increased willingness to attend school as well as general behavioural improvements.

‘Surfing for Farmers’ is another surf therapy initiative, which began in Gisborne, New Zealand. In Aotearoa New Zealand, farmers have alarming mental health and suicide rates (Beautrais, 2018). This prompted Stephen Thomson to found the initiative in 2018 and provide an opportunity for farmers to meet socially in a non-farming-related activity. Their premise is in “bringing farmers together, off-farm and into the surf, to enhance wellbeing”. The 13-week programmes are free and have spread to 18 locations across New Zealand. Farmers can attend their local beach and potentially return in their own time with whānau and friends.

As outlined, there are a variety of programmes, all with a different focus or target group. Primarily, these examples are rehabilitation-focused or are targeted to at-risk groups, such as the Surfing for Farmers model. This programme contains valuable elements that promote stress relief and connection to those in a similar circumstance. It is evident that some groups have not been provided with equitable opportunities to wellbeing enhancement strategies in trusting and supportive environments.

Single sex surfing interventions

There are multiple international and local examples of surfing-specific interventions with a focus on benefiting females (Aotearoa Surf, n.d.; Community Wellbeing North Canterbury, 2022; Franceschi et al., 2024; Glassman et al., 2021; Hibiscus Mount Maunganui, 2025).

A 2024 study examined the impact of a surfing programme on females who had experienced trauma, abuse and/or mental illness, focusing on emotional regulation, resilience, body acceptance, and gratitude (Franceschi et al., 2024). Over the 8-week programme, 'Groundswell' participants experienced positive changes in emotional regulation, resilience and body acceptance, with no significant shift in gratitude. Researchers also noted the same results may have been realised in other challenging activities in outdoor spaces. In common with Glassman et al. (2021), the participants were all female but were of adult age and required rehabilitation from their experienced trauma.

At a New Zealand level, there are female-only surfing programmes in several locations, including a 5 week 'Wahine Waves' (Hibiscus Mount Maunganui, 2025), and the 4, 8 or 12-week 'Surf Sistas' (Aotearoa Surf, n.d.). These programmes are focussed on surfing skill development and confidence building in female-only environments and take all age groups. 'Surf Wise Therapy' based in New Zealand's South Island, is a surfing-based programme that supports tamariki and rangatahi in strengthening resilience and wellbeing (Community Wellbeing North Canterbury, 2022). While the concept more closely aligns with the focus of this thesis, the participants are both male and female, and the programme is run by facilitators from a local surfing lesson provider, in contrast to a youth-led approach through schools.

Summary - Surfing programmes

While studies show that long-term activity in blue spaces is beneficial for mental health outcomes (Fuchs & Schomer, 2007; Overbury et al., 2023; White et al., 2021), there is limited research specific to surfing. There is also less information produced about young people as compared to more experienced adults, and whether the early development of understanding

wellbeing protective factors could help shape future mental wellbeing and encourage healthy habits through to adulthood.

There is a dearth of published studies on young females surfing options, where programmes are designed with a positive psychology approach and are delivered through the participants' school. Available surfing programmes are varied in approach, but there is a gap in programmes available for young females considered not at risk, and in considering what's accessible and available for the participants in their local area. Understanding nature spaces in their local area and being able to replicate experiences is also less well documented in the literature, leading to inequities in being able to continue with any experiences that have had health-enhancing properties.

Literature Review Summary

This thesis responds to an evident mental health and wellbeing problem in New Zealand's rangitahi that extends beyond those with a mental health diagnosis. This review also highlights some inadequacies in the systems dealing with this issue, including the increasing use of clinical interventions when research suggests youth mental health may be an outcome of modernity. There is a lack of non-pharmaceutical approaches that have the potential to enhance mental wellbeing through positive psychology measures such as the PERMA framework.

There is a significant number of young females not achieving a wellbeing state of flourishing, and who are negatively impacted by an increase in social media use with a reduction in physical activity, positive relationships, and time in nature. This review has identified limited significant research into health-promoting lifestyle-based interventions for young females, where they can understand and implement factors into their lives that support positive mental wellbeing. This study aims to help support young females in developing a 'prevention over cure' approach to their own holistic wellbeing.

Despite growing interest in the use of outdoors and blue space in enhancing wellbeing, there remains a gap in programmes that focus on females from the general population versus those experiencing mental illness. Existing programmes have tended to focus on either at-risk youth or as one-off experiences and are not designed to be replicable, accessible and sustainable. Current outdoor-based programmes, such as those in a recent OAA review (Pearson et al., 2025) lack specificity for New Zealand rangitahi and understanding of place within the culture of Aotearoa.

The research in this thesis fills a gap in current knowledge by developing, implementing and evaluating a female-only, school-based, place-responsive surfing programme that uses Te Whare Tapa Whā and positive psychology principles to enhance wellbeing and flourishing in young females in New Zealand. It offers a pathway for reimagining youth mental health not as a problem to be treated, but as a potential to be nurtured through place, belonging and purpose.

Chapter 3 Methodology

Introduction

The chapter provides a walk-through of the research philosophy, design, and methods used for this study. The research design was chosen to explore the lived experiences of young females in a place-responsive surfing programme, aimed at enhancing mental health and flourishing. There is an introduction to the research participants and the recruitment methods through which they and the student facilitators (my research helpers) were gained, including the consent process. The surfing programme is described in full, including the timeline and description of the type of data that was collected from participants. The chapter concludes with data analysis methods.

Ontological and Epistemological Position

This research adopts a constructivist ontological position, where mental health is not fixed but is socially and culturally constructed through an individual's lived experiences. Ontology refers to the nature of reality and what we believe exists. In qualitative research, it is acknowledged that reality is socially constructed and shaped by context (Guba & Lincoln, 1994). From this perspective, mental health can be understood as being formed through cultural and relational influences. Mental health is defined by WHO as the ability to learn and work well, realise abilities and cope with the stressors of life (WHO, 2022), rather than a focus on diagnosed mental illness. Ontologically, this study positions mental health as not a single truth; rather, it is negotiated through social contexts (Ankers et al., 2023). In this view, mental health is constructed through interactions between individuals, their environments and cultural influences. This aligns with the use of Te Whare Tapa Whā and PERMA models, which both view mental health and wellbeing as dynamic and relational, with acknowledgement that the participants' realities are based on context and the meaning they make of their experiences.

This thesis also recognises the contrast between the constructivist approach and the dominant biomedical approach, where negative mental health outcomes are commonly diagnosed and treated through pharmaceutical and other Western medicine methods such as psychotherapy, or talk therapy. The constructivist approach allows for a nuanced understanding of mental health, where social and cultural contexts are recognised as inherent to positive mental health.

From an epistemological standpoint, this study adopts an interpretivist paradigm, which understands that we gain knowledge through the subjective understanding people attach to

their experiences. Epistemology considers how we have come to know what we know, and in this case, mental health is understood through the interpretation of lived experiences, in addition to the observation of them. Rather than being fixed, meaning is shaped by the individual's context, identity and social interactions (Wells & Giacco, 2025).

Interpretivism is suited to mental health and wellbeing research as it acknowledges the complexities between environmental and emotional influences, and the personal narratives of the participants (Wells & Giacco, 2025). Interpretivism demonstrates an understanding that while people may be having similar experiences, they may be interpreting them differently, including during a programme such as this research. In this way, the voice of each participant is valued and places them as the expert within their own lived experiences. The qualitative methods of journaling and interviews align with this ontological position. They provide rich insights, complementing numerical data, to illustrate that mental health status is complex and contextualised (Krueger & Stone, 2014).

The alignment of the constructivist ontology with the interpretivist epistemology is coherent and supports this research project's focus on mental health as both socially embedded and sensitive to the unique voices of youth. In this study, participants self-report their levels of wellbeing through quantitative measures, so any change may be seen over time. While gathering quantitative data is important in identifying shifts in wellbeing, understanding the nuances within these shifts will come from understanding the participants lived experiences. While a mixed methods approach has been used, there is a preference for understanding the participants lived experiences, and this is supplemented by the quantitative data.

If what is considered good/poor mental health is constructed alongside the rest of our reality, young people are susceptible to multiple inputs - many of which lie largely out of their control. What they see, hear and experience - particularly through digital media and gendered representation in the outdoors - contribute to their understanding of what is 'normal'. They are then left to interpret these phenomena against the backdrop of a highly curated representation of others' lives, which can shape, affirm or distort their own sense of wellbeing.

The meaning of the experience is individualised and co-constructed by the participants' ongoing participation. Interpretivism values subjective understanding and experiences as valid sources of information, where participants' voices are prioritised as rich in knowledge and authenticity. In this context, having youth as a research group allows us to understand mental health through the lens of those experiencing it, and to be flexible in co-constructing the process with the participants.

The interview and journaling data help to complement the quantitative findings. The result is an interpretive process that allows for the complexities and individualised youth experiences, and a deep understanding of wellbeing within this context.

Western and Te Ao Māori Epistemic Tensions

Much of Western health literature approaches nature as an external resource to be consumed as a therapeutic space and measured for its ability to reduce stress and improve health outcomes. In contrast, Te Ao Māori posits a relational ontology where humans do not just interact with nature but rather are part of it, entwining human and environmental health as dependent on each other. This methodology does not resolve this tension but rather holds space for both perspectives. The constructivist lens allows the qualitative inquiry to invite both transactional outcomes such as skill acquisition and stress reduction, and also relational, interconnected experiences of place and wellbeing.

Researcher Positionality

My positionality in this study serves to both contextualise the background and to provide an interpretive lens through which the data is analysed and created. Over two decades of professional engagement with youth has led to the observation of the shifting social and mental health challenges they face. However, this prolonged exposure also introduces a potential bias in a predisposition to view nature as largely restorative based on non-formal observations and anecdotes over time. Sociopolitical landscapes have shaped how young people experience wellbeing, with terms such as anxious, stressed, and depressed increasingly used to describe their lived experiences. Concurrently, I have been fortunate to take many young people into the outdoors in a range of contexts and to witness the positive impact these spaces can have on their sense of wellbeing.

My identity as a physically active female who enjoys the activity of surfing positions me as both an insider and an outsider within outdoor education. In my experience, outdoor education contexts are often male dominated, with fewer females participating, which has shaped my understanding of access, inclusion and vulnerability in these spaces. Facing personal barriers, such as a historical lack in female role models (Evans et al., 2020) through my own outdoor experiences, further deepens this perspective. My lifelong connection to the ocean and surfing provides an embodied perspective that informs my interpretation of participants' experiences but also requires constant reflexivity to avoid projecting my own relationships with the ocean onto the participants' unique stories. In practice this was reflected through non-leading, participant centred interviewing techniques designed to allow participant experiences to emerge rather than be steered by researcher assumptions.

My pre-existing relationships with the student participants introduced complex power dynamics. This posed some ethical considerations with my positionality as designer, educator and researcher. Whilst this enabled me as a researcher to gather rich, authentic insights due to an existing trusting relationship with participants, it also has the potential for some response bias in participant journal entries and interviews. Participants may have moderated their responses in order to appear 'well' or appease the researcher in some way. Though this was mindfully acknowledged and avoided through student-led programme facilitation, the interpretation of data may have been influenced to provide positive accounts, as the researcher was invested in the programme design and outcome.

It must also be acknowledged that this thesis makes extensive use of affect and emotion concepts. Leaning on the work of Wetherell (2012, 2015), this thesis grounds emotion as 'embodied meaning-making' and that affect is a relational and practical activity not isolated to a psychological state. The use of emotive language throughout highlights my own affective reactions within the research process, and again forces constant reflexivity in interpreting participant experiences as exclusive to my own.

The dimensions of identity, experience and proximity to the participants help to define the parameters through which this research was conducted, and the data was collected and analysed. By maintaining a rigorous reflexive approach around researcher bias and relational trust, I can present a nuanced interpretation of young female's wellbeing in this nature-based context.

Trustworthiness

My dual role as researcher and Deputy Principal was acknowledged through maintaining strong ethical conduct and research integrity. There was a power dynamic between me and the student participants, and while the surfing programme was facilitated by senior students, this dynamic remained. This was mitigated through a variety of pathways, with checks made throughout the process. Participation was purely voluntary, and informed consent (alongside parental consent) was obtained after explicitly reassuring participants that their decision to participate, decline, or withdraw would have no consequences for their broader schooling. Withdrawal was offered at multiple points throughout the programme by the researcher, with one participant choosing to leave the practical surfing aspects. Trustworthiness was established through allowing participants to withdraw any comments made in interviews or journals at each stage. In one instance, the researcher chose not to include particularly sensitive information, despite the participant choosing to share this during an interview.

Research Design

Action research

This study adopts Kemmis and McTaggart's (2013) action research spiral to explore the development and impact of a nature-based outdoor programme on female youth wellbeing. A key reason for the adoption of this spiral lies in teacher familiarity with it from common use during annual professional reflections. An action research design was used as the intention was to both investigate and act on the issue of low emotional wellbeing in youth, as identified through what is described by Aulianda et al. (2021) as the diagnostic phase. This spiral model fits well when working with group-based projects, allowing for adaptive, emergent changes as learning progresses (Carr & Kemmis, 1986; Kemmis et al., 2013, 2014). Action research strongly aligns as a methodology with both constructivist ontology- where reality is understood as socially and culturally constructed - and interpretivist epistemology - which emphasises the subjective meaning individuals give their experiences (Denicolo et al., 2016; Guba & Lincoln, 1994; Hathcoat et al., 2019). Constructivist ontology sees reality as both socially constructed and specific to the context, which is supported by action research by engaging with participants in a real-life context.

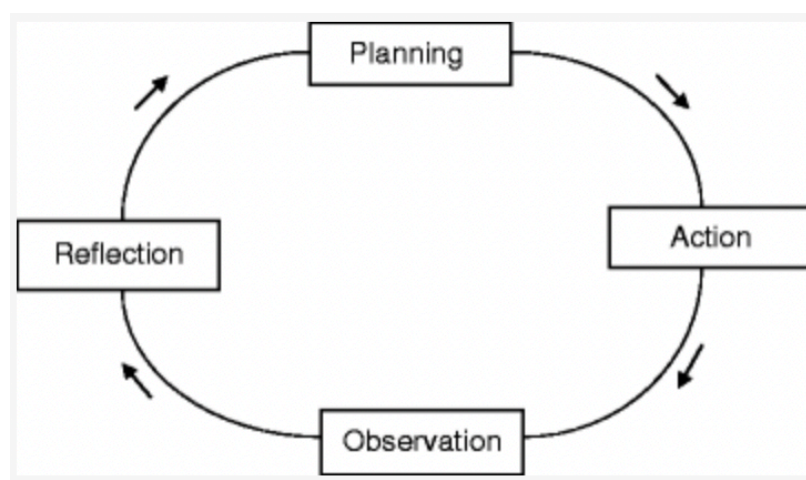
A broader critique of action research identifies its local specificity and lack of generalisability or replicability (Waterman et al., 2001). Critics argue that because cycles are highly contextual and continuously modified, in this case by the changing ocean conditions and participants' emotional progressions, it's difficult to isolate variables or standardise outcomes (Reason & Bradbury, 2001). However, within an interpretivist paradigm, this study does not aim for generalisation, but rather a deep, context-rich understanding of female youth wellbeing as lived and experienced in this specific environment.

Action Research integrates research and action, providing a cycle of action and reflection that can be repeated as variables change (Somekh, 2005). Action research necessitates a collaboration between participants and the researcher, where all are collectively involved in the process of developing strategies, creating action and actively reflecting to succeed together. David (2002) suggests that "without the involvement of the researched in the formulation and conduct of research all research remains opaque" (p.13). However, rather than a pure action research model using a full participatory methodology where participants co-design every phase, the researcher developed the learn to surf programme independently. Decisions regarding the context of surfing, location selection, and safety protocols were made solely by the researcher to ensure physical safety and risk management. A distinction must be drawn between action research as an overarching research methodology, and action research as a framework for programme design. While

participant contribution to the structural aspects of the programme was very limited, action research remains the appropriate research methodology, as the principles were used as micro cycles through weekly collaborations between participants, student facilitators and the researcher. In this way, each participant was able to guide their own progression and increase autonomy over their experiences. The fluid nature of wellbeing would not be fully captured by a rigid intervention with pre-determined outcomes. The action research spiral was fundamental to the study's methodology, as daily progressions were participant-led and negotiated around dynamic environmental and often emotional conditions. By using action research, the study maintained the flexibility to adapt to participant needs and progressions, even within a structured activity framework.

In this study, the researcher was able to observe participants' (young females) progress as well as listen to their understanding of their experiences, both through interviews and informal conversations when walking to and from the beach. This led to collaborative discussions with the research helpers - senior student facilitators recruited to teach in the programme, shaping future planning for each session. Discussions were held with the senior students' facilitators after each surfing session and these informed individual planning for the following week.

The ocean was a passive co-constructor of each weekly session in the sense that conditions contributed to how each session was planned. As conditions changed, each of the student facilitators was not only adapting to the advancing progression level of the participant, but also to the experience the ocean conditions were allowing on the day. The cyclical nature of action research design considers the ability to continue to develop, test, and adapt through the process.



Whakaahua 1 Kemmis and McTaggart's Action Research model

- Planning: This stage involves problem identification, systematically analysing the problem, formulating research questions, and outlining a strategic plan for action to address the identified problem.
- Action/implementation: This stage involves implementing the strategy and some intervention or action to address the problem.
- Observation/evaluation: This stage involves observing the outcomes of the strategic plan and evaluating the actions taken in the previous phase with appropriate methods and techniques.
- Critical reflection: This stage involves reflecting critically on the results of the evaluation and the whole action and identifying a new problem and the process to start all over again.

Kemmis and McTaggart's action research model suggests a need for multiple reflective cycles and ongoing reflexivity. Examples of this model used in educational settings include: Bhutanese secondary teachers used the model to inform practice in classroom communication, finding the impact was both non-linear and 'messy', with reflection necessitated at all stages of the cycle rather than only at the end (Rabgay & Kidman, 2023). Similarly, a UK example focused on increasing outdoor learning opportunities led to enhanced engagement and better curriculum fit when planning and evaluation processes were improved (Dillon et al., 2005). Examples such as these highlight the reflexive nature of action research and that messy real-life situations can help to shape future iterations of any change programme. However, Aulianda et al. (2021) suggest a potential weakness of action researchers is that they can overestimate the importance of their findings and conflate their use beyond their study. To avoid this limitation, this study aims to frame findings as context-specific insights with a further objective of contributing to how outdoor programmes can help shape youth wellbeing.

Somekh states that "Action research starts from a vision of social transformation and aspirations for greater social justice for all" (2005, p.7). The alarming rate of youth mental health issues calls for immediate action. As an educator in a secondary school, I was well placed to develop and implement a place-responsive programme using an action research approach that is achievable for participants and replicable for facilitators. As a facilitator of Outdoor Education for 20 years, the logistics of such a programme were within my knowledge and skill capabilities. Previous experiences in these environments and anecdotal evidence of the positive impacts on emotional wellbeing in youth drive this study, and my unwillingness to be a bystander as youth mental health continues to deteriorate. This potential bias as an 'advocate for the underdog' (David, 2002) is acknowledged and requires constant reflexivity through planning and implementation phases of the programme.

The action research model was chosen and used within each session and as a broader tool for the whole programme. Having a surfing progression programme as the foundation for the sessions was valuable but also allowed the flexibility of individuals' differing skills and development through individualised co-construction of sessions. In a broader sense, using the action research model allows an interactive process of facilitation, allowing ongoing reflection and adaptation of the programme during school time and consideration of its impacts on participants as students. It also provides insights into how the programme integrates with the broader school environment and its potential impacts on other areas of school life. I am uniquely placed as both a researcher and a deputy principal in a school, so I understand the complexities when introducing new initiatives into these busy environments. Providing validity to a programme through evidence-based research, planning, and practice will help support the introduction of a programme such as this as a scalable and sustainable option for youth mental health and wellbeing promotion.

A Place-Responsive Pedagogy

This study adopts a place-responsive pedagogy (Wattchow & Brown, 2011), in which local environments, sustainable outdoor activities, and practical skills are central to the planning process. Place-responsive methods included:

Activity context – surfing is a common localised outdoor activity at the town where the research was conducted. While many young people do not get involved in surfing, the activity is very familiar to them. The school also has a set of surfboards used for their Outdoor Education programme, so there was no cost in using these. This factor significantly reduced financial barriers to participation.

Research location – the beach chosen for this research was a short walk from the participants' school and is often used by them, for example as part of the school-wide cross-country event. The proximity removed the need for transport and the cost associated with this.

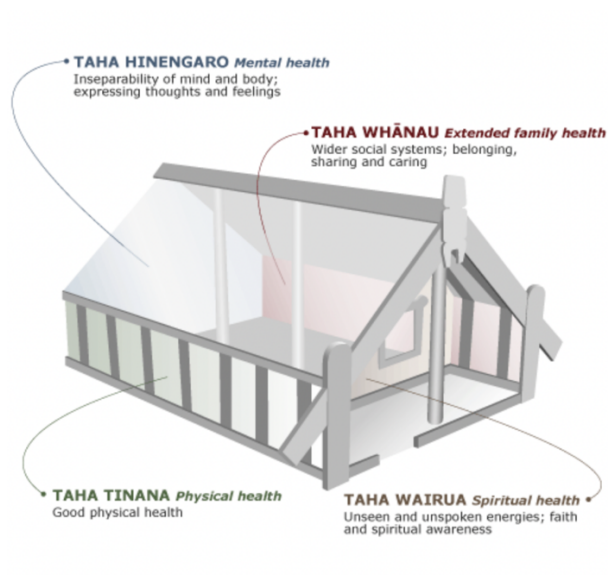
Tuakana- student facilitators – the voluntary student facilitators were able to both share their surfing or surfing lifesaving skills and enhance their own capability as leaders. The benefit to them also extended to contributing voluntary hours towards the school's community service requirements.

Measuring Wellbeing

In the context of this study, measuring wellbeing is integral to understanding the potential impact of the surfing programme on participants. It is also important as a self-reflection tool for participants, allowing them to identify not just areas of concern or further required support, but in their areas of strength or growth. For this study, the two quantitative metrics of the Hua Oranga and MHC-SF surveys were chosen and used as baseline and post-programme measures around the 10-week surfing programme.

Te Whare Tapa Whā model of wellbeing

New Zealand schools have strongly adopted the Te Whare Tapa Whā model in the Health and Physical Education curriculum (2007), with explicit teaching and learning in the physical education and health core area, compulsory through to the end of Year 10 (approximately 14-15 years old) (Tāhūrangi, 2022). Rangatahi - youth) are introduced to the four taha and a broad understanding of the aspects of their wellbeing that fall within these. Ākonga (students) can be asked to identify aspects of their wellbeing that require attention in relation to this model. The language of Te Whare Tapa Whā is widely used in secondary school settings in New Zealand, and the use of the Māori terms are intended as broad definitions of the four aspects of our health.



Whakaahua 2 Te Whare Tapa Whā Model of Wellbeing

By using a framework that participants are familiar with will help them when I use the Hua Oranga survey tool to gather quantitative data. The Hua Oranga tool used for this study has been modified from the original tool in that only the participant is required to measure their subjective wellbeing. The original tool required other stakeholders (e.g., family, caregivers) to provide information on the participant's wellbeing, enabling a holistic overview for the healthcare practitioner. For this research, only the voice of the research participant was

gathered and interpreted, providing individual insights into personal wellbeing exclusive of family and other inputs. Although the Hua Oranga tool collects multiple inputs when used in clinical settings, this research sought to collect the voice of the individual participant and their sense of wellbeing. Focusing solely on the participants' voice ensured their perspectives remained central and were not impacted by external influences. The Hua Oranga tool has four items measured on a 5-point Likert scale, where the four walls or aspects of health is categorised from 'extremely good' to 'very bad' as perceived ratings. In addition, the terminology and guidelines of Te Whare Tapa Whā are reinforced through their use as a guideline for the participants' weekly journal entries.

Whilst the Hua Oranga tool was initially developed for use by Māori with mental illness to gain a broader perspective for treatment, the Te Whare Tapa Whā model and larger understandings of Hauora in the population make it accessible for all. Hauora and Te Whare Tapa Whā is an integral part of the New Zealand Health Education curriculum, and all students at the participating school use the wellbeing model for reflections during Years 9 and 10 (Tāhūrangi, 2022). In their 2012 study, Harwood et al. tested the validity of the Hua Oranga tool against other more established tools and found that the "...simplicity, relative brevity, minimal cost and adequate psychometric properties should favour its use in future studies with both Māori and Pacific people" (Harwood et al., 2012). The tool has not previously been used on youth in a non-clinical setting, but was used as a framework for a Health Council-funded study on the impact of early childhood Māori immersion (Health Research Council of New Zealand, n.d.) This thesis applies the model to a broader selection of the New Zealand population, all of whom have a grounded understanding of the concepts within Hauora.

The Mental Health Continuum -Short Form

For this thesis, the Mental Health Continuum Short Form (MHC-SF) is used to measure emotional, social and psychological aspects of wellbeing (Lamers et al., 2011). Importantly for youth who may not have previous experience with academic or clinical measurement tools, the MHC-SF has proven validity and reliability (Luijten et al., 2019). For example, the MHC-SF has been used in a variety of cultural contexts such as in youth research from Ireland (Donnelly et al., 2019), China (Guo et al., 2016), India (Singh et al., 2015) and Denmark (Luijten et al., 2019). Despite cultural differences, these studies found good validity and consistency, and that the three sub-scales for emotional, social and psychological wellbeing were robust when measured against other wellbeing tools. A 2023 study of Iranian adolescents found that the MHC-SF had high internal consistency and psychometric properties, confirming its use in both psychological evaluations and diagnosis (Yousefi

Afrashteh & Janjani, 2023). All five of these studies concluded that the MHC-SF was a useful psychometric tool assessing positive mental health in youth according to the WHO definition.

The MHC-SF was derived from the Mental Health Continuum Long Form (MHC-LF), a comprehensive 40-point measurement tool that has been validated through use in hundreds of studies (Keyes, 2007). Keyes and his colleagues went on to develop the short form of this questionnaire, with 14 points of wellbeing organised into the three key areas or sub-scales (Lamers et al., 2011). The short form consists of three emotional well-being items, six psychological well-being items, and five social well-being items, with the questions framed in a positive mental health outlook. Emotional wellbeing items are classified as hedonic, while the other two categories are considered as symptoms of positive functioning (Keyes, 2002). These levels are based on the participants' view of the previous month in their lives and are measured using a 6-point Likert scale, scaled from 'never' to 'every day'. Ultimately, the MHC-SF yields the participant a score between 0-70, with predetermined indicators of 'flourishing', 'languishing' or 'moderate' mental health levels.

According to Keyes (2002), to be classified as flourishing, participants must choose 'every day' or 'almost every day' for at least one of the three hedonic, and at least six of the eleven positive functioning questions. In contrast, languishing is defined by at least one of the three hedonic and six of the eleven positive functioning, as either 'never' or 'once or twice'. Those who do not fit into either flourishing or languishing are considered to have moderate mental health. Languishing is considered low mental health; however, mental illness is not diagnosed with this tool.

While the MHC-SF is both validated and widely used, it is not without limitations when used in a youth context. Some studies have found that the language may be too abstract and adult-oriented for youth, and in particular, some concepts, such as "being a good person", may not align with how they conceptualise their wellbeing (Doré et al., 2017; Greenspoon & Saklofske, 2001). The questions also cover broader concepts such as how the participant understands the workings of society, as well as their level of contribution and belonging within it. These expansive notions require the participant to consider not just themselves, but their role as a social being within their society and environment and again may not align with their personal sense of wellbeing. To address this limitation, the participants were encouraged to take time in considering their responses and to ask for any clarifications as they completed the questionnaires.

Te Whare Tapa Whā and PERMA - a culturally connected strengths-based approach

The use of positive psychology principles through the PERMA model, with mātauranga (knowledge) Māori, specifically Te Whare Tapa Whā, creates a holistic framework of health that allows for the establishment of a culturally responsive view of flourishing for New Zealand youth. This approach allows for both psychological science and indigenous knowledge, encapsulating a more holistic and responsive understanding of flourishing. For this study, Te Whare Tapa Whā was used as a primary framework, with PERMA used as a complementary lens to enrich the understanding of wellbeing dimensions within the model.

Te Whare Tapa Whā framework ensures cultural relevance, and the MHC-SF has previously been used and validated in the New Zealand context (Reid et al., 2014). While these two models of wellbeing have not previously been used together, the use of positive psychology alongside culturally embedded frameworks such as Te Whare Tapa Whā has been explored. A 2021 literature review of Māori models of health suggested that the PERMA model has some conceptual overlaps with Te Whare Tapa Whā, and could enrich wellbeing measurement and avoid over-reliance on Western models (Wilson et al., 2021).

When used together, the two models provide cultural integrity and conceptual breadth. Te Whare Tapa Whā ensures the research and findings remain grounded in New Zealand's bicultural context, recognising Māori worldviews of holistic wellbeing. PERMA then complements this with the language of positive psychology, aligning with the study's focus on flourishing through connection and challenge. The use of the model's side by side strengthens the study's coherence and supports the representation of wellbeing as an embodied, relational and evolving construct.

The findings from this study will be presented numerically to indicate shifts in the four taha of hauora, and in the 14 MHC-SF items. The emergent themes from the qualitative data will be presented within the four taha of Te Whare Tapa Whā as primary deductive parent codes. PERMA will then be used to inform inductive subcodes where specific aspects of flourishing and growth can be explored. These frameworks and themes are supported by direct quotes contributed by the participants through interviews and journaling.

Survey Data

Eight participants completed pre- and post-surveys. Each participant's results are presented as pre- and post to represent any shift in either direction. A mean score for the whole group

was derived for each question. The standard deviation from the mean was attained, and a 95% confidence interval was established using the statistical significance set at $p < .05$. Attaining a 95% confidence level was important as the quantitative results will be used to support the qualitative data, and this increases trustworthiness and provides quantitative context.

The results from both the Hua Oranga and MHC-SF surveys are outlined in the tūtohi (tables) below. Results are shown for eight participants. As she did not complete the surfing intervention programme, Charlie's results were not included in the quantitative analysis. For both surveys, the participants did not have access to their pre-test surveys when completing their post-programme surveys. The post-surveys for both Hua Oranga and MHC-SF were completed within a few days of the programme finishing. The scores are presented within two decimal places.

Wilcoxon signed rank tests were completed using NUMIQO software to produce a Wilcoxon Test statistic (W), z-score (z), p-value (p), and effect size I (numiqo Team, 2025). For each survey, there is data to represent the participants' group total shift and is then broken down to each subdomain. For Te Whare Tapa Whā this is the four taha (hinengaro, wairua, tinana and whanau), and for the MHC-SF it is the three domains of hedonic, social eudaimonic, and psychological eudaimonic. The null hypothesis for each is that *there will be no difference in wellbeing domain before and after the surfing programme*. This test was used to compare two related groups with categorical data and to determine if they are statistically different from each other. It was used because it is designed for situations where the same subjects are measured twice, making it ideal for comparison of pre- and post- test results.

Boxplot graphs were used to present the results of the Wilcoxon signed-rank tests. The box shows the interquartile range (middle 50% of data), the line inside the box is the median, and the whiskers extend to the minimum and maximum values. If any outliers are present, they are shown as individual points. The Wilcoxon signed-rank test has a level of significance of 0.05.

Data collection and analysis

This study adopts a mixed-methods approach to provide a more nuanced and holistic understanding of youth mental health within the context of a place-responsive outdoor programme. The choice of a mixed methods design is consistent with the study's constructivist ontology and interpretivist epistemology, recognising that each provides different, yet complementary, insights. The study adopts a complementarity design (Greene et al., 1989), where quantitative (surveys) and qualitative (journals and interviews) methods

are used to highlight different facets of participant wellbeing. To ensure a strong mixed-methods design and avoid generating isolated parallel findings, this study intentionally integrates both sets of data in an ongoing analytical dialogue (Tashakkori & Creswell, 2007). The quantitative self-report tools provide structure, and from a practical perspective, this data can be very valuable for schools and other providers looking to adopt the programme. School leaders can be data-informed when making decisions about the experiences they include into their co-curricular space. The qualitative data deepens and provides meaning to, and new insights from, these findings. The self-reporting questionnaires (SRQ) provide a structured framework for self-assessment; however, they must not be viewed in isolation but are rather interpreted alongside the narrative qualitative data to provide a rich and layered understanding of youth experiences in outdoor programmes. The complementary methods allow us to hear the rich stories from each participant, but also gain confidence from the qualitative findings, with each method appealing to a different audience. The interweaving of numerical metrics with qualitative stories help to illuminate how and where changes occurred.

A mixed-methods approach draws on the strengths of qualitative and quantitative data, integrating both to generate a richer, more comprehensive understanding of complex phenomena (Shorten & Smith, 2017). From a quantitative perspective, the survey data were gathered to indicate any numerical shifts in wellbeing over the course of the programme. This is valuable, as quantitative data offers insights that can be statistically analysed to indicate the direction and extent of any changes. However, it is important to note that SRQ are not inherently objective and do rely on the subjective perceptions and participant willingness to self-disclose. A similar use of SRQ and subsequent interviews looked at the efficacy of an eight-week 'Pause, Breathe, Smile' mindfulness programme on New Zealand rangitahi, finding the qualitative data corroborated the quantitative measures, in part by helping to explain *how* and *why* wellbeing had changed (Bernay et al., 2016). The alignment of the two methods helped to gain insight and deepened understanding. Gathering quantitative data reduces researcher bias by using numerical evidence to represent perceptions. The inherent structure of quantitative data also increases the potential for replicability, allowing others to apply similar methods across different programmes or contexts (Henline-Hall, 2024).

Qualitative information was gathered as the primary means of exploring complexities and key factors underpinning participants' experiences, with the quantitative data serving to indicate contributing factors where shifts in wellbeing may have occurred. The stories of each participant provided rich narrative insights that contextualised and deepened the understanding of any statistically significant shifts in survey results. As discussed in the literature review, the two surveys used to gather quantitative data are well tested and

reliable, however, the qualitative methods provided the most nuances and valuable information for interpretation.

Qualitative data were collected via focus groups and individual interviews, as well as participant journaling. The researcher also kept a weekly journal with information on the conditions and participant experiences, including informal conversations on the way to and from the beach, which further informed the qualitative analysis. This enabled the researcher to keep real-time insights and to maintain an audit trail of how the programme developed. The addition of journaling was provided so participants could reflect between each weekly surf, although only four participants used these. Journaling was used as a tool for collecting reflections on a regular basis, and for those who were not as confident during the interviews. Journaling was added to increase the rigour and depth of understanding into participant insights, while also providing a platform to share any sensitive topics (Tuckett & Stewart, 2004). Journaling does have its limitations, with inconsistent collection across participants due to motivation, time or memory.

In keeping with the interpretivist paradigm, semi-structured interviews are appropriate for enabling participants to interpret their experiences, allowing them to contribute what they feel is important and relevant to the programme and their personal wellbeing (“(PDF) Theoretical Frameworks Used to Inform Qualitative Mental Health Research,” 2024; Silverman, 2015). It must be acknowledged that there are challenges in the techniques needed for semi-structured interviews, and researcher bias will be mitigated by avoiding leading questions and by probing into all insights.

Research Structure and Timeline

The total timeframe of the research was nine months, but there were various stages of participation. Over the course of 10 weeks, the participants were involved in a weekly 90-minute practical session based on learning to surf and ocean knowledge. These began with a discussion on weather and surf conditions, safety considerations, and daily goals for everyone. The sessions progressed each participant through ocean knowledge, paddling, basic techniques, and eventually standing up on their surfboards. The participants could let the student facilitators know whether they wanted a specific skill progression or if they just wanted to be left to self-manage, under the watchful eye of the facilitators. The weekly sessions closed with a recap of the skills learnt that day, and any specific issues that arose, for example, navigating a particularly challenging rip current. Participants were encouraged to share how they overcame challenges and they contributed as to how they could better manage the situation in the future. As time progressed, the participants would offer tips and encouragement to others during these debrief sessions. After each session, they were

reminded to complete a diary or blog entry around the day. Participants were required to complete two surveys regarding certain aspects of wellbeing. The first survey occurred at the start (week one prior to going surfing) and at the end of the 10-week programme (week 10). Each participant was also involved in four interviews of up to an hour each as shown on the tūtohi (table) below. Two of these were completed as a whole group, and the other two were individual interviews.

During analysis, the different sources of data were integrated to build an understanding of the participants' experiences. Quantitative wellbeing scores were cross-referenced with relevant narrative from their journals, individual interviews and full focus group discussions. The integration helped to identify wellbeing changes and insights across the whole programme from individuals and the group.

A structure was followed to ensure the programme was completed in the allocated ten weeks and to meet safety considerations as the participants progressed. The programme timeline is presented below.

Tūtohi 1 Overview of data collection timeline

Timeline	Programme	Qualitative data	Quantitative data
Week 1	Surfing programme begins		Hua Oranga and MHC-SF pre surveys
Week 2		Group interview	
Weeks 6-7		Individual interviews	
Week 10	Surfing programme ends	Journals collected	Hua Oranga and MHC-SF post surveys
Week 13		Group interview	
Weeks 31-33		Individual interviews	

The process steps are further explained:

February (week 1)

Participants completed two surveys - (Hua Oranga and Te Whare Tapa Whā) to gather baseline quantitative data on feelings of perceived wellbeing before the start of the surfing programme. This was on the first day of the programme and before going to the first beach-based session.

February (week 2)

During week two, participants were involved in a focus group interview following the indicative questions in Appendix C. All participants were involved in the interview and were able to contribute.

February to April (weeks 1-10)

Participants were involved in a ten-week learn to surf programme, facilitated by senior students. This was once a week for approximately ninety minutes on a Wednesday afternoon. The researcher adapted a surfing programme to suit the timeframe and group size. Participants were prompted to journal after each session, and the researcher kept a weekly journal.

March (weeks 6-7)

Through weeks six and seven of the programme, the participants were involved in individual interviews of up to one hour each. These followed the indicative questions as previously included in a semi-structured format.

April (week 10)

After the last session of the learn to surf programme, the participants completed two surveys - (Hua Oranga and MHC-SF) to gather post-programme quantitative data on feelings of perceived wellbeing.

April (week 13)

All participants were involved in a focus group interview in the week after the programme finished, following the indicative questions but with an added focus on any wellbeing shifts they felt had occurred. Journals were handed to the researcher to support qualitative data.

September/October (weeks 31-33)

Participants were involved in individual semi-structured interviews of up to one hour following the indicative questions. There was a focus on understanding any themes from the shifts in their quantitative survey data, with specific questions for each participant based on their results. A deeper investigation into journal entries and comments from previous interviews prompted questions for everyone. These interviews were individualised more than the previous ones, and enabled participants to contribute their thoughts around topics such as the value for broader school structures.

Programme Design

Programme development

As previously identified, this programme was informed by Wattchow and Browns (2011) four signposts for place-responsive outdoor-based education, to foster meaningful and sustainable relationships between participants and the environment. Underpinning this programme is the understanding, that experiences that are accessible and localised to the participant are more likely to be repeated by the participant. The programme was facilitated by senior student facilitators from the same school-kura as the participants, and both participant and facilitator groups were all female. The inherent risks within surfing as an activity were also respected identified, discussed, and mitigated.

The Programme - an Overview

The surfing programme was shaped through a reciprocal relationship with the beach, drawing on its unique localised qualities as well as the expertise of the researcher and student facilitators. The context of surfing was used as it is a popular activity in this coastal town, and the participants all understood the activity in some way, as they live in a city lined with beaches. The school already used surfing as a context in outdoor education, so it had equipment available for use.

A school term in Aotearoa is ten or eleven weeks long, so the research surf programme was run for a ten-week block during the first term of the year. Term one is during the summer months, though the ambient and water temperature starts to cool down towards the start of April, just as the programme was coming to an end. The participants were recruited at the end of the previous year, and contact was made at the end of the summer break, so the group were ready to start as soon as school began in February. There was no cost to the participants as the school owns a quiver (set) of surfboards, and senior students were recruited to act as facilitators for the programme.

Surfing progressions

A four-part series of learn to surfing progressions was adapted by the researcher and is attached in the appendices. The programme is progressive by nature, but it is intended that individuals may be at different levels and may even regress at some points. At all stages of the programme, the senior student facilitators provided the delivery to the participants. Every week, the facilitators and the researcher discussed where individuals were on the surf progression programme, and how they could be supported in their progress. The facilitators completed part one of the series during a swimming pool session on the first day of the programme. Subsequent weeks progressed in a relatively linear fashion through the fifteen

steps that are integrated into the four-part progression programme. This began with understanding the equipment, especially the safety and use of a leash that always attaches the surfer to the surfboard. The remaining parts of the progression went from lying on a board, pushing up, rolling a board, and eventually to standing up. If a participant did manage to stand up, they progressed to catching green waves and surfing along them.

As participants did not progress at the same rate and in keeping with the action research programme design, the facilitators and researcher discussed group management and appropriate individual progressions before each surfing session. The high ratio (just under 1:2) of student facilitators (5) to participants (9) allowed individuals to be supported in their daily goals, including if they just wanted to work on a skill individually while being supervised.

Surf lifesaving and other safety equipment

A full safety management plan was completed by the researcher, which covered the entirety of the programme. A consultation with Surf Life Saving New Zealand took place and tested the efficacy of the safety structure, gaining support from Surf Life Saving New Zealand Youth Education Manager. A letter of confidence from Dani Shepherd, about the programme and safety plan, is present in the appendices.

Initially, the participants engaged in a safety and skill session in the swimming pool, which allowed the researcher and student facilitators to understand the water confidence level of each participant. This session covered observation of the participants swimming several lengths of the pool and completing some unassisted floating. Participants were then introduced to the surfboard, including which leg to put their safety leash on. Basic skills were taught in the pool, including paddling in a straight line, how to roll a surfboard, and how to cover their head when they came off their board.

Safety and group management were discussed and reviewed by the student facilitators and the researcher at each session. The facilitators were able to adapt progressions based on the conditions and confidence of the participants on the day. There were surfboards and a surf lifesaving rescue tube at each session on the beach, and the researcher and student facilitators had experience using this equipment for safety management purposes. The participants were taught common surf lifesaving hand signals, including the sign for 'come back in'. When this signal was engaged, all participants returned to the beach. There was also a mobile phone on the beach for emergency communications. The researcher provided a first aid kit for any situations that required it, but none arose during the duration of the programme.

When the group arrived at the beach for each surfing session, they would talk as a group about the conditions and the specific daily goals. Daily safety covered discussing the rips and currents, creating a safe activity boundary, focusing on daily goals and tide issues, for example if the waves were breaking into shallow water. This briefing was initially run through by the student facilitators, but after several weeks, the participants would initiate the safety briefing themselves.

Research Context

The school

Mount Maunganui College is a co-coeducational years nine to thirteen high school with just under 1800 students. The school is located very close to the coast and within a one-hour drive there are other activities such as world-class mountain biking, white water kayaking and rafting, and bush walks. The school has adopted a place-responsive approach to their outdoor education programme and makes good use of the local area and the expertise of the staff. There are strong and well-recognised outdoor education and education outside the classroom (EOTC) programmes in the school. Consent for my research was gained from the Principal and Board of Trustees, who govern the school, to ensure they were fully aware of the research programme occurring in the school. The Principal and Board of Trustees were supportive of the research programme.

Research participants

I chose to have all female participants and senior student facilitators in response to females in Aotearoa having poor mental health outcome statistics and the lesser time spent in both physical activity and the outdoors. The research of Evans et. al. (2020) on outdoor-based interventions for all girls, found that the single sex environment tended to reduce competition, enhance participation and allow the girls to focus on personal growth. The addition of the female student facilitators who were competent and confident in the activity, allowed for a layer of role modelling which studies have found to be valuable and important to participants (Culp, 1998; Evans et al., 2020).

Selection of participants

The target group for this project was females from the Year 11 (2024) cohort. An advertisement was produced and provided for the year level Dean to review prior to presenting it to the students. At the time of this research the whole female cohort in Year 11 was approximately 200 students. In accordance with the ethics process, the year level Dean held an assembly during a normal non-teaching period and read out the advertisement. The

five senior (Year 12 and 13) student facilitators were at the assembly and were able to answer any queries from the Year 11 students

This advertisement was presented as follows:

(The researcher) is conducting research next year on how physical activity and the outdoors affect mental health. She is looking for a group of female students to be the participants. You would be part of a large research project that is hoping to help young people find ways to support good mental health.

The research involves being interviewed several times and filling in surveys. The activity you will be learning is surfing, and you will be doing a 10-week programme through term one. This will be every Wednesday (term one only), through lunchtime and period 5, so you will not be doing the Future Pathways study programme for term one. You will not be disadvantaged and if you miss anything you will be caught up in term two. The surfing programme stops after term one but there will be a further interview and surveys after this. The surfing programme is run by five senior students (female).

The criteria are:

- *Do you want to learn to surf and haven't really tried it before?*
- *Are you confident in the swimming pool and the ocean?*
- *Are you willing to use your unstructured period on Wednesday last period?*
- *Are you willing to be involved in a research project that spans over several months and has a focus on emotional wellbeing?*

The interested participants provided their names, so the Dean was able to email their caregiver/parent with information about the research and consent forms. At this point, the Year 11 students were informed that if they did not wish to continue participation, they could let the Dean or student facilitators know at any stage of the recruitment process. The student facilitators then provided a further information pack to the interested students. These packs contained full participant and caregiver information and consent and assent forms. The prospective participants were given two weeks to return the consent and assent forms after speaking with their family. The first twelve who return the forms would become the research participants, and their confidentiality maintained from this point using pseudonyms.

Consent and assent forms were returned to the school administrator, who passed them on to the researcher after two weeks. After a lot of initial interest in the programme, approximately forty information packs were given out to potential participants. The programme was to be facilitated each Wednesday from 1.30-3 pm, a time that was chosen as it is the school's unstructured study time for senior students. This was specifically chosen as there would be

no impact on the participants in terms of lost learning time. However, due to late changes in school structure, this time became unavailable to some potential participants. This is elaborated on further in the limitations section.

The participants

After the recruitment process, there was a research group of nine participants. Whilst they were all from the same year group at the school, they were not necessarily well known to each other. An introduction to the participants below, allows some context for their experiences and contributing narratives. Each participant is briefly introduced in this section with some insights into their personality and background, where relevant to the research.

Huia is the most experienced surfer in the group, having been to a few lessons previously. She doesn't surf in her own time but has an affinity for the activity. She is a very determined person and involves herself in a wide range of activities and advocacy situations. She is proudly mana wāhine and is actively working to strengthen her connection to Te Ao Māori.

Rose is a bubbly and positive participant who loves the beach and swimming in the ocean. She loves trying things and is very social. She is rarely alone but rather enjoys being surrounded by close friends. She was encouraging of her friends in the programme as they improved and challenged themselves.

Aria is quiet and reserved but has a very determined personality. She never appears stressed or anxious and will often be the first into the water. She didn't socialise much within the group and preferred to get as many waves as possible. She is also in an outdoor education class that is learning to surf concurrently with the programme timing.

Mia seems reasonably apathetic to the activity of surfing but is keen on the social aspects of the programme. She spends time at the beach mostly swimming and 'playing mermaids'. She is the most anxious about the surf and beach conditions and prefers to stay close to shore in bigger waves.

Charlie appears outgoing and is very physically active, mostly in basketball. She is American and from a large family. She spends quite a bit of time at the beach and has been involved in a variety of activities, which her mother strongly encourages. She has a high needs sister that she finds challenging to navigate at times. She withdraws from the surfing programme after two surfs but continues to contribute to interviews and survey data.

Kya is a reflective thinker who absorbs learning and tries hard to improve from the start of the programme. She is from a large and close-knit family that spends time doing activities

together. She is keen to get to a point where she can confidently surf with her mother, who is a surfer herself. She is grateful and curious by nature.

Lily is self-declared as anti-physical activity. She loves learning to surf but does not view it as exercise, although she worked hard to improve. She has a blend of time alone on waves and with friends just floating around. She loves the ocean and is reflective of her time there.

Esther is initially a quiet member of the group but grows in confidence quickly. She is from South Africa and has been in New Zealand for some years. She has never been involved in surfing as an activity and hasn't spent a lot of time at the beach. During an interview, she discloses that her brother drowned as an infant.

Elandri has a strong, quiet personality type, and she is very independent. She is also from South Africa and remains very connected to there as home. She listens and acts on all feedback and doggedly tries new things. She is grateful by nature and can contrast her experiences between South Africa and New Zealand as a young person.

The participants were all quite different personalities and had differing motivations for participating in the programme. As the programme went on, the group became more cohesive, and participants would join different members of the group for their surfing. It was clear during the second focus group interview, when all participants were together, that they had become a close-knit group and were united in their understanding of the experiences they had together.

Selection of helpers

Five senior students were approached to facilitate the programme. They are referred to as student facilitators. They were all female and in either Year 12 or 13 in the year of the research. Their ages ranged from 16-18 years. Two of the student facilitators were competitive surfers, and three were surf lifesavers who also spend some time surfing, so there was a lot of experience in the group. All the student facilitators were 16 or over and therefore able to provide their own consent. However, their parents were informed and provided information about the programme. All five student facilitators remained committed for the entirety of the programme, with a minimum of four attending each session.

The student facilitators were offered some volunteer hours as part of the school's community service programme. In their senior years (Years 12 and 13), to graduate from this school, students are required to complete community service hours in school and in the community. This research programme allowed them to complete their in-school service hours. However,

all of the student facilitators had double or triple their required hours from a variety of sources, so helping with the research programme was not the key driver for them.

Data Collection Methods

There were several data collection methods used: focus group and individual interviews, two Likert scale surveys, and participant journals. The researcher also had a weekly journal from each surfing session.

Focus group and individual interviews

Semi-structured interviews were used for both the focus group and individual interviews. There were two semi-structured focus group interviews completed, each approximately one hour in length. One at the start of the learn to surf programme in February (week one) and another at programme completion in April (week 13). The following guidelines were used in the interviews. There were two individual interviews for each participant, one during Weeks 6 or 7 of the programme and the other six months after completion of the programme (Weeks 31-33). The latter was based on the participants' journal entries and aimed to further comment on emerging themes or areas of interest that require elaboration.

A guide for the interviews was developed to maintain consistency and focus the interviews.

Indicative interview questions

- *Tell me about this week's surfing session. (expand on high or lowlights).*

Shifts in hauora/wellbeing

- *How do you feel during a surfing session? What led you to feel this way? Further explain. Is this feeling just during/around the activity, or does it extend further into your week?*
- *Thinking of the four aspects of hauora, tell me about anything that has changed (positive or negative). What do you think has led to this change?*

Environmental stewardship/kaitiakitanga

- *Have your feelings about the environment we surf in (beach and ocean) changed since we started the programme? What has led you to feel this way?*

Lifestyle-based strategies

- *Your lifestyle has changed to include weekly beach and surfing sessions during this programme. Tell me about how this has made you feel.*

Further implementation

- *Tell me if you feel an activity like this could be part of your lifestyle going forward. What has made you feel this way?*

For the individual interviews, after the completion of the programme, there was a focus on digging into excerpts from participant journal entries to further elaborate on key themes or points of interest. The participants were also informed of any key shifts in their survey data, and further detail on these shifts was extrapolated and expanded upon.

Surveys

As previously described, there were two surveys used to gather quantitative data. The Hua Oranga model, based on the Te Whare Tapa Whā model, indicates an individual's sense of wellbeing over physical, emotional, social, and spiritual factors on a Likert scale. The second model is the adolescent version of the Mental Health Continuum-Short Form (MHC-SF), which presents fourteen questions and indicates a scale of 'flourishing' through to 'languishing'. Both surveys were presented by the researcher at the beginning of the programme and discussed and explained with the participants. At this time, participants were encouraged to clarify anything as needed. When the participants were required to complete the surveys, they were informed that there was no time limit on how long they should take to complete the forms, and that any questions could still be raised. They were in a quiet area and spread out from other participants so they could complete the surveys confidentially and in their own time.

Both surveys are available to view in the appendices.

Journaling

The journals were less structured than the other data gathering methods, but participants were provided with a rough guideline if they chose to follow this. They were reminded of Te Whare Tapa Whā before the programme and provided with a copy of the model within their journals. As this model is frequently used in the New Zealand curriculum and in our classrooms, their knowledge of the model and each aspect of our wellbeing may just need to be reminded to them. Participants were guided to focus on each of the four aspects of the model when reflecting on their daily surfing session, and include any other anecdotes, thoughts or feelings about how they are feeling or about the activity. This was important for some participants as they had the opportunity to reflect between weekly surfing. The analysis of the journals was again a thematic analysis, where ideas were grouped according to the importance placed on them by the participants. Specific quotes were used to support themes. If a student did not want to share all or some of their journals, they had the right to withdraw them.

Data Analysis Methods/Techniques

There were several sets of data to analyse, both quantitative and qualitative. The quantitative data were analysed as a statistical foundation for the richness that the qualitative data provided.

Quantitative data

The responses on both surveys' Likert scales were assigned numbers from one to five or six, enabling the differences in scores to be identified. The Hua Oranga Likert scale ranged from one (extremely good) to five (very bad), while the MHC-SF Likert scale ranged from zero (every day) to five (never). The MHC-SF was completed at the same time as the Hua Oranga survey for both the first and second rounds. For the MHC-SF, participants were placed into **flourishing**, **languishing** or **moderate** mental health categories based on their results. To gain a flourishing, a total of seven entries had to be ranked either four or five points, with at least one of those within the first three questions, and six in the remainder. The opposite explains the languishing category, with participants needing to have a score of zero or one for seven of the questions. All other results place the participant as having moderate mental health.

The data was analysed using pre- and post-programme scores for both surveys. The Hua Oranga test was also broken down to the four taha – taha hinenegaro, taha wairua, taha tinana and taha whānau. The MHC-SF was analysed for total shifts across the whole survey and then broken down to the three domains of hedonic wellbeing, eudaimonic social, and eudaimonic psychological. An overall score for each participant was entered to determine their scores as **languishing**, **moderate**, or **flourishing** in the pre- and post-test scores.

A Wilcoxon signed-rank test was chosen as a non-parametric test and was used to determine if there was a statistically significant difference between the pre- and post-test scores. This test was chosen as it is suitable for small samples and due to the ordinal nature of the Likert-scale data. Non-parametric approaches, such as the Wilcoxon signed-rank test, are more robust under these settings and provide greater confidence in assessing the both the magnitude and the likelihood of the effect. The outputs were the following:

- test statistic (W) represents the sum of the ranks of positive differences.
- z-Score (z) represents how many standard deviations a data point is from the mean.
- p-value (p) represents the probability of attaining results if a null hypothesis is true.

Statistical significance was based on the following thresholds:

Tūtohi 2 p-value (p) ranges

Insignificant	$p > 0.10$
Marginally significant	$0.05 < p < 0.10$
Significant	$p < 0.05$

- Effect Size I represents the strengths of a relationship between variables.

The effect size was extracted from the NUMIQO software (numiqo Team, 2025).

Tūtohi 3 Effect size(r) ranges

$ r < 0.1$	no effect / very small effect
$ r = 0.1$	small effect
$ r = 0.3$	medium effect
$ r = 0.5$	large effect

The mean difference and statistical significance were used to determine if any changes in responses were due to the programme rather than chance, and the direction of change indicated if the scores increased or decreased (Henline-Hall, 2024). The combination of these metrics determined whether any changes were meaningful.

Qualitative data

The qualitative data from the two sets of group and individual interviews were audio recorded and later transcribed verbatim using the Nvivo software. A deductive approach for the data was used, with the four taha of Te Whare Tapa Whā as parent codes. The interviews were read and reread to ensure the themes were coded correctly. The interviews and journal entries were then coded with an inductive approach, where themes emerged under each parent code. The inductive approach allowed for flexibility as participants' insights arose, with the researcher staying close to the data to ensure the integrity of the participant quotes and experiences (Azungah, 2018). The collection of data through mixed methods has allowed integration of themes with numerical data throughout the analysis.

The qualitative data have been analysed in three separate sets:

1. First group interview, early journal entries (very early).
2. First individual interviews, second group interview, and later journal entries (during).
3. Second individual interviews (after).

These sets represented the participants' experiences very early, during and after the surfing programme. Each parent code of Te Whare Tapa Whā then had 2-4 sub-themes that emerged during inductive analysis.

Methodological limitations

Several limitations occurred that were out of the control of the researcher. None of the limitations negatively impacted the running of the programme and research.

Participant group size

A primary limitation of this research was the size of the participant group. There was significant interest in the programme at the outset, with around 40 information packs given out at assembly by the Dean and student facilitators. However, due to the constraints on time, many of the interested participants were unable to commit. The programme intended to avoid all curriculum-based learning time, and at the time of the assembly, the Wednesday afternoon was an unstructured study time for the Year 11. The introduction of the new literacy and numeracy requirements by the Ministry of Education means that all students in Aotearoa must sit examinations to gain their overall qualification, and these are generally in Year 10 or 11. The students who had not passed their examinations in Year 10 were required to attend compulsory tutorials on Wednesday afternoons to prepare them for the next round of examinations, so they were unable to attend the surfing programme. This impacted many of the interested students and reduced the number.

A second reason for interested students withdrawing was social reasons. Some of the students were very keen to be included in the programme, but their friends were impacted by the tutorials, so as a whole social group, they did not return any permission slips. One student was impacted by a serious illness and had to withdraw.

Impact of the weekly time allocated

In choosing a weekly day and time to conduct the programme, it was important to avoid any existing curriculum time constraints. As noted, Wednesday afternoon was the best fit for avoiding curriculum teaching time. The limitation was that the programme ran during this time regardless of the weather and conditions, potentially being better during other times of the week. Ultimately, this was unavoidable and was not a serious limitation, as noted in the researcher's journal.

Environmental conditions

As the surfing was limited to a 90-minute weekly session, the weather and surf conditions had an impact. In Aotearoa New Zealand, the ocean reaches temperatures of up to 22 degrees, and the air temperatures up to 30 degrees. There is typically an onshore breeze in the afternoons through summer, so in this situation, the wave conditions become less smooth and easier to ride. The wave conditions were variable, but the programme was able to progress each Wednesday as the waves did not reach extreme conditions. The water temperature reduced slightly in this time, and the air temperature only began to get lower in the last two weeks. The school had several wetsuits to borrow, and some participants had their own, so in the last two sessions (weeks 10 and 11), most of them used these.

Surfboard access

The school has a set of foam top surfboards that students can use during outdoor education classes or other EOTC events. These were used for the programme as they are free to use for any student in the school, and accessible as they are locked away in a shed on-site. In one of the planned sessions, the group was unable to progress in line with the programme as we were unable to access the surfboards. The lock on the door became jammed and could not be fixed in the time we had available. On discussion with the participants, it was decided to go to the beach and to use other available equipment. Some participants took bodyboards, while others chose to swim. While the planned surfing did not occur, several of the participants mentioned the differences in the day during interviews and how they enjoyed going to the beach regardless.

Power imbalance

The ethics process identified a potential imbalance of power between the researcher and participants due to the researcher being a member of staff at the participants' school. The ethics process was completed and the issue mitigated, but the relationships remained. For safety reasons, the researcher was at every surfing session of the programme, and there were a few times where the participants came to the researcher for support or advice on their surfing. They were directed to the student facilitators, and it was understandable that having the researcher nearby made the boundaries a bit unclear.

Participant sickness

As the season shifted from summer to autumn, several of the participants became unwell, including one who got pneumonia. This impacted progression in terms of surfing, though even when unwell, the participants would come to the beach and support the group. Every participant missed at least one session due to illness.

Journal entries

Only four of the participants chose to complete journal entries. Those who did, provided valuable qualitative data, in hindsight, it would have been beneficial to have this aspect as a compulsory part of the programme. The journal entries were analysed separately from the interviews and included in the discussion under the key concepts and themes as a supporting narrative.

Participant withdrawal

Beyond week three of the programme (one swimming pool and two surfing), one of the participants withdrew from the physical aspects. She did, however, continue to contribute to interviews. The participant was having some personal challenges, which are highlighted through the data analysis and discussion with her permission.

Methodology Summary

This chapter has outlined the methodology used to investigate whether participation in challenging outdoors-based activity could enhance the emotional wellbeing of young females in Aotearoa. A constructivist approach identifies the impacts of the modern world on youths' construction of mental health, while interpretivism shows how they place themselves and their lived experiences within that.

A surfing programme grounded in action research theory laid the context for participants' experiences, where they could learn a challenging new skill through progressions with strong safety management in place. The action research process was implemented through providing an instructional progressive template, but then individualising this based on participants' progression and environmental conditions. The weekly individualised co-construction led to a trusting relationship between participant, student facilitators and at times the ocean.

Data was attained through the collection of pre- and post-test scores from two surveys, as well as focus group interviews and individual interviews, and journaling. This mixed-methods approach allowed for the rich narratives of the participants to be used alongside the statistical impacts of the surveys. The data was analysed qualitatively through a thematic analysis, and quantitative data using the Wilcoxon signed-rank test, with this statistical information used as a reliable and non-biased source. The rich narrative from the participants

integrated with the numerical data, together allowing for a nuanced view of wellbeing shifts through the programme.

Whilst several limitations have been highlighted through the methodology, they were mitigated or limited in impact on the programme and research. The framework laid from these methodologies allow for a strong foundation going into the data analysis and discussion in the subsequent chapters.

Chapter 4 Findings

The findings in this chapter underscore the various impacts the surfing programme had on participants, leading with a separate analysis of quantitative and qualitative data. The following chapter outlines the findings from both qualitative and quantitative data sets.

Hua Oranga survey results

The table below outlines the mean shifts, standard deviation, and Wilcoxon signed-rank test results for each of the four wellbeing domains, including a total group score across all four taha or domains. The standard deviation of 0.27 indicated low variability in responses, which enhances confidence in the consistency of the positive shift.

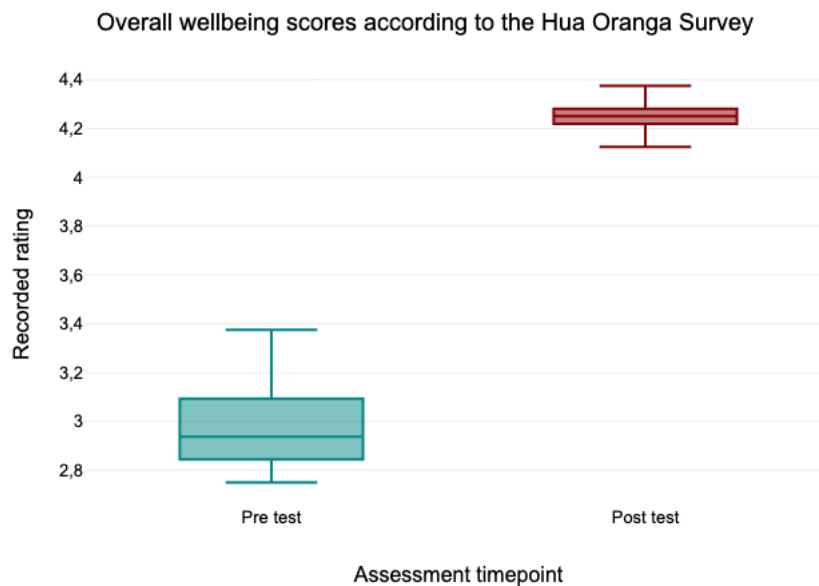
Tūtohi 4 Overview of Hua Oranga results

Taha	M	SD	W	z	p	r
All taha	1.25	0.27	0.00	-1.83	0.10	0.91
Whānau	1.5	1.41	0.00	-2.23	0.034	0.79
Hinengaro	1.38	1.19	0.00	-2.23	0.034	0.79
Wairua	1.25	1.04	0.00	-2.23	0.034	0.79
Tinana	0.88	0.35	0.00	-2.65	0.011	0.94

Footnote: M =(Mean) SD =(Standard Deviation) W =(Wilcoxon Statistic) z =(z-score/Standard score) p =(p-value/Probability value) r =(effect size)

With positive shifts in all four taha between 0.88 and 1.5 points, the Hua Oranga survey set indicates the participants improved in all aspects of wellbeing over the course of the programme. While taha tinana had a positive shift of 0.88, this did not change the overall score and was not statistically significant. The average of 1.25-point improvement (M = 1.25) raised every taha at least one Likert point, from rating as **not good** (2) and **just okay** (3) in that wellbeing aspect, to consistently being rated in the **good** (4) category across all four taha. The largest shift was in taha whanau, or social wellbeing, with taha hinengaro showing the next largest improvement. At the post-test, all four taha mean scores landed between 4 and 4.5 out of a possible five, indicating an overall balance in the four taha of wellbeing. While taha tinana had the least total improvement, this aspect did have the highest mean score overall in the pre-test, indicating there was less potential for a shift.

The table and boxplot below outline the results of the Wilcoxon signed-rank test and are followed by an interpretation.

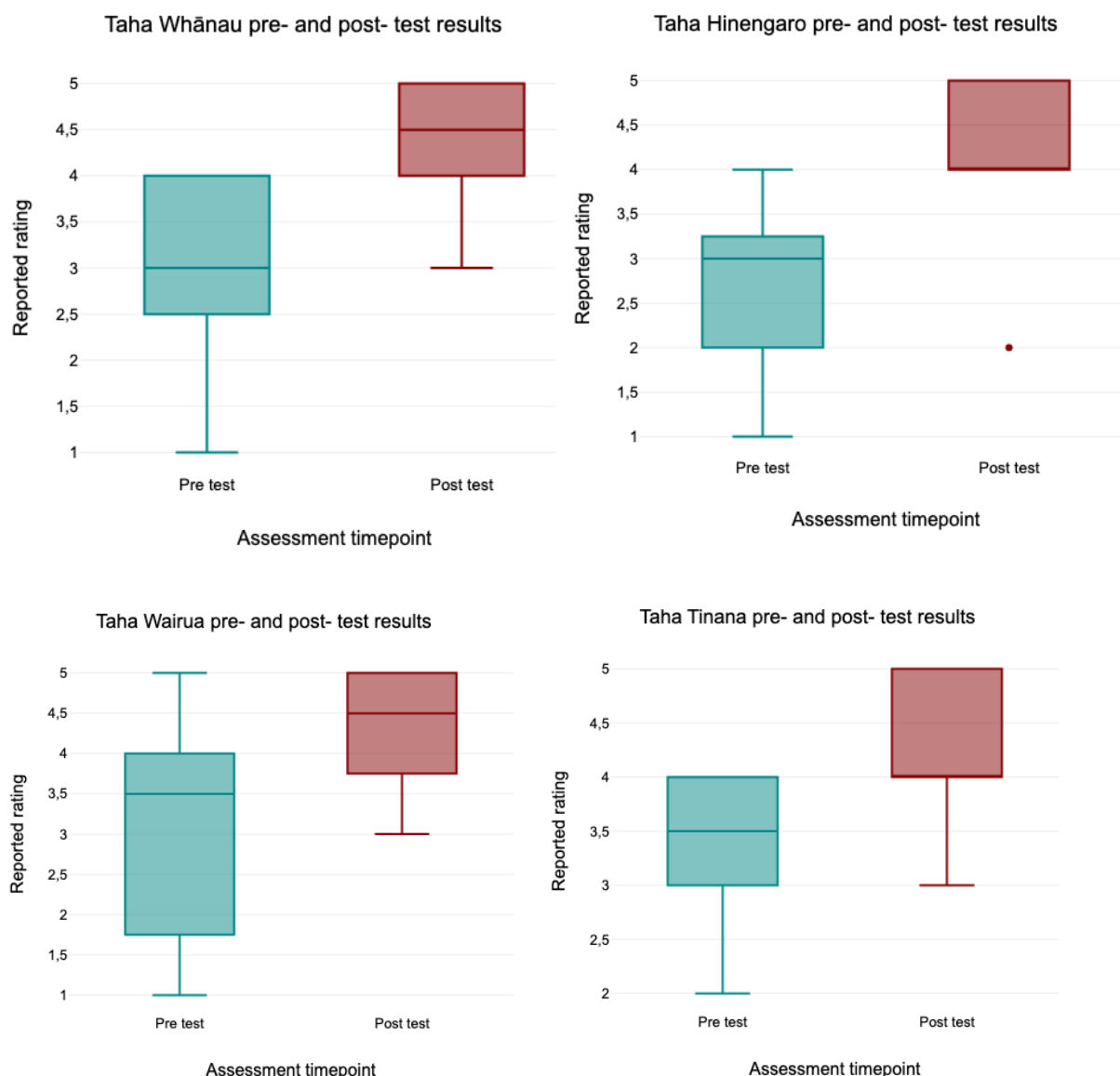


Whakaahua 3 Overall wellbeing scores according to the Hua Oranga

Interpretation

The results indicated no statistically significant difference between the two time points, **W = 0.00, Z = -1.83, p = 0.10**, meaning we fail to reject the null hypothesis. However, the effect size was large (**r = .91**), suggesting that while the change was not statistically significant, the post-test scores show very little variability and are substantially higher. The post-test scores are not only higher but are also more consistent, indicating a meaningful effect of the surfing programme.

The following boxplot graphs break down the participants' pre- and post-test responses on each of the four taha of wellbeing. Pre-test scores are indicated in green, and post-test scores in red.



Whakaahua 4 All taha pre- and post- test results

The following is an interpretation of the results under each of the four taha of wellbeing.

Taha whanau

Taha whānau followed the trend of the other taha whereby after the programme, 50% rated their taha whanau the maximum of **extremely good**, despite none of them starting at this point. There was a high mean change value of 1.5 (SD = 1.41) indicating that participants benefited socially from the programme. Consistent with taha wairua and hinengaro, the largest improvements were observed in the participants with the lowest baseline scores. Two participants did not shift, though one of these already rated her taha whanau as '**very good**' at baseline, and three of the others, all with a starting point of at least three, moved one point.

The Wilcoxon test revealed a statistically significant difference between pre-test and post-test scores, with a z-score of -2.23 and a p-value of 0.034, leading to rejection of the null hypothesis. The effect size of $r = 0.79$ indicates a large and meaningful impact.

Taha hinengaro

Taha hinengaro scores had a large positive mean shift of 1.38 (SD = 1.89) indicating an improvement of over one Likert point, and that this shift was statistically significant ($r = 0.79$, $p = 0.034$). The results show that after the intervention, three participants rated their taha hinengaro the maximum of five (extremely good), whereas none of them had at pre-testing. Again, like taha wairua, the largest increases were associated with the participants with the lowest baseline scores. Specifically, Mia and Lily, who had starting values below neutral, but increased three points each from pre to post. Mia went from **very bad** to **good** following the programme, which was supported by her narrative through the interviews. Neither Rose nor Elandri's scores changed nor ended above neutral, despite their qualitative data suggesting positive outcomes in this domain.

Results from the Wilcoxon signed-rank test indicated a significant difference between pre-test and post-test taha hinengaro scores, $W = 0.00$, $z = -2.23$, $p = 0.034$. The large effect size ($r = 0.79$) suggests a strong and meaningful improvement following the intervention.

Taha wairua

The data from the taha wairua set show a mean shift of 1.25 (SD = 1.04), the Wilcoxon signed-rank test ($W = 0.00$, $r = 0.79$, $p = 0.034$) indicating the data showed a statistically significant positive shift in taha wairua for the group overall. At an individual level, Lily had the biggest increase between her pre- and post-test scores, with an increase of three Likert points from two to the maximum of five. Of the remainder, three participants improved one point, two improved two points, and two did not change. These smaller increases were seen in participants who already had high (**very good**) pretest scores, therefore having little room to improve. In contrast, the larger changes were seen in those participants with the lowest baseline scores. For example, Mia and Rose both went from **very bad** at the pre-programme survey to **just okay** at the post survey, which represents a two-point increase, well above the standard deviation. In total, 50% of the eight participants reached the maximum of five for their post-test score, indicating their spiritual wellbeing was **extremely good** after the programme.

The hypothesis test yielded statistically significant results, with a z-score of -2.23 and a p-value of 0.034, indicating that we reject the null hypothesis. The effect size of $r = 0.79$ suggests that there was a large impact on taha wairua.

Taha tinana

As indicated previously, taha tinana had the least mean shift ($M = 0.88$) of the four wellbeing domains. However, the pre-survey result mean was the highest of the four taha ($M = 3.78$), therefore was already scored highly by the participants. This physical aspect had a small standard deviation of 0.35, as all participants shifted by a maximum of one Likert point, and all in the positive direction. After the programme, every participant indicated their physical wellbeing was 'good', 'very good' or 'extremely good'.

The hypothesis test comparing pre-test and post-test scores revealed a statistically significant result, with a z-score of -2.65 and a p-value of 0.011, leading to rejection of the null hypothesis. The effect size of $r = 0.94$ indicates a very large impact, suggesting meaningful increase in physical wellbeing between the two conditions.

Mental Health Continuum – Short Form survey results

The MHC-SF yielded varied results, with six out of eight participants improving their overall mean score. Tūtohi 5 below outlines the overall mean score for pre- and post-surveys, with a further breakdown to the three sub-categories of hedonic, eudaimonic, social and eudaimonic psychological wellbeing. The Wilcoxon signed-rank test results for the overall MHC-SF results showed that the positive mean shift of 0.72 ($SD = 0.51$) was not statistically significant ($W = 0.00$, $r = 0.93$, $p = 0.181$, $r = 0.93$) but the effect size suggests a substantial and meaningful improvement in participants' overall wellbeing after the surfing programme.

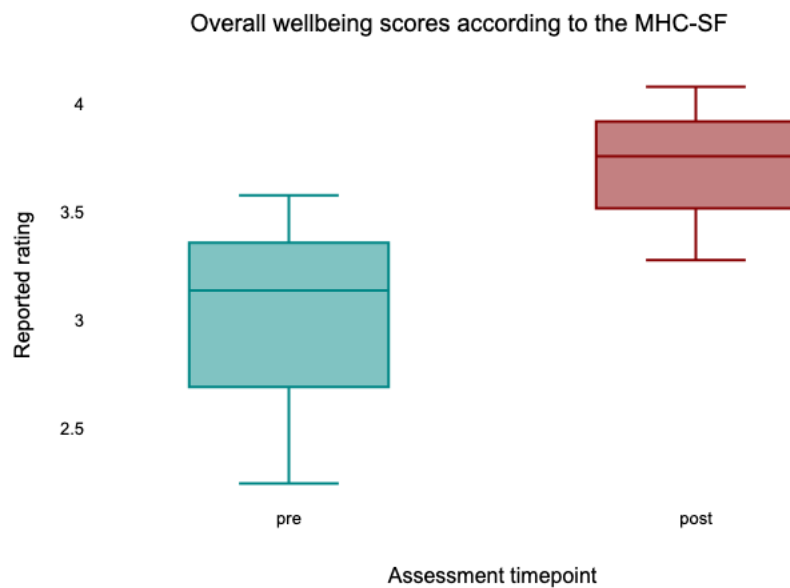
Tūtohi 5 Overview of changes in MHC-SF results

	M	SD	W	z	p	r
MHC-SF						
overall	0.72	0.51	0.00	-1.60	0.181	0.93
Eudaimonic						
social wellbeing	1.03	0.72	0.00	-2.03	0.058	0.91
Eudaimonic psychological wellbeing	0.6	0.43	1.00	-1.99	0.059	0.81

	M	SD	W	z	p	r
Hedonic wellbeing	0.5	0.35	0.00	-1.63	0.174	0.94

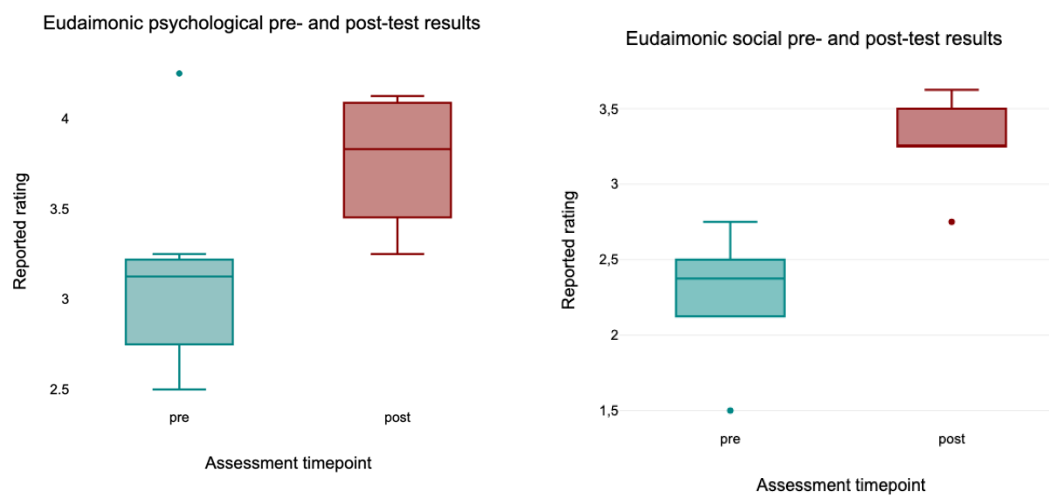
Footnote: *M* =(Mean) *SD* =(Standard Deviation) *W* =(Wilcoxon Statistic) *z* =(z-score/Standard score) *p* =(p-value/Probability value) *r* =(effect size)

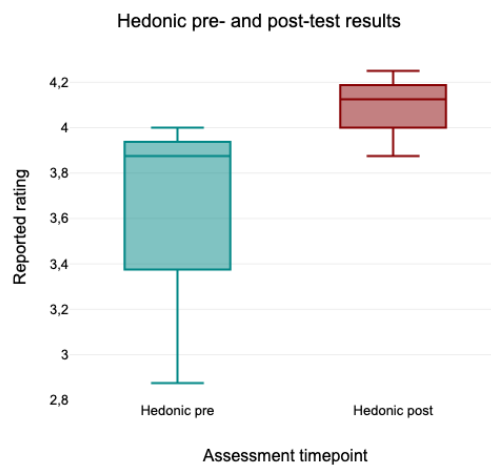
The boxplot graph below indicates the statistical difference between the total scores.



Whakaahua 5 Overall wellbeing scores according to the MHC-SF

The following figures represent each of the three sub-categories of hedonic, eudaimonic, social and eudaimonic psychological. The boxplot graphs represent the mean shifts from pre- to po-test.





Whakaahua 6 All MHC-SF domains pre- and post-test results

Interpretation

As indicated in tūtohi 5 the mean shifts of the group as a whole vary when broken down to the three sub-scales of hedonic wellbeing (three questions), eudaimonic social wellbeing (five questions) and eudaimonic psychological wellbeing (six questions). The following is an interpretation of the results under each of the four taha of wellbeing.

Eudaimonic psychological wellbeing

The difference between pre- and post-test scores was not statistically significant ($p = 0.59$) but the effect size was large ($r = 0.81$), suggesting a meaningful change. There was a positive mean shift ($M = 0.6$), though this was not sufficient to change the frequency of positively reported thoughts from **2-3 times a week** for the group.

Eudaimonic social wellbeing

Although the p-value of 0.58 indicates the change in eudaimonic social wellbeing is not statistically significant, the large effect size ($r = 0.91$) suggests a meaningful impact on pre- and post-test wellbeing conditions. Despite failing to reject the null hypothesis, the test statistic ($z = -2.03$) reinforces a strong effect.

The biggest total shift was in the eudaimonic social domain, where participants quite consistently scored themselves higher, with a mean shift of 1.03, taking the group from on average thinking positively about their social wellbeing **about once a week** to **2 or 3 times a week**. The category of eudaimonic social wellbeing places an emphasis on making a positive impact on and with others. Within this subset, one question had a significant rating shift of 1.5. ($p=0.064$, data not shown). The question is focused on **social integration** and asks participants about their sense of belonging to a community within the last month. The

participants were consistent in supporting this notion through describing their sense of belonging to the surfing programme group, as well as the support from the student facilitators.

Hedonic wellbeing

The mean difference of 0.5 between hedonic pre- and post-test scores was not statistically significant ($p = 0.174$), but the effect size was very large ($r = 0.94$). While this suggests a strong change, the small sample size and high baseline scores may be why this was not statistically significant.

Interestingly, the shifts in the hedonic category were low to moderate, suggesting that participants were focusing less on fun and pleasure from the surfing programme. Happiness had an initial mean of 4 out of 5 (times per week), yet the rise to 4.25 was not statistically significant. With an already high mean of four out of the possible five, the shift was in a positive direction, but with an overall low change.

Flourishing, moderate and languishing subcategories

The following table represent the number of participants in each of the three categories of languishing, moderate and flourishing mental health, from the pre- and post-test scores.

Tūtohi 6 Participant numbers in languishing, moderate and flourishing categories

	Pre-test participant numbers	Post-test participant numbers
Languishing	0	0
Moderate	7	4
Flourishing	1	4

When broken down as **flourishing**, **moderate** and **languishing** categories, the pretest indicated that Huia already scored as **flourishing**, while all other participants were within the **moderate** range. Lily was just one point from being in the **languishing** category. After the surfing programme survey results showed that Huia, Esther, Elandri and Kya were all scored as **flourishing**, and Lily was just one point away. This means that post-intervention, 50% of the participants being considered **flourishing** compared to 11% at baseline, on the MHC-SF scale. Rose and Mia both had a slight dip but remained in the **moderate** mental health category. In terms of total shifts, the largest came from Lily, who moved 23/70 points, with Kya (16/70) and Esther (19/70) also having considerable shifts. The table below outlines the number of participants in each category from the pre-test and the post-test.

Summary

The quantitative data indicate some statistically significant improvement in all aspects of wellbeing and have several commonalities in improvements between the two surveys. The increase in social wellbeing in both surveys is substantial, despite the questions in each being framed differently.

If we consider the aspects of taha wairua and taha hinengaro as being interconnected with eudaimonic psychological aspects in the MHC-SF, again, we can compare similar trends in positive shifts. Increases in areas such as autonomy and being satisfied with life (MHC-SF questions) align with spiritual and mental growth (Hua Oranga) within participants.

The physical aspects of wellbeing were less impacted by the intervention, reflected through the lower increase in taha tinana, while the MHC-SF yielded a lower increase in hedonic wellbeing. It was also clear, however, that these aspects were self-reported as relatively high in the pre-surveys, so the potential for improvement was limited. Some incongruences between survey data (i.e. low quantitative data results versus positive impacts from participant narratives) indicates the complexities of self-reported data and highlights the importance of mixed methods data collection to provide meaning and clarity. These points will be discussed in more detail in the chapter below.

Qualitative Data

The qualitative data were separated into three categories to represent insights from very early in the programme, during the programme, and from several months post-programme. These categories drew on insights from the following sources:

1. First group interview plus participant and researcher journals, weeks one and two
2. First set of individual interviews, second group interview, participant and researcher journals, weeks three to ten
3. Final set of individual interviews (no journal entries were used as they were completed at the end of week 10)

The use of Te Whare Tapa Whā as parent codes was guided by the study's methodological commitment to a holistic and culturally grounded understanding of wellbeing, as outlined in the Measuring Wellbeing section of the Methodology chapter. This framework aligns with the research focus on mental health and flourishing through outdoor experiences and provides a coherent structure for organising the data. The PERMA model served as a complementary analytical lens to highlight elements of flourishing within each taha.

The journal entries from both the researcher and participants were also added to these four codes. A thematic analysis within each of the parent codes was then performed, with inductive coding used as sub-themes emerged. This method allowed for nuances within each wellbeing category and produced between two and three sub-themes under each taha. An outlying theme emerged from the data, where one participant reported heightened anxieties that ultimately led to her self-removal from the programme. Her experiences remain as reflections with each of the taha and led to valuable contributions for future wellbeing programmes and contexts, as well as challenging any assumption that the outdoors enhances wellbeing for all.

Participant contributions

Although she did not complete the programme and thus her quantitative data is not included, as it was incomplete, Charlie's stories have been included. Her reasons for leaving the programme were based on her low self-confidence and feeling she did not belong in the group, which are very tangible and real issues for many youths. Her contributions help to understand some of the barriers young people may have to participating in outdoor-based activities such as this programme. The remaining participants made diverse contributions to interviews, and all voices have been represented throughout this chapter. Several of the participants were able to provide more in-depth responses, in particular Kya, Huia and Esther - leading to extra contributions in some areas.

The participants' contributions have been added verbatim, so there are some spelling and grammatical errors present. All quotes below are from either participants, or as noted, from the researcher's journal.

Round one: Early Experiences

Early qualitative data focused on the physical challenges and thrills of learning a new skill. The participants were also making initial connections with others. Subsequently, during the first group interview, the participants were less likely to share as they were becoming comfortable with each other in the social setting. The voices of Huia, Lily, Elandri, and Kya, displayed more confidence resulting in them making more contributions than others.

Taha Tinana/Physical wellbeing

Three sub-themes around taha tinana emerged from the early journal entries and the group interview. These themes feature the participant journeys as beginner surfers and the skill development required in the early phases of learning.

Physical challenge and progress

For the participants, it was clear that learning to surf was what had attracted them to initially participate in the programme. Learning a new skill positively impacted engagement, though it also highlighted the challenges associated with developing competence. In terms of prior experience, Huia had surfed a few times in the past, but was not an experienced surfer. Both Kya and Aria were also learning to surf within their outdoor education class concurrently throughout the term. The remainder of the participants had zero or very limited surfing experience, though most spent time at the beach and in the ocean. It was clear from the first pool session that Esther and Elandri were the least confident in the water, as noted by Elandri in her first journal entry.

Today was the first day of surfing. We started out in the pool.....I'm not very good with the whole paddling thing but I'm excited for next week.

Learning the basic skills of surfing in the pool served to identify participant confidence and to practice in a predictable, bounded environment. The introduction of skills such as paddling, rolling their boards and board control in the pool helped participants prepare for the upcoming beach-based sessions, with Lily noting “*we learned a whole bunch of surfing techniques*”.

From week two, the programme moved to the beach, where participants began their surfing progressions. Being beginners and learning about ocean conditions was challenging for them, with participants describing some initial physical discomfort. Elandri reflected in her week 2 journal entry:

It is not easy and first time it was a bit of a mess because the waves were big.

Despite the difficulties, participants valued the challenge of tackling something new and physically demanding. Huia summed this up well:

It was good to see a lot of people trying something new and something that they would deem as hard.

Repetition and practice

The introduction of new skills sparked a desire among participants to keep practising through repetition. From week 2 onward, they began working on their surfing progressions alongside the student facilitators. The conditions on this day were challenging, with larger waves and powerful whitewash. As Huia reflected in her journal:

It was very dumpy, and I didn't end up catching any waves, only tumbled by the whitewash.

Lily also found the conditions challenging, reflecting that *“the waves looked huge, but then-just catching the whitewash.”* Despite these difficulties, some participants used their frustrations as motivation to improve. Kya acknowledged the challenge but also her determination to progress:

I mainly caught the whitewash. I'm not really at the point where I can get greenies yet, but I'm hoping to get to a point where I can.

The following week, she wrote:

I'm getting better and better every week. And I now know how to get through white wash and out to the back.

Huia also began to understand how small adjustments could lead to success:

“I found myself making like we were talking at the end of Wednesday last week. I mean, if I just did a few more strokes, I definitely would have been able to catch it. So that's something to take into account for next time.

Huia understood the value of repetitive practice and how, if frustrations can be overcome, the outcome is improved skill learning and physical advancement.

I feel like I really enjoyed it because it, it's like a practice because a lot, like quite frequently in surfing, for me anyways, I can get like quite frustrated, but it's the practice of going, like doing it over and over again.

Physical activity as a positive health habit

Participants in the programme demonstrated a clear understanding of the benefits physical activity can have on wellbeing, notably rating their taha tinana – or physical wellbeing – as the strongest of the four taha in the pre-programme surveys. This suggests physical activity is seen as a health-enhancing habit. Lily did not view learning to surf as a form of exercise, indicating the social and environmental factors may have enhanced her sense of the activity to include emotional and spiritual wellbeing. She shared that *“I feel like surfing feels different than exercise for me”*, highlighting the difference she felt between structured, organised physical activity and the more dynamic and experiential activity of surfing. In contrast, the benefits of physical activity were seen as important to most participants, with Huia noting:

I think that some sort of activity that is physical, let me say, is, is good for everyone. I think everyone should be shown to implement some, or that, in some aspect of their life.

She added that the benefits to personal health could be enhanced by nature-based experiences:

I always think like, it's great to get outside of course, because you get vitamin D, which can produce some of those good, feel-good feelings.

Taha tinana was clearly already an important consideration for the participants, with generally high pre-test results indicating their sense of physical wellbeing was high.

Taha Hinengaro/Mental wellbeing

There were several impacts on taha hinengaro that ranged from experiencing positive emotions to overcoming personal mental barriers. Participants spoke about their positive emotions and mental challenges as they began their surfing journey.

Fun, joy and excitement

Weekly surfing sessions had a clear impact on mental wellbeing as they consistently described feelings of fun, joy and excitement. Huia reflected in her journal that she felt “*exhilarated and joyful*” after the first surfing session, while Lily wrote she had “*heaps of fun*”. These positive emotions were widely shared by participants and worked to boost early engagement in the programme.

For some, early success in the water amplified this experience. Rose described the thrill of standing up for the first time.

Good, like, catching a wave straight away. It was really fun standing up.

Together, these moments of joy reinforced participants’ motivation and built momentum for continued learning.

Positive mindset and mental shifts

Participants experienced a sense of accomplishment early in the programme as they achieved small surfing milestones and experienced fun. For Elandri, accomplishing her target of standing up briefly during the first surfing session helped shape a positive mindset.

Makes you feel positive. Yeah. When you like can actually like accomplish standing up.

These accomplishments contributed to broader mental shifts, with participants describing surfing as uplifting and restorative. Lily reflected that:

Because it just changes your mindset. Makes you, well made me, happier.

Huia echoed this in her journal, noting the contrast between before and after surfing:

When I came out of the water, however, I already felt so much better compared to 30 minutes prior. I had feelings of relief and a sort of contentment.

Together, these reflections highlight how achievement in surfing not only built confidence but also positively influenced participants' wellbeing.

Overcoming mental barriers

Even in the early stages of the programme, participants began stepping beyond their comfort zones. Lily described the initial challenge as “a little uncomfortable, like, getting up there at the start.” These feelings often surfaced when they did not meet their own expectations around their learning, with Huia admitting that she felt “kind of discouraged” when she couldn't catch any waves.

Despite this, participants demonstrated a growing awareness of the preconceptions around their capabilities. Huia captured this shift:

But, then at the same time, it's just getting over that, you know, barrier of your own thoughts and thinking that you can do this, and it's about continuing to try.

A key moment came during the first beach session when several of the participants were swept further out to sea than they intended. The student facilitators quickly managed the situation, and the debrief extended beyond safety to themes of adaptability and resilience when situations change. Trust in the student facilitators reassured participants, helping them feel secure even in the challenging conditions. As Huia reflected:

If things go wrong, that's ok. It's just life.

This combination of persistence, trust and reflection supported participants to start to reframe discomfort as part of learning and growth.

Taha Whānau/Social wellbeing

There were various impacts on social wellbeing from the beginning of the programme, with participants describing their sense of belonging, support and connection. They described the impact that being in a single sex environment had on them, and the contributions of the student facilitators as support for them.

Peer connection and mutual support

Meeting new people was a highlight for many participants, as they came together to share the surfing experience. There were some existing friendships, but most of the group were meeting each other formally for the first time. Elandri reflected in her first journal entry that *“It was nice meeting new people,”* and Lily similarly valued meeting *“a new bunch of people to become friends with”*.

Huia also emphasised the importance of these new connections, noting that being able to share her basic knowledge of surfing with others reinforced her sense of belonging:

I was able to help out and give advice to my surf mates and felt appreciation.

Opportunities to give and receive support strengthened relationships within the group and fostered a sense of encouragement

Community and mentorship

The programme created a sense of togetherness and shared experience that bonded the participants as a community. The single sex environment supported this sense of community and contributed to both trust and safety from the onset of the programme. Huia shared:

It was good to be able to do it as, like, a community, and especially with all females, but just to, um, go out there with, you know, a group of other people, and especially with, um, the seniors that were there to help us.

Kya shared this sentiment and was able to compare her experiences in the programme against participation in her mixed outdoor education class. Her journal entry stated:

Surfing with the girls, and mentors [student facilitators] watching made me feel a lot more confident when surfing as opposed to our mixed class for outdoor ed.

Together, the encouragement from peers and guidance from senior helpers created a positive, safe environment that enhanced learning and confidence.

Taha Wairua/Spiritual wellbeing

Though early in the programme, participants' sense of wairua was being impacted in various ways. They quickly understood the positive impact of having something to look forward to and the impact that being in nature was having on them.

Anticipation and accomplishment

The feeling of anticipation - for future weekly surfing sessions and for their sense of progress - quickly became a motivating factor. Lily reflected after the first session in the pool that *"I am excited for what next week brings,"* a feeling that was echoed by Elandri in her journal *"I am excited for next week."* This sense of looking forward was more than just motivation, it reflected a change in taha wairua, as participants experienced renewed hope, purpose and energy for what lay ahead with surfing.

Lily summed up this shared excitement during the group interview:

I think it like made a lot of us more excited for like next time being able to do better and looking forward to have that feeling of catching a wave again.

For many, the programme added variety to the regular routines of the school week, as Lily noted it *"breaks up the week a bit."* The inclusion of the programme as part of the school structure ensured they were able to remove barriers to participation, as described by Huia:

...[people] that are limited and they can't go surfing like whenever they want to, being able to do this through the school every week, it's very accomplishing to me.

Accomplishment of these early participation goals led to participants feeling a sense of personal satisfaction towards their experiences in life, as described by Huia:

You always feel accomplished, and you always feel good. Quite good about yourself, that you've done it, and even after you've accomplished what you're attempting to do, like catching a wave, you always, um, feel real good.

Presence and connection

Being present and in the moment was identified as integral to surfing progress. Particularly in the early learning stage, participants understood the importance of focusing on the task and connecting to the natural environment. Esther, who had never experienced surfing before, found this integration especially significant:

I feel like you kind of have to like, put your mind with your body as well. Because if your mind's somewhere else, you're not going to be present where you are at the moment.

Huia had previously been told by an experienced surfer that they experienced a meditative state when surfing – an experience that she struggled to connect with while learning:

I was thinking like, wow, it's really hard for me to get into a meditative state while surfing, but it also makes you realize that it's not just like, you're not just gonna go out to the ocean and all of a sudden you're going to be meditating. That's not how anything really works. You know, it takes time and effort and love.

Elandri also recognised the importance of being connected to the environment around her. She realised that learning about the environmental conditions helped her become a “*bit more aware of your surroundings and not just ‘being there’.*”

Nature's calming impact

From early in the programme, many participants found that nature had a calming impact on them, often despite the challenges of surfing. It was proximity to the ocean that had an impact on Huia, as she described “*being by the ocean, that definitely can make a person feel a lot better.*” However, it was also clear that she found it difficult to articulate the reasons why this happened:

I'm not sure why, but I'm quite sure that it's like a collective thing. That it's not just like, ‘Oh I feel good by the ocean’. It's most people – when they're by the ocean – they feel, you know, better.

This was echoed by Lily:

Being out in nature with the ocean definitely calms you down. So even if you don't catch a good wave or something goes wrong, you know, you can get back up and do it again. Yeah, the ocean just calms you down.

As Lily highlighted above, nature provided valuable lessons when “*something goes wrong*”. As part of the group that had experienced being caught in a rip current, she described “*how powerful the ocean is*”, a reminder of nature's role in both the successes and challenges of the groups surfing experiences.

Round one: Summary

The participants' early experiences reflected on their feelings as they navigated new relationships and skills. They began to experience cohesion and joy from the shared experience of surfing together.

Round two: Experiences during the Programme

The second set of qualitative data is retrieved from the journals (weeks 3-10), the individual interviews from weeks 6-7, and the final group interview, held just after the programme was completed. The reflections are indicative of the participants' experiences as they are immersed in the surfing programme, following their skill progression and challenges, as well as their growing connections to peers and the environment. The contributions came from all participants as they became more confident and relaxed in each other's company.

Taha Tinana

Participants more broadly reported physical aspects of the surfing programme as they progressed, understanding the benefits of regular movement and the impact of practice on skill learning.

Progress through practice

Continued practice and repetition of skills led to all participants experiencing significant progress. Many participants experienced standing up on their surfboards, but this was often fleeting in the first weeks. Persistence led to improvement over time. Elandri captured the excitement and satisfaction in a journal entry: *"I stood up for the first time today. It feels quite rewarding after all the 'almost'...two weeks ago I couldn't stand up, but now I can."*

Once participants were able to stand up, they were encouraged to the next level - to paddle 'out the back' and to catch waves unassisted. This became a clear highlight and goal for all, with Elandri reflecting: *"I think the highlight is like actually like catching a wave, like without anyone like helping you kind of."* Kya was also able to achieve this goal near the end of the programme - *"today I finally paddled out to the wave and stood up for the first time."*

This physical milestone changed the perspective for Huia, as she no longer focused solely on beginner skills, but now she could *"go out surfing with the intention to catch a wave, because that's also like super satisfying."*

Esther's progression was slower than some others, but she maintained a pragmatic and consistent approach. She was able to recognise her progress and understand that skill development was not always linear.

You're not going to achieve everything in one lesson. You're kind of just taking time to, like, see what you've done today, you know.

Physical exertion

Both Kya and Huia enjoyed the physical exertion involved in improving, with Kya reflecting that *“it’s something new to work on, it’s like physical, and surfing is just really cool.”* Surfing requires considerable exertion in navigating conditions and skills, which Huia appreciated:

It does take like a bit of energy, working up to the point where you can confidently like get up on a wave. Especially like when you’re paddling back and forth – It’s good exercise, good practice.

This practice led Huia to participate in specific exercises that would support her surfing. She understood she could improve more quickly by increasing her strength and showed determination to get herself prepared for progress.

I definitely feel like it’s encouraged me to do some things like outside of just surfing and being on the water that can help me progress in my surfing like doing exercises that a specific to surfing so that you can like, get better at being able to get up on the board and stuff.

Huia also recognised the importance of physical activity in mental health, sharing that the exercise *“puts endorphins into your body, which makes you happy.”*

Learning the conditions

As knowledge and skills around surfing progressed, participants also deepened their knowledge of the ocean environment. They were able to confidently read conditions and navigate changing currents, which in turn supported their physical skills. As Kya reflected:

I feel I can become more familiar with ocean like knowing where the rips are, safest spots. And I know we’re like to like go on my board now to like catch waves.

She recognised that she could take more control over her own learning and continue progressing:

When we had small surf, it was still like really cool because like I knew what to do, like I knew how to, like, improve.

This growing confidence also extended to the group. Some participants began leading the safety briefings, taking over from the student facilitators, and sharing their understanding of the conditions. In doing so, they contributed not only to the group’s physical safety but also to their emotional security in the water.

Surfing as a future physical activity

Surfing began to be seen as a physical activity that participants could continue to explore well into their future. There were some barriers to participants continuing surfing, such as transport (two participants had moved far away from the beach), and the upcoming cooler months. Safety considerations were also important, with Esther stating that *“for safety reasons I wouldn’t go out alone, just with someone experienced.”*

Other participants were keen to surf as they gained independence and therefore the ability to provide their own transport and equipment. Huia appreciated that this early experience could shape her future connection to surfing:

I think that it’s still great for me to be able to start surfing at this age, because I definitely would enjoy carrying it on for many years to come.

Kya was also keen to continue surfing – *“yeah, I can see myself surfing”* – and hoped to share the physical activity with her mother.

Taha Hinengaro

Mental wellbeing was reflected through a variety of emotional responses, such as changes in confidence and mindset. Participants were also able to identify the impact that an activity such could have on their wellbeing in the future.

Confidence

There was clear evidence of participants increasing in confidence, both through their physical accomplishments and changes in their self-perception, particularly in relation to body image.

Early learning in the surfing programme led to the achievement of goals and a growing sense of accomplishment as they progressed. As Elandri excitedly reflected, *“I stood up for the first time today. It feels quite rewarding after all the ‘almosts’.”* The group as a whole experienced success in their surfing, which fostered feelings of joy and positivity.

I think it’s like it makes you positive like to be there and actually standing up and even seeing other people accomplish that and like the positive energy of all these people actually getting it right and it is it makes you positive.

Elandri further captured this sense of growing confidence as her skills developed: *“That’s the big thing, like, actually being confident enough to like go out the back and like catching waves.”*

Two participants described initial low confidence as they navigated negative feelings around their body image. Charlie reflected on her discomfort, acknowledging that her concerns were largely internal but nonetheless affected her experience to the point of removing herself from the group:

Even if you're good you just kind of feel super intimidated. And like you kind of have to just think to yourself like no one else is actually thinking that, like no one actually cares.

Similarly, Esther discussed needing time to feel comfortable in her body and to overcome self-consciousness:

I had to take time to kind of get comfortable with the idea of not wearing a shirt or something.

Her initial discomforts eventually gave way to increased confidence and self-assurance, reflecting that:

At the start I felt kind of judged in a way because I'm not as like tiny as the other girls. So I think that was just like one big thing that I kind of like, you know, like work on in the moment. But now I feel confident in it. Yeah, it's just like clearing your head and, you know, stop thinking about what they're going to say or what you'll look like.

A 'mental break'

Participants consistently expressed they experienced feelings of calm and clarity from the surfing programme, feeling rested and recharged afterwards. Huia shared her feelings:

You feel good and whole just being on the water -after the surfing -it kind of helps me to clear your mind.

Esther explained these feelings as a sense of freedom, or “*escape from reality and just kind of, like, take time to yourself.*” Lily also reflected on this point, and felt the surfing programme provided her with the ability to relax and relieve stress:

It makes me feel like so much more relaxed, especially with every like assessment going on. It's like, all this pent-up stress. And when you're out there, like your head just like clears and there's like, nothing to worry about.

Surfing provided an escape from stress for Mia and Rose. Mia reflected that surfing “*takes my mind off all the schoolwork I have to do,*” and Rose explained that surfing “*takes my mind off like, school, schoolwork, home.*”

Lily indicated that she felt a positive change from implementing the programme into her week:

I feel like it's definitely helped me. And like, I feel a lot more calmer, coming like back to school the next day, because it's just like a fresh start for me and it just it's so much better to have something like that in between.

Elandri also reflected this sense of taking time out to enhance wellbeing, sharing that “sometimes you get a bit lost in all the stuff happening around you, but yeah, it's like so calm and relaxing and you can actually just take time and think about yourself.” Esther also took the time to reflect while surfing, explaining the benefits of taking a mental break:

Even if it's just like sitting there clearing your mind, thinking.

Lily captured the sentiment most clearly, explaining that for her the surfing programme offered a chance to discard any negative feelings from her day:

I feel like just everything that has been going on, just washes away.

Reframing challenges

Several participants reported they had a change in mindset and were able to navigate challenging situations differently. As Huia identified, she would get frustrated at times if the conditions “wouldn't even let me get out back like I just kept on getting tumbled roller rolled over.” As time went on, she changed her approach and, rather than get negative or angry, she would just leave her board and the beach and go for a swim. As she reflected:

I just felt like so much better. And I just felt like that was kind of an irrelevant way to feel.

Elandri shared this shift in mindset around approaching challenging situations – “there have to be some negatives, everything can't just be positive. You have to learn to adapt to the negatives and make the best out of it.” Similarly, Lily reflected that she had initially felt a mental barrier when navigating challenging conditions, but that through practice, she shared that “you can get through it.”

Esther experienced a significant change in her outlook and expressed that:

This has held me through my confidence and positivity, and I just like, self-awareness in a way.

As she progressed through the programme, she reflected that confidence needed to come from within rather than be gained from others:

I think that comes within yourself. And once again, if you're feeling like judged at the time, you're not going to be confident at all. And I feel like that's kind of up on you to feel, like working on your mindset to feel different.

Elandri was perhaps the most direct with attributing positive character changes to the surfing programme, describing how she felt compared to prior to beginning:

I think the surfing has helped me to become a more positive, humble and relaxed person.

Ongoing impacts

All the participants had advice concerning ongoing access to wellbeing opportunities such as their surfing experience and providing the opportunity to other students. Aria was not alone in the group when she suggested the programme should be longer so the positive impacts could be experienced throughout the year. The group were able to reflect that the surfing programme bolstered their wellbeing beyond the day of surfing and into the rest of their week. Rose reflected that the surfing programme positively impacted “*the approach to my week*”, and Esther recommended continuing surfing or “*just being in the outdoors.*” As Kya shared:

It's like a recharge almost. Yeah. And then I feel like it helps me for the rest of the week.

Some participants reflected that students could have access to a range of activities that produce positive wellbeing outcomes. Mia suggested that some students may prefer activities such as drawing or reading as a respite from school stresses. Despite not completing the surfing programme, Charlie understood the benefits of including wellbeing practices in the school week. Her suggestion was to include a variety of activities as options:

It would be good like, well I know it's kind of difficult to do this, but if there was like different kind of activities, if you were into art or surfing and it was all had a wellbeing kind of thing into it. So, if there was like a like an art class and everyone just painted and talked.

Rose shared that if students had something to look forward to in their school week, it would “*make them feel more happy to actually come to school.*” As Huia concluded:

I hope that more students in the future get the same or a similar type of opportunity, as well, because it's great for your mental wellbeing and just it's good practice to stay in the moment.

Taha Whānau

A strong sense of trust and shared identity emerged among participants, particularly through the all-female space and mentoring by the student facilitators. Despite many of the participants not knowing each other before the programme, the shared experience enhanced relationships between participants and extended to the student facilitators. The social connection grew significantly between the participants over the programme, and the social aspects were noted frequently as being beneficial to them, representing the importance of connection and relationships.

The importance of support from peers

Over the course of the surfing programme, the social connection between participants grew, and they would surf or walk to the beach with people they initially didn't know. The bond they shared was evident not just when they were surfing but also during the last group interview, where they agreed or supported each other's ideas. This was a sharp contrast from the first group interview, where participants were less keen to share in the new group environment. The social connections were clearly stronger after the ten-week programme. As Huia described:

I feel like I love the environment, like just talking with the girls. Like, while I'm on the water, and like encouraging them and them encouraging me.

By the end of the programme, the dynamics in the group were more fluid, as participants spent time with various individuals rather than being confined to one small group. As noted in this researcher's journal entry:

Rose and Lily decided to boogie board and had a fun time, laughing so much. Elandri was away sick so although she surfed, Esther stayed with Rose and Lily. I could hear them laughing from the beach.

Lily in particular, took the opportunity to meet new people and create new connections as well as strengthen her friendships. She noted that she was:

Getting a lot closer with my friends being able to just go out and do something that we wouldn't usually do like stepping out of our comfort zone.

Despite having these close friends in the group, she also spent time with others, and her connections with these new peers helped broaden her understanding of her friends.

You get like this different sense of people like something that like you don't typically see at school.

Rose also enjoyed getting to know new people, sharing that *"I like interacting with other people – I've talked to other people, and my friends, and it's been good."* Mia also had close friends in the group, and this was the main reason she was involved in the programme. She had a self-described love-hate relationship with surfing, and the social connections were integral to her completing the programme, though she did learn to surf and stand up. On reflecting on her future participation, she said:

I like it because I can go out and surf with my friends. But I probably, like, wouldn't choose to do it by myself.

Encouraging others

As the group became more comfortable with each other, they began actively supporting and encouraging their peers. Their focus shifted from their own learning to include the whole group, and many participants reflected the feelings of Elandri when she said, *"it's nice to see people accomplish their goal of standing up"*.

It was also important for some participants to individually provide support and tips. Huia enjoyed this aspect and shared that *"it's good to like help the other girls around, like encourage them, motivate them."* She shared a time that she had provided Kya some advice:

I cued her on when to stand up and then she actually caught the wave which was really satisfying for both of us. I assume it'd be satisfying for her, Yeah, it's a great energy around the group.

This support was appreciated by others in the group, which increased the connection between individuals. As Kya shared:

Huia gives me, like, really good advice all the time. Like, she'll tell me, like, what to do to get on the wave and when to go – "Kya go for this one".

As the participants began to spend time with others, they also learnt from their progress. Elandri reflected:

You see someone doing that and then you try that and, oh, okay, this works, but that person does it like that, but that doesn't work for me, so let's try that. Like Kya, she does it like that and that, so let's try to do it like that and that.

A sense of belonging

Surfing as a group, who were all on relatively the same ability level, created a community feel that fostered a strong sense of belonging. As Kya reflected in her journal, *“I’m actually starting to enjoy surfing, and surfing with other people who are new to surfing allows me to feel more comfortable.”*

Lily was able to explain the feeling that surfing was helping the connection between participants, enhancing the sense of belonging. When discussing the communication that was occurring amongst the group when surfing, she reflected:

You just like tend to connect a lot more when you’re out there.

Lily and Esther shared a similar sentiment when they described being *“surrounded by people in that environment that, you know, make you feel comfortable and confident”* (Esther), and *“I feel most comfortable with my friends and I feel most comfortable with, like all the girls”* (Lily). Huia also reflected that *“It was good to be able to do it as, like, a community, and especially with all females.”*

For Elandri, there was a sense that learning to surf had helped her to further integrate into ‘kiwi’ culture. She had perceived that only those who grew up surfing could do so, and that she was an outsider to this community. However, she expressed a desire to join the surfing community and chose to join the programme to try an activity that she considered integral to being a New Zealander. She wanted to try because *“you’re in New Zealand, you’re living next to the beach.”* Through the programme, she realised that anyone could learn to surf and that she was now part of this community she had only previously observed.

However, not all participants experienced a sense of belonging. Aria remained relatively ambivalent to the social connections and preferred to focus on her surfing progression. She would contribute when asked about conditions or her learning, but would not seek out others during surfing sessions, often preferring to surf alone.

Charlie discussed how she did not connect with other participants and felt that she would have stayed in the programme if she had a close friend there. She reflected:

I’m not really in that friend group with those girls kind of, and I didn’t want to like push myself in or anything, but if you have friends in there, that it’s, it looks really fun.

Charlie was unable to overcome feeling ‘overwhelmed’ and ‘intimidated’ and ultimately chose to discontinue the programme after several weeks surfing.

Single sex environment

Having a community of females together was a highlight that extended between participants and to the student facilitators. The single sex environment was described by many participants as being essential to the programme, with Huia reflecting that *“it was good to be able to do it as, like, a community, and especially with all females.”* Several participants discussed that they felt more comfortable with only girls, including the student facilitators and the researcher, and that the environment was non-judgmental. Lily compared the surfing programme to being with both males and females in class:

I think it's very good. Because like, a lot of the time in PE it was very difficult to like, get out and like do things without feeling uncomfortable, because I would constantly feel judged, but when it's all like, just a girl environment, it makes it very, like warming and comforting. So, I think it's a lot better.

Mia reflected that the programme was *“more fun because we're all girls and we don't know how to surf”*, indicating that shared progress was important. Kya was also able to contrast her experience in the programme with her outdoor education class, which she felt was more restrictive.

Surfing with the girls, and mentors watching made me feel a lot more confident when surfing as opposed to our mixed class in outdoor ed.

Rose enjoyed the single sex environment and thought it was better for her. She described that boys can be a *“...bit try hard and like, show off”*. Kya was able to contrast the surfing programme with her experiences in her outdoor education class, expressing her preference clearly.

I think I'm definitely more comfortable surfing with girls, you know? Less judged you know, like this sort of mana wāhine thing, you know, like we all like we all understand each other. Sort of like there's an understanding between all of us. Just really comfortable with that, with the girls.

The role of the senior student facilitator

The role of the senior student facilitators evolved throughout the programme. Initially, the participants leaned heavily on the facilitators for advice and learning, which was individualised weekly. As Kya shared in her journal:

The encouragement and support from our mentors has definitely helped to improve.

The student facilitators were able to adapt to the needs of the participants, and their flexible approach supported everyone in their progression. They were empowered as the programme progressed to make decisions about each participant. This researcher's journal entry shared how the student facilitators were taking ownership for the participant's progress:

The helper [student facilitator] came in and said 'they are having so much fun out there.' She decided that next week they should have a quick refresh on popping up and that the helpers should then be out on boards with them as they [participants] have progressed to that point.

The participants perceived the student facilitators as playing an equally important role in ensuring their safety as in providing instruction, especially as their competence developed. Esther described feeling safe just knowing they were there, a sentiment that was echoed by Lily.

But like, they have definitely helped, like me making me feel more safe. And knowing that I'll be like, Okay, if anything didn't happen.

Lily valued both the sense of safety provided and the boost in self-efficacy gained from the pre-surf discussion, which was tailored to the day's conditions. Two of the girls had been caught in a rip and were easily brought back to shore by two of the student facilitators, which increased the trust the participants had in them. Lily reflected on why she felt safe:

Coz I knew that. Like, everything would be okay, purely because we had like a lot of surf lifesavers, there. And I knew that like, even if they weren't able to get us I like, I knew that what you do is you just let the rip take you out.

As the surfing sessions progressed, the student facilitators were spending less time directly coaching and more time refining skills and surfing with the participants. As noted in a researcher journal entry:

Student facilitator Ariana came and surfed with them; they loved watching her surfing properly. Aria and Kya paddled out the back with her and paddled into some of the bigger waves. Both coped so well, and I do think it was because Ariana was there and they could feel her encouragement.

Taha Wairua

Spiritual wellbeing was enhanced through participation in the programme, with a variety of impacts felt by the group. Anticipation remained important as they navigated busy school weeks. The surfing programme fostered a sense of calm that reinforced the participants' relationship with nature and appreciation of the place they lived.

Anticipation and temporal wellbeing

As the programme progressed, the participants noted that it was having a positive impact on their week, and they were looking forward to it as a highlight. Elandri noted her feelings as *“positive and excited for next time”*, and Kya wrote in her journal that surfing *“... has now become something that I look forward to every week.”* Other participants also reflected these feelings, with Aria sharing that *“it makes me feel excited for next week.”*

As well as having the mid-week distraction of the surfing programme, Kya noted the broader positive impacts that flowed through their week. For some, these impacts went beyond their Wednesday session, as Kya noted in a journal entry:

I've noticed that surfing has sort of separated the week for me, making the days less boring and long.

Lily also discussed the surfing programme as something to look forward to amongst the busyness of school. She described school in the following way:

It's just like so much to take in. But when you have like that break, it's like kind of like a breather.

Both Kya and Huia considered that the programme contributed to them trying to surf more at other times. Kya's mother is a surfer, and she was excited to be able to spend time with her on this shared activity. Huia was also motivated to continue her own learning journey in surfing.

I just really enjoyed it and this programme has inspired me to start surfing on weekends and follow swell maps.

Mindfulness and presence

Participants identified the importance of being in the moment and present when surfing. Kya described the importance of focus and attention:

You have to focus on one thing. Like when you're getting on the wave, you're focusing on paddling. And to actually catch the wave, we have to stand up on the board. So you're in the moment.

Kya's sentiment highlighted that if she wasn't concentrating, her ability to read the waves and conditions was not good enough for her to continue improving or be enjoyable. Huia expanded on this notion.

I mean, I remember last year someone telling me that for them surfing was like super meditative. Meditative. Yeah. And, um, and that moment I was thinking like, wow, it's really hard for me to get into a meditative state while surfing, but it also makes you realise that it's not just like, you're not just gonna go out to the ocean and all of a sudden you're going to be meditating. That's not how anything really works. You know, it takes time and effort and love.

The need to stay present in the moment during surfing was discussed as integral to success. It was mentioned by several participants that being present and 'in the moment' crowded out any negative emotions they had at the time. Kya suggested that to surf, there was a need to focus on the task and to succeed, "you just pay attention to your environment you're in". She contrasted this with being at school, where she described being more easily distracted and stressed. Lily echoed this notion.

And you just like live in the moment. And I think that's like something that like a lot of people should get behind because like, obviously school is very stressful.

Esther also described the importance of staying present while learning to surf.

When you just like stay in, stay in the moment- stay present- it's like really nice. And each wave that goes past that you try and catch you like progress more and more.

She described the negative implication of not doing so, and that failing to be present as "It's not going to work out."

Huia discussed how surfing presented opportunities for young people to experience a sense of mindfulness through activity, and how it contrasted with more traditional mindfulness techniques such as mantra meditation or breathwork:

But I feel like being able to do something that's a bit more mindful instead of like, hands on all the time, every day, I feel like it would make students feel like have a more positive outlook. Mindfulness, like a lot of people don't really like, you know, mindfulness about like meditating and stuff and like doing yoga. I don't know, people don't, tend to not like that at this age, they tend to not be mature enough to want to sit down like clear their head.

Increased connection with nature

Nature and the environment were discussed in several different ways by the participants. As Elandri noted, being in nature was "just nice", and the added element of doing an activity in nature was a positive. Lily described her connection as growing as she developed an understanding of what the area means to her:

I think it's very like peaceful to like connect with like the land like, you really get a feel of what it's true meaning is kind of to you – like this where we were born, this we were raised, and it's really good to connect with that.

Several participants were able to describe their feelings of peace and serenity when in the ocean. The ability of nature to provide moments of spiritual enhancement was described by Huia:

It just brings a lot of peace, just being able to be on the water and surfing.

She continued with expressing how the ocean provided her with a sense of serenity and that even if she did not catch waves, she felt the positive impacts.

I love the feeling of just being able to sit at the end, just like breathing fresh air, and just like look around. And it's like, you know, not very noisy, there's no distractions.

Kya shared this sense of serenity and found she was able to appreciate the environment with a sense of growing awe:

I feel like it, but the nature of it has really added to it too, because it's like so beautiful. Yeah, it's quite distracting to, like, you know, sitting there -'whoa'.

Esther also shared that she experienced a feeling of peace and was able to calm her thoughts and enjoy the moment. *"I feel like if you're outside in the air, it's kind of just like, refreshing yourself. I mean, as the waves go out, your thoughts go out."*

Respect and appreciation

The ocean became a place to be appreciated for its beauty and calm but also respected for its force and the dynamic environment it was. Most participants spoke of the increased connection and awareness about the ocean environment they had gained through the programme. As Rose reflected, *"it makes me appreciate it more."* Esther also shared this feeling of gratitude and appreciation, sharing that:

Just kind of grateful, I'm just to like, learn something new, especially around the ocean you're living in.

Esther's appreciation of the environment began before the surfing sessions began, as she discussed in her first interview.

So, when you're walking to the beach it kind of just gives you time to like reflect on what you're about to do and just like feeling the breezes and different like smells and

like especially like the salt of the water just kind of like prepares you kind of what you're going to do. Yeah, that's very cool.

Kya suggested there was a sense of awe around the environment, and that supported her appreciation of the place she lived:

But I feel like yeah, because we are actually so lucky to be living like where we are. But yet it's super awesome just looking at everything again, like when you're on the wave, when you look out to the beach, you see all the sand, the dunes.

Elandri shared that it was both appreciation and a healthy respect for the ocean. Being relatively new to the area and to the ocean environment, she was aware that there was much to be gained from being in nature, but also felt the reminder of the ocean's force was important:

I think sometimes it is good if the waves are a little bigger because it reminds us of the power nature has. It reminds us to respect nature.

Huia also described the importance of being respectful and aware when in the ocean.

Sometimes it's oh it's just the ocean but then you see it is dangerous – it can be dangerous – but it's not always it's nice and it's calming and yeah. So you respect it a bit more, I think it's not like just going to the beach – it's like actually being connected.

Summary: Round two

Capturing the lived experiences of the participants during the surfing programme outlined the growth they were experiencing, both through positive change and the challenges they worked to overcome. Surfing became a vehicle for relationships to be formed, nature to be appreciated, and perspectives to be challenged. The completion of the surfing programme was marked with some sorrow as participants expressed a desire to continue despite the cooling weather and water conditions.

Round Three: Post Programme Reflections

The final set of qualitative data is from the second round of semi-structured individual interviews. These were held approximately six months after the surfing programme finished, toward the end of the school year. Snapshots of the second (post-programme) survey results were included to reflect the participants' shifts in wellbeing scores. Participants offered a range of reflections around their post survey results, and the impacts the surfing programme had on them. These contributions indicate the participants' growth and changes in perspective as a result of the surfing programme.

Taha Tinana

The participant's physical health was considered highest during the Hua Oranga pre-test, yet made a small increase ($M = 0.88$) in the post-test and became the highest overall taha of wellbeing. Participants' interview discussions outlined several benefits they experienced from participation in a new physical activity, and the impacts the physical aspects of the programme had on aother areas of their lives.

Surfing as a springboard for ongoing physical activity

In the post-programme interviews, all participants were asked about perceived physical benefits of the programme, with all agreeing they missed the regular opportunity for movement throughout their week. As Huia shared, *"the physical activity part of it, like, moving your body is obviously very beneficial."* She felt that the benefits of movement extended to gains in her strength and to having the benefit of vitamin D provided by time outside.

Elandri found the physical activity aspect rewarding, and she approached her school day better when she exercised. She began to seek out other ways to exercise through joining the gym and running, sharing that:

If I train or something, I find it easier to learn for tests and stuff.

She became significantly more involved in school sports, including athletics and netball, and began to be physically active in her own time and own motivation:

And I think, like, the physical thing, it, like, motivated me to stay more active or, like, to be more active. (final interview)

Esther also discussed her increased involvement in physical activity and how she was now regularly going to the gym. She shared that this supported her confidence and focus during the school week.

For Lily and Aria, the increased participation flowed into other areas of school life, and different activities. Aria became more involved in kapa haka which flowed into participation in the school production. It was Lily who had been least involved in other activities and was now experiencing a strong desire to do extracurricular activities.

I've actually gotten into doing things like the surfing thing. I've done a whole bunch of dance things, and I feel like I'm a lot more satisfied, like, where I am because I pushed myself to do the best I can. (final interview)

Skill learning in nature

During post-programme interviews, participants consistently emphasised that learning a new skill - specifically surfing - was far more impactful than just relaxing in nature/on the beach. Having clear goals and a focus gave their time in nature deeper meaning and a sense of purpose.

Learning to surf was identified as a key contributor to feelings of accomplishment. When asked if they would have experienced the same benefits if they had simply gone to the beach, participants unanimously agreed that skill-building was essential.

Lily reflected:

I do feel like I wouldn't have learnt as much because I'm not necessarily learning a new skill and it would've felt like, this is so much fun, but, like, what's the point? Like, yes, I'm gonna feel better about myself after, like, I'm getting a nice break, but what's the actual point of being here if I'm not gonna learn a new skill? If I'm not gonna, like, take my water abilities to the next level, like, have new knowledge, and kind of what is the point to do it if there's not something big that's that you're gonna learn from. (final interview)

The progression in surfing skills was obvious throughout the programme, and each small individual achievement was celebrated. Kya shared that *"it was still like really cool because like I knew what to do, like I knew how to, like, improve."* Participants valued having a focus - something to work towards - rather than just *"chilling."* The combination of nature and purposeful learning created a powerful environment for growth, reflection and overall wellbeing.

Taha Hinengaro

Mental and emotional wellbeing had a significant increase through the Hua Oranga survey, with a mean shift of 1.38 and P-value of 0.01. Participants outlined the various impacts they felt through the programme as they pushed through many natural fears and anxieties involved in learning a challenging skill in the outdoors. Their growth supported an understanding of how nature and physical activity could help with day-to-day stresses and provide a sense of calm.

Beyond the comfort zone

Gaining confidence was a common theme for most participants. This was not just in their physical abilities but mostly in the confidence gained from stepping outside their comfort zone. Kya shared that:

There was still, like, that nervous part of it, but I guess that made it more interesting because I was scared.

Esther was also aware that she was experiencing changes in the way she felt about herself, reflecting that “...mentally, I feel like way more than I was, like, not as self-conscious as I would be.”

Two participants spoke about the concerns they had around body confidence. Esther initially felt her confidence was an issue in the programme, but she was able to work through this and become fully involved. She understood that at first, she thought that “...the way I would speak or act or I don’t know, just like my decisions might have been judged by others” but she quickly became “...satisfied with myself in a way.” Her growth in this area was evidenced through her increased willingness to get involved and contribute, and she developed a sense of accomplishment from her successes that worked its way into her sense of wellbeing.

I feel like the beach kinda, like, helped me to calm myself and the surfing just, like, being able to come up to the water, just, like, being able, like, to stand up or just, like, accomplish standing or, that was a big thing as well.

Charlie was most impacted by a feeling of judgment from others, and she did not feel she fitted in with the group. She described her feeling while walking to the beach in her bikini as ‘intimidating’ and that “... like the walk there and you kind of like, don’t know what, like who to talk to or you just like think that you look a certain way, but you probably don’t.” Here, she touched on the fact that she understood that she was likely not being judged but was unable to change her feelings. She offered “...like a suggestion, if there was, like, a little circle and everyone, like, came around and talked together and all was like one whole group, you know?” Interestingly, this had occurred at the start of the programme, but Charlie had not attended that session, which further contributed to her feeling of exclusion.

Her perception that she was being judged proved to be very strong, and she mentioned that a parent had pushed her many times to try new things, “...over time, it kind of you get more used to it, but sometimes you still kinda feel awkward and stuff like that.” She was keen to try activities that she herself had chosen, which had included this programme, but when others became involved, she felt pressured and said “...no one really just understands and can kinda just, like, relax about it and just kinda let you do your own thing.” For Charlie, the pressure of being pushed to be involved in multiple experiences had led to a decrease in confidence.

The quiet between the waves

Being out in nature and experiencing a sense of quiet and solitude was important to most participants. Aria understood that nature had a calming effect and that she would “...go for a walk and clear my mind” if feeling overwhelmed. Charlie was also clear that the summer months had a positive impact on her and that “...I feel like everyone kinda like thrives in the summertime and that’s definitely me.” The combination of the warm summer months, being outside, and the physical activity of surfing created an opportunity for calming moments amongst their busy weeks. Lily described her week as “chaotic”, juggling school, part-time work and social activities.

She remembered the feelings she had during the programme, and her sense of reprieve from the classroom:

There were just loud people all the time, and it felt really nice to just have one period of the day where you just go out where it’s nice and calm on the water.

Rose also described her feelings of serenity from the surfing programme:

When you’re just sitting there, I feel like that’s the most peaceful part. I find it really peaceful, like my mind just like stops, like thinking about everything I have to do at school or I have to do at home, it’s just like peaceful.

Huia also echoed this feeling:

When you’re just sitting there, I feel like that’s the most peaceful part.

Kya was also clear that surfing had a very calming impact on her and reflected:

I feel like it was, like, really calming – surfing. It was still like a sport, but, like, there was, a quietness to it. But I feel like it got everything to, sort of slow down. Like, it just got everything to sync, sort of.

Esther shared this feeling as she described that “...I feel like the surfing kinda helped you to cut your mind and just, like, giving you time to breathe in a way.” She described understanding the need to be present to be safe in the ocean, but with that presence, other negative emotions could not come to the surface. Huia was able to express this when she said:

And just, like, stress is kind of stress kind of resides in future thoughts and past thoughts. It can’t really reside in the moment unless you, like, make it as such, but that’s only when you’re thinking about the past or the present.

For these participants, surfing provided an opportunity for them to 'crowd out' some negative or persistent thoughts from their otherwise busy lives.

Wellbeing programmes in schools

Throughout the interviews, the participants offered recommendations for how they would implement a programme like this for other young people. A key recommendation from Aria was echoed by others in that it should "go for the whole year." As a brand-new surfer, Esther was clear that everyone should at least try surfing to understand if they gained the same impact as she had.

But I feel like if surfing could be a thing that we could do every day in the school or during the weekends, what do you think would be great, you know? Especially to those who don't know the feeling used to surfing.

Having something to look forward to during the school week was discussed as a benefit that would assist in motivation, and potentially even in attendance for some.

I think they'd be more like, happy to come to school... Yeah. Make them feel more happy to actually come to school.

The general feeling of the programme being a break, or a refresh in the middle of the week from the stresses in school, persisted. Kya coupled this notion with learning something that wasn't tethered to schoolwork and classes.

Because I feel like. Just like having those, like, if like all classes, maybe like, separating it, like boys and girls and then having it like in the middle of the week. It's just like a good break from everything else. And it's something new to work on, its like physical and surfing is just really cool.

It was suggested by a couple of participants that other activities may also suffice to achieve many of the benefits gained from the surfing programme. The options were not limited to outdoor-based activities but broadened to personal preference, as suggested by Huia.

I think I great thing to implement, like some people just like going on a bushwalk or something. ...And just being able to like, it's kind of like, take a step back.

Charlie suggested providing a range of options for students to choose from, based on their interests and abilities.

I know it's kind of difficult to do this, but if there was like different kind of activities, if you were into art or surfing and it was all had a wellbeing kind of thing into it. So, if there was like an art class and everyone just painted and talked. That would, that would be really fun. Yeah. And, or whatever anyone's into, kind of. Like you, whether it's like learning to do something that you've wanted to do. Yeah, something different.

Both participants were able to understand that the benefits may not be isolated to one activity, and that if young people were provided with options, they may be able to choose a direction for themselves.

Taha Whānau

The most statistically significant increase across wellbeing domains was in both taha whānau and the eudaimonic social wellbeing subscale. These results are strongly supported by participant stories in the following section and highlight the important role that connections play in wellbeing.

Friendships and new connections

At the post-programme interviews, participants discussed the impact on both existing relationships and new connections within the group. Lily described her experiences as “...doing something different in a way to like socially interact with people.” By the end of the programme, most participants reached out beyond existing relationships and made new connections, as highlighted by Elandri.

Well, it's nice to do something like that with friends, so it also brings you closer with your friends.

She felt that her existing friendship with Esther was enhanced by being in the surfing programme together:

I feel like, it's us both being able to be vulnerable in a way, which is, like, being able to look past our competitiveness and just being able to learn together.

Post programme, Lily indicated that meeting and getting to know new people through participation meant she was now able to connect with them in classes “...I can obviously sit with them and stuff, which I think is good because, like, so that I'm not just, like, confined to a couple of people.” She also spent time with Esther and Elandri learning about their South African culture and was able to “...see how they experience life”. This indication of connection and belonging through a shared experience was strongly mirrored through her very high increase in both taha whānau and eudaimonic social wellbeing scores in her surveys.

Kya also discussed the importance of making new connections. She found the social aspect invigorating despite not being the most 'social person'. As she reflected:

I got to socialise, with other girls and, like, talk to more people.

Huia thoroughly enjoyed the social aspect and thrived in the environment where she could make connections. She described the feeling when out surfing with others:

I feel like a lot of the time when you think about surfing socially, like, it's most of the time it's all good vibrations... it's like a good vibe always.

Not all participants found the social aspect important, with Aria often spending the surfing sessions alone focussing on her own progress right from the start of the programme. She was consistently focussed on improving and the social aspects interested her but did not impact her participation and this was reflected in her taha whānau results which did not change through the programme. Charlie was also unable to connect socially and was not confident in making new friendships amongst her peers, impacting her withdrawal from the programme:

Getting in there with, like, girls that especially have their own friend groups as well as can be intimidating.

Being supported to learn and grow

Huia reflected on how important it was that group members valued the support she offered, even seeking out her tips for improvement. This helped her own experience to be positive, as she stated "...and even when I would, like, give other people advice, really, it was like it made me feel better as well." She connected her value to others as being integral to her success within the programme.

I remember giving people like some tips and stuff, and then it was just a great feeling to, like, see those tips actually work and see them catch waves, because they're trying to do something different.

The theme of learning in a safe and comfortable environment was discussed by Kya, who said, "... it was like a safe space, I suppose, like, to learn something." She expanded on this notion by highlighting the lack of judgment from the group, and that she felt she could fall off and "make a fool of myself." Esther had similar sentiments in this area and realised quickly there was no judgement and that she could progress at her own pace in a safe and comfortable environment.

Kya disclosed that she had continued to surf occasionally through winter but that *“...it’s just not quite the same.”* When asked to expand, she mentioned the group effect and that her learning phase had slowed down. Kya shared her excitement that she was going to Hawaii to visit her sister with whom she would now be able to surf.

Just the girls

After the programme was completed, the participants persisted in their sentiment that a female-only element was essential. Mia found the single sex environment to be very important and was clear that being with ‘the girls’ was more important to her than the actual surfing. There was a comfort level that several participants discussed that allowed them the freedom to learn in confidence. Kya stated *that “surfing with girls was, like, way more, like, comfortable,”* and Rose shared the sentiment with *“...we wouldn’t have felt as comfortable.”* She felt that boys were *“intense”* and *“show off”*, and that *“...it wouldn’t have been as good if they were with us.”* Kya also indicated that the presence of boys would have negatively impacted the programme, as she would have been *“...always conscious that they’re there”*. She understood that her feeling of being judged by the boys was likely a perception, but an important one to overcome. As she reflected that *“I felt way more comfortable and, like, less judged in a way”*.

Mentorship

By the very end of the programme, the participants were mostly surfing as a group, while the student facilitators would watch from the beach. The role of these student facilitators transitioned from coach to safety managers, through to observers was matched by the participants’ increase in sense of autonomy in the eudaimonic psychological wellbeing domain. As they improved in skills and in trust of each other, the participants increased their agency as a group and didn’t require the intensive supervision they did at the start.

This sense of the group’s emotions being bound together extended to the student facilitators, with Lily appreciating getting to know the older girls. The student facilitators were discussed for their role in the safety of the group, as Rose noted *“.... because I trusted who we were with and I didn’t think anything bad would happen.”* She displayed a high level of trust in the skills and knowledge of the student facilitators involved. Interestingly, the participants did not discuss the student facilitators in terms of their contribution to their surfing skill in these final interviews, but were consistent with the safety message, as explained by Kya when comparing the sessions to her outdoor education classes.

It, like, we felt like I felt like way more safe surfing during that period than I did in outdoor ed because I knew that if I, like I don't know. Had a situation or something like, they would be there to help.

The role of the family

Participants discussed the role of the family in supporting children's participation in outdoor activities and in developing wellbeing strategies. Aria brought up an important consideration when discussing equitable access to activities such as the surfing programme. She believed that schools should provide these experiences, as "... *Home usually can't*". Lily agreed that different situations at home meant that the consistency was not there for everyone to access opportunities. She described how parents' time was torn between various things, and that "...*they don't wanna go out and do things necessarily all the time consistently.*" She was absolute in believing that when the programme is scheduled during school time, it suits everyone and becomes a highlight of the week. Kya was also aware that families are constructed in different ways, and that she was fortunate to have parents who had the time to take her to various activities if required.

Huia agreed that schools were the best place for young people to get both opportunities like this programme, and education on mental health strategies. She believed that even if parents were recommended to teach their children strategies that it wouldn't be "...*guaranteed that, students will get those type of care.*" She firmly believed that children should be specifically taught skills and strategies to support their own wellbeing and that schools should be consistent in delivering this. She suggested:

Children may be feeling like, I guess, left out that they were never taught, aspects like that about what it means to be content, and ways that you can do that, and practices that can help calm you down and stuff like that.

She took this notion further by suggesting the ongoing future impact on the following generations.

But also, through doing this at school, it leads the hope that this generation, when they become parents, they can teach that to their children.

Taha Wairua

Participants felt their spiritual wellbeing was enhanced through participation in the programme, with a mean increase of 1.25 (SD = 1.04) across the group. The aspects of taha wairua captured in interviews ranged from the benefits of nature exposure and environmental protection, through to fostering a sense of meaning and purpose. Understanding of taha

wairua expanded beyond the self to encapsulate moments of awe and environmental awareness.

Being in nature and the appreciation of place

All participants expressed that they missed the opportunity to go 'outside' and spend time in nature. Elandri firmly understood the benefits for herself and believed others should spend time in the outdoors:

I think it's good for people to spend time outside.

Huia was able to express the benefits and hoped to share that with other students in the school:

There are benefits, and I feel like a lot of students aren't as open-minded as that – to think that just standing in grass with their feet can benefit you.

She reinforced that schools were able to support young people in understanding the positive impacts that nature exposure can have on them:

You could teach the students how, like, the aspects of the benefits of just being in nature.

Esther echoed this sentiment when she was asked if she believed it was the impact of the surfing or of the environment, saying "...I feel like it's the beach and the ocean", and I "calming place." Lily also believed it was the environment that supported her enhanced sense of wellbeing, and her appreciation for her local area grew. She spends a lot of time at home in her spare time, preferring to read in her room, so the surfing programme has provided her with valuable time outdoors.

I think because, like, as someone who does spend a lot of time at home and, like, just in such confined spaces, it's good to see what places are, other than just like something that is man-made. Just something that is just built from, like, pure nature, just from the world is so refreshing than just constantly seeing man-made structures.

Kaitiakitanga

The sense of kaitiakitanga grew within several of the participants, with an understanding that taking care of the ocean and beach environment was everyone's responsibility. Kya discussed that the surfing programme had made her realise "...a few things", and that while she didn't feel it was her fault, there was much to be considered when using the beach.

Like, actually, I do have a, like, a responsibility, New Zealander, like, taking care of certain things, because I always see posters around school, like, overfishing and stuff and, like, pollution...But, like, this thing about being responsible, like, with, like, not overdoing it.

Lily was also concerned about the future of the ocean and beach and was keen “...to just get out into the nature and just, like, enjoy it for what it is before, like, climate change, whatever the world, like, ruins it.” Several other participants mentioned they had increased their sense of care for the beach and that with an increase in knowledge about the space, they had come to better respect it. Elandri and Esther had consistently maintained a healthy respect for the ocean and considered it a place that could be perilous if treated carelessly. The notion that the ocean can provide rich learning and grave dangers if not adequately respected was highlighted as particularly important to these two participants. Esther had an extra dimension as she disclosed late in the programme that her brother had drowned as an infant. This had led to the family largely avoiding water spaces and activities throughout her childhood. Her ability to overcome this fear and gain the confidence required to be in that environment was evidenced in her appreciation and joy in being involved. Coming from landlocked South African cities, Esther and Elandri were learning not just about surfing but nearly everything about the beach environment.

Kya was intent on respecting the ocean and “other people who use it.” This gave the sense that the ocean was more than just a place to play and recreate; it was a place that had further meaning and purpose for them. The reflections of the participants suggested they were gaining a deeper sense of the PERMA domain of Meaning and understanding that they belonged to something larger than themselves. This directly correlates with the significant shift in the participants’ sense of social cohesion on the MHC-SF, where the question asks how often they feel ‘that the way society works makes sense to you’.

Sense of meaning

The MHC-SF survey data revealed that some participants had increased their sense of meaning and life appreciation over the course of the surfing programme. Huia attributed that sense to her environment and increased gratitude.

Like, I was ready to accept and be grateful for that I, like, that I live here in the Mount, and that I live next to this awesome beach where I have the opportunity to go out to the ocean. I feel like that would also contribute to my increase of, like, life appreciation.

Two of the participants felt that the programme had provided them with much potential to achieve personal growth. Lily had improved significantly on all four aspects of Hauora on the post Hua Oranga survey, and she was cognizant that she had matured emotionally and had

“...grown a lot more throughout the year.” Esther became emotional as she discussed the changes in her outlook during and after the programme.

I think that I started seeing things from different perspectives as well, not just like coming to my conclusion on things. I feel like I start seeing things different than I did before but also feeling stronger in a way.

When questioned further about feeling stronger, she stated it was the “*sense of belonging*” and that she didn’t immediately see a purpose in surfing but as time progressed, she began to see others’ perspectives and “*...kind of seeing why things happen.*”

Finding stillness and connection

Beyond calming, it was identified that ocean had some almost ethereal power, with Huia describing this as “*...kind of mysterious properties about the ocean that make someone feel like better.*” All of the participants would choose not to actively chase waves at different points and would instead just sit or lie on their boards in the ocean. Huia reflected on the meditative properties of spending time on the ocean:

I feel like one of the best parts about surfing is, like, in between catching waves.

Both Kya and Esther credited the programme and being in the ocean regularly as having a far greater impact. Esther’s experience included an increase in confidence that led to her feeling “*...at one with myself now,*” where she described her feelings of being self-conscious as no longer relevant.

When things happened in the past, I feel like doing this and just coming out of the ocean kind of just like brought me to myself, like connected to myself in a way I didn’t think would have happened because, you know, the surfing would, you know. But I feel like the ocean kind of helped me to find myself in a way.

Kya described maturing through the programme, saying, “*I guess I started thinking, like, differently.*” She talked about surfing and being on the ocean as having to be “*...present, like, in the moment sort of thing,*” rather than distracting herself with social media, in turn forcing her into a situation where she was reflecting more. While she didn’t necessarily like having time to think, “*...because my brain will just, like, start doing things*”, she did outline the benefits she felt when removing distractions.

I suppose, like also, like, talking to you, like, throughout the term and doing interviews and stuff, like, made me understand, like, think about things a bit more too, like, a bit more deeply.

Elandri also broadened her understanding of the importance of perspective, sharing that:

I think spending time with people I didn't really know actually made me think, okay, but maybe not everybody sees stuff the same way as I do and that makes you think, okay, but how's that person feeling about this and, like, there are different people.

Round three: summary

The final round of qualitative data revealed a significant shift in participants' understanding and experience of wellbeing because of engaging in the programme. While this transformation was evident, participants also expressed a sense of loss as the programme had come to an end. Their reflections pointed to a more mature and nuanced understanding of their wellbeing that entwined personal growth with a deep sense of belonging to both the group and the physical environment. Participation in the programme helped support them to find mechanisms that cultivated calm and identified places that could sustain the feelings beyond the programme. Most participants noted stronger connections with others, which in turn enhanced their self-confidence and fostered a sense of care for themselves and their surroundings.

Summary of Findings

The quantitative results showed a significant positive impact across all taha of Hauora, and these findings are supported by the rich narrative of participants, highlighting the benefits of a mixed methods approach. The MHC-SF results yielded strong evidence that eudaimonic wellbeing was enhanced more than hedonic, indicating the programme's impact as meaningful, extending beyond fun and enjoyment. Within the eudaimonic data, social wellbeing had a significant increase, highlighting the contribution to participants' *Relationships* domain and sense of belonging and connection within a group.

The four taha of Te Whare Tapa Whā served to provide a framework to organise the findings, and this continues through to the discussion. The following table is a summary of the findings across all three rounds, showing the progression in participants' perceptions through the programme. Each of the four taha housed several sub-themes, which emerged from the embodied experiences and subsequent stories told through interviews and journals. These sub-themes served to expand on areas that the participants found most important, with the complexities and notions of wellbeing expanding over time.

These findings support the understanding that wellbeing is constructed from lived, shared experiences that evolve and are relational, leading to connection to place and a collective sense of meaning. The following discussion further synthesises these into conceptual

categories that highlight how surfing - and the ocean – can be a catalyst for enhancing youth wellbeing.

Tūtohi 7 collates the subheadings from the findings under their taha, or parent code. This overview outlines the subheadings over time, from the early to the during and post-programme experiences. For the discussion, five key themes emerged from the findings to represent the participants experiences of wellbeing and change over the duration of the programme:

- Challenge to growth - the role of physical activity in wellbeing
- From discomfort and fear to increased confidence and self-esteem
- Belonging and supportive connections
- Nature exposure - presence and connection
- Reframing wellbeing and flourishing.

These themes are distilled from the findings from each aspect or taha of wellbeing, and reflect the overall impacts of the programme. Each of these is elaborated on in the following discussion section.

Tūtohi 7 Overview of discussion themes over time

Early in the programme	During the programme	Post programme
Taha Tinana		
Physical Challenge and Progress	Progress through Practice	Surfing as a Springboard for Ongoing Physical Activity
Repetition and Practice	Physical Exertion	Skill Learning in Nature
Physical Activity as a Positive Health Habit	Learning the Conditions	
	Surfing as a Future Physical Activity	
Taha Hinengaro		
Fun, Joy and Excitement	Confidence	Beyond the Comfort Zone
Positive Mindset and Mental Shifts	A 'Mental Break'	The Quiet Between the Waves
Overcoming Mental Barriers	Reframing Challenges	

	Ongoing Impacts	
Taha Whānau		
Peer Connection and Mutual Support	The Importance of Support from Peers	Friendship and New Connections
Community and Mentorship	Encouraging Others	Being Supported to Learn and Grow
	A Sense of Belonging	Just the Girls
	Single Sex Environment	Mentorship
	The Role of the Senior Student Facilitator	The Role of the Family
Taha Wairua		
Anticipation and Accomplishment	Anticipation and Temporal Wellbeing	Being in Nature and the Appreciation of Place
Presence and Connection	Mindfulness and Presence	Kaitiakitanga
Natures Calming Impact	Increased Connection with Nature	Sense of Meaning
	Respect and Appreciation	

Chapter 5 Discussion

This research explored the potential for an evidence-based, place-responsive, challenging outdoors programme that impacts the emotional wellbeing of young wāhine. This programme was developed and tested in the context of surfing, with the ocean acting as both a rich backdrop and an active participant alongside the group. A core theoretical contribution of this research is the conceptualisation of nature, specifically the ocean, not merely as a backdrop but as an active co-facilitator and advocate within the participants' learning journey. This study highlights how the ocean can actively shape identity and connection in female youth and portrays nature beyond a static setting.

As well as being a challenging learn-to-surf experience, the programme supported participants in discovering factors that enhanced their personal wellbeing that can lead to a long-term, informed, holistic path to flourishing. Holistic wellbeing was fostered through shared social context and enriching experiences.

This chapter begins with a summary of the key findings from both survey data sets and the qualitative data from journals and interviews. A framework for the synthesis of data is introduced, with Te Whare Tapa Whā model of wellbeing used as a primary framework, and PERMA domains used to complement this and to provide an integrated interpretation for the discussion themes. The main body of the discussion synthesises these themes against current literature and theory, making sense of the participants' narratives and meaning from their lived experiences.

The findings are then discussed in relation to the research questions presented early in this study. The following sections discuss the theoretical and practical contributions to this area of research, as well as the contextual limitations and critical reflections of this study, identifying areas that could be further investigated.

Ultimately, the discussion presents the potential for scalable and contextualised programme development, with implications for addressing the complexities of the current youth mental health crisis through embodied, place-responsive experiences embedded in a positive psychology lens.

Summary of Key Findings

The data findings suggest that overall, the surfing programme had a positive and meaningful impact on the participants. The analysis of the Hua Oranga results highlighted a positive shift in all four taha of Hauora, with mean shifts ranging from 0.88 to 1.5 out of a possible five. The

largest shift was in taha whānau, indicating a positive impact on participants' social wellbeing. The smallest shift was in taha tinana, however, the baseline data confirmed an already high start point.

The MHC-SF revealed an increase in the Flourishing domain to 50% of participants, from just one participant (11%) at the baseline data collection. When broken down to sub-scales, eudaimonic social wellbeing had the biggest mean change ($M = 1.03$, $p = 0.002$), aligning with the data from taha whānau. Hedonic wellbeing had the least shift, but, like taha tinana, the baseline data indicated a higher level before the programme. Eudaimonic psychological wellbeing showed significant positive shifts within personal growth and autonomy, and an overall mean shift that showed statistical significance ($M = 0.6$, $p = 0.01$).

The thematic analysis of the qualitative data supported the positive numerical shifts, and as the study progressed, new sub themes emerged as participant perceptions shifted. Participants discussed their journey from discomfort and fear to confidence in themselves and the trust and safety within the group. The social bonds were enhanced through a female-only environment, with peer-to-peer learning, encouragement and a sense of belonging contributing to social coherence and autonomy. This narrative aligned with the increases in both taha whānau and eudaimonic social wellbeing domains. Participants discussed the therapeutic and calming effects that the ocean had on them, speaking about presence and mindfulness when spending time in the ocean. This led to an enhanced understanding of the importance of being in the outdoors and increased their intimate connection with nature. There was evidence that the positive indicators of wellbeing went beyond the surfing programme, with participants describing the impact on broader aspects of their lives. The participant's contribution outlined the potential of the programme in providing a meaningful experience that can enhance the wellbeing of young wāhine in Aotearoa.

A Framework for Data Synthesis

Five core themes emerged from the findings, representing the lived experiences of the participants on their journey through the surfing programme:

- Challenge to growth - the role of physical activity in wellbeing
- From discomfort and fear to increased confidence and self-esteem
- Belonging and supportive connections
- Nature exposure – presence and connection
- Reframing wellbeing and flourishing.

These themes are distilled from the findings from each aspect or taha of wellbeing, and reflect the overall impacts of the programme. Each of these is elaborated on in the following section.

For the discussion, each of these is aligned with a dimension (taha) of Te Whare Tapa Whā (Tūtohi 8). The final theme captures participants' reframing of wellbeing to incorporate concepts associated with flourishing, reflecting the interconnectedness of all four taha. The interviews and themes demonstrate a developmental trajectory in the participants' understanding of wellbeing as the participants move from relatively simple notions to more complex, integrated perspectives. The themes illustrate how participants made sense of wellbeing as multidimensional, and how each taha interacts with and influences the others, contributing to a holistic view of wellbeing. To strengthen the interpretation, the language of positive psychology, through the PERMA framework, is used to reinforce and extend these understandings.

Interpreting the Findings Through Te Whare Tapa Whā

The five main themes emerging for discussion outline the range of impacts the surfing programme had on the participants, as they progressed from the early stages through to post-programme reflections. The discussion of each main theme begins with a summary of several fine-grained insights from each round of data collection, which are referred to as sub-themes. The five main themes are linked to each of the four taha and are outlined below in Tūtohi 8. Each main theme is introduced with a summary of the findings within the taha, and an overview of the subheadings that emerged during development of discussion themes. The themes are interpreted and synthesised using participant insights, researcher reflection and reference to reviewed literature.

Tūtohi 8 Overview of five core themes

Key Wellbeing Domain	Core Theme
Taha Tinana	Challenge to Growth -the role of physical activity in wellbeing
Taha Hinengaro	From discomfort and fear to increased confidence and self esteem
Taha Whānau	Belonging and Supportive connections
Taha Wairua	Nature exposure – presence and connection
All Taha - Flourishing	Reframing wellbeing and flourishing

Taha Tinana: Challenge to growth - the role of physical activity in wellbeing

Tūtohi 9 Reflective summary of Taha Tinana subthemes from the data rounds

Early in the programme	During the programme	Post programme
Taha Tinana		
Physical Challenge and Progress	Progress through Practice	Surfing as a Springboard for Ongoing Physical Activity
Repetition and Practice	Physical Exertion	Skill Learning in Nature
Physical Activity as a Positive Health Habit	Learning the Conditions	
	Surfing as a Future Physical Activity	

This section demonstrates how participants' experiences reveal the central role of physical activity in wellbeing, and the flow-on effect to the positive impact on taha hinengaro. Early experiences of fun and positive emotions in an activity can become powerful engagement tools, leading to continued participation and the ability to gain broader benefits and experience moments of flourishing. The subheadings emerged from the narratives participants shared about their physical experiences in the programme. Distinct storylines emerged as the data was reviewed: moments of tolerable stress, early frustrations to growing mastery, choosing to be active, and connecting physical activity to nature. These recurring storylines were shaped into subthemes to represent physical change and growth through the programme.

Tūtohi 10 Insights from: Challenge to Growth – the role of physical activity in wellbeing

Insights from: Challenge to Growth - The role of physical activity in wellbeing
• Learning a New Skill - the role of multiple moments of tolerable stress
• Taking on a Challenge - from fun to accomplishment
• Being active
• Physical activity and nature

Learning a new skill - the role of multiple moments of tolerable stress

Participants initially experienced frustrations in learning to surf, yet these challenges directly fostered resilience through multiple moments of tolerable stress (Berkett, 2021). Participants

described '*getting rolled*' and not catching any waves, but they persisted despite these challenges. The safe environment led to them taking small risks without overwhelming fear of failure, and the resilience they built led to skill development and agency. These findings align with Antonovskys (1987) salutogenic theory of wellbeing, as well as my own observations around skill learning, where growth occurs through the ability to navigate adversity, rather than in avoiding stress. The moments of stress led to an enhanced sense of wellbeing through resilience and small, consistent adaptations, an experience shared by participants in the Waves of Wellness programme (McKenzie et al., 2021).

In contrast to the constant low-level stress state that can lead to negative mental health outcomes (Khan & Khan, 2017), embodied and focused activities such as surfing provide a relatively controlled environment for stress to be experienced. In particular, as the skill learning moves from early phases to less frequent errors, the focus changes to self-improvement and a space where frequent attempts at refinement can be made. Providing a safe and trusting environment provides a backdrop to experience these moments of tolerable stress and success, offering an ideal antidote to the feelings of low motivation and bleak outlooks that many youth are currently navigating (Ministry of Health - Manatu Hauora, 2024; Stubbing et al., 2023b).

Taking on a challenge - from fun to accomplishment

Early fun and some frustrations were overtaken by moments of mastery as participants learnt to stand up and perform moves such as learning to surf sideways along a wave. This supports the findings of Turecek et al. (2025), who describe environmental mastery as a key element of flourishing; in particular, wellbeing is enhanced when physical activity is performed in nature. These experiences of success and accomplishment were celebrated by themselves and extended to others as they experienced their own surfing achievements. This is an important element as mutual support is essential in enhancing resilience and wellbeing for females in outdoor programmes (R. Pearson et al., 2025). One participant reflected that while it was '*nice*' that she was accomplishing skills, it was even better to '*see other people happy*'. My interpretation of these narratives suggests the participants saw other successes in part as their own, in that the group collectively were progressing.

This sense of accomplishment significantly increased participants' life satisfaction, and though taha tinana had low to moderate increases, physical mastery plays an important role in continued engagement and continuation of activities. However, some participants reported negative experiences in their learning, with one noting frustrations when she was "*...not meeting (my) own expectations*". This highlights the dual nature of learning a challenging

activity such as surfing - there are opportunities for both successes and failures, creating the potential to develop perseverance and resilience (Franceschi et al., 2024).

Being active

Physical activity experiences that are non-competitive and inclusive play an important role for young females (Sport New Zealand - Ihi Aotearoa, 2023). Many young females are avoiding or not being introduced to physical activity experiences, in particular in the outdoors, often due to early and persistent gendered schema and beliefs (Chapman, 2016; Parsons & Halstead, 2022; Rogers et al., 2024). It is important to provide a comprehensive and equitable range of opportunities to overcome any long-held stigmas or barriers to participation.

As highlighted by one participant, physical activity is “...*so much more than sport*”. The surfing programme helped in reframing definitions of physical activity, broadening the understanding of what is available and accessible beyond normal sporting constructs. Involvement in the surfing programme led to several participants seeking out new and ongoing physical activity experiences, and a recognition of the benefits of regular exercise. As an advocate for the powerful influence physical activity can have on mental wellbeing, I found this evidence to be encouraging. Current low rates of female participation in physical activity (Sport New Zealand - Ihi Aotearoa, 2023) require targeted intervention and exposure to enjoyable, diverse, and accessible physical activity experiences, ensuring young females can see activity as both relevant and achievable in their everyday lives.

Physical activity and nature

Engaging in physical activity while in the outdoors enhances the benefits, leading to increased mental wellbeing, self-acceptance and personal growth, in part due to connection with nature (Turecek et al., 2025). Participant data confirmed this notion, showing enhanced *Environmental Mastery* and *Self-Acceptance* scores, both key components in human flourishing (Keyes, 2007; Turecek et al., 2025). The opportunity that nature provides - as both a place to ‘do’ physical activity and its ability to provide a setting for calm and reflection - is a unique backdrop to enhance wellbeing and personal development. Participant descriptions of the surfing programme moved from more hedonic terms such as ‘*fun*’ and ‘*enjoyable*’, to showing an understanding that physical activity in nature can improve emotional wellbeing through being ‘*grounding*’, ‘*calming*’ and ‘*peaceful*’. This shift in their reflections, despite participating in a challenging activity, illustrates how physical activity can foster a deeper sense of wellbeing. This also highlights the evolution from hedonic to more eudaimonic wellbeing, aligning with both PERMA and Te Whare Tapa Whā.

Summary

This theme explored the connection between physical activity, wellbeing and the important role physical activity has in enhancing experiences. The programme provided participants with an opportunity to experience a new and testing physical activity with its inherent risks and moments of stress, while expanding their understanding of wellbeing through overcoming challenges. Nature served not just as a backdrop, but as an important advocate for mastery, self-improvement and building of resilience.

Taha Hinengaro: From discomfort and fear to increased confidence and self-esteem

Tūtohi 11 Reflective summary of Taha Hinengaro subthemes from the data rounds

Early in the programme	During the programme	Post programme
Taha Hinengaro		
Fun, Joy and Excitement	Confidence	Beyond the Comfort Zone
Positive Mindset and Mental Shifts	A 'Mental Break'	The Quiet Between the Waves
Overcoming Mental Barriers	Reframing Challenges	
	Future	

This theme explores the journey from initial discomfort and fear to increased confidence and self-esteem through the psychological and physical challenges within the surfing programme. These are framed against the journey of participants from experiencing *Positive Emotions*, through to expanded *Engagement*, strengthening their taha hinengaro and taha wairua in response to challenge and growth. The three subthemes emerged strongly through the narrative of participants as their progression in surfing was demonstrated, shifting perspectives about what they were capable of, how they could view the challenge, and also the range of emotions they could feel through the activity.

Tūtohi 12 Insights from: From Discomfort and Fear to increased Confidence and Self-esteem

Insights from: From Discomfort and Fear to Increased Confidence and Self-esteem
• Early Fear, Discomfort, and Unfamiliarity, to Emotional Balance • Confidence and Self Esteem • Relaxation and Calmness

From early fear, discomfort, and unfamiliarity to emotional balance

Many participants expressed early vulnerabilities and discomfort when they started the unfamiliar skills of surfing and navigating the ocean environment, as echoed by females in other studies (Jelleyman & Humberstone, 2024; Roy & Caudwell, 2014). Discomfort was clearly subjective, with participants having doubts about differing aspects of the programme initially. There were descriptions of surfing being '*a little uncomfortable*', through to clear discomfort in being '*rolled*' and negotiating conditions.

Despite many challenges in learning to surf, even when they didn't get waves, the ocean was a place that supported emotional balance. One participant described her experiences after not getting waves that day, that she was. "...*only tumbled by the whitewash, but I already felt better*". The surfing acted as a medium for participants to enhance their resilience through experiencing challenge and facing fears, integral factors in supporting growth (R. Pearson et al., 2025). Pushing through the early fears and discomforts led to transformational experiences, such as Esther's emotional disclosure around '*seeing things differently*' and '*feeling stronger*', and Kya's claim to feeling '*more mature*', as well as opportunities to push themselves '*to do the best I can*'. I found these statements to be expressions of empowerment and deeply enhanced positive emotions, supporting McMahan and Estes (2015) findings that wellbeing is promoted more by increasing positive experiences than by reducing negative ones.

Confidence and self esteem

Early frustrations were overtaken by moments of confidence and feelings of mastery. The safety provided by the group and student facilitators provided a space where participants were '*challenging ourselves*', and this provided a platform for risk-taking to be explored. Young females are more likely to engage in this type of risk-taking when they have a backdrop of mutual support and belonging (Pearson et al., 2025). These experiences of exploring risk and overcoming small fears in nature lead to reinforcing positive mental health in youth (Jimenez et al., 2021), strengthening the ability to buffer negative thoughts and feelings.

As progression occurred, surfing became a space for relatively unstructured play, where participants could experience joy, creativity and self-expression (Dankiw et al., 2020). Young females seem less likely to experience free play as they enter the teenage years, as they are exposed to gendered ideals through social media that do not conform with childish notions (Leonhardt & Overå, 2021). Play enhanced physical competence and confidence, which in turn motivated progression and supported a shift in thinking. Attitude became a powerful tool in gaining confidence, shifting from feelings of discomfort to having confidence in physical

abilities, and that surfing was seen as *‘having a purpose’*. This reflects my own feelings about surfing as a powerful wellbeing enhancer, rather than a mere activity. Negative self-talk also changed to a motivational inner dialogue - *‘just two more paddles and I would have got that’* - which ultimately supports persistence, determination, and overall life satisfaction.

Relaxation and calmness

Nature exposure and wellbeing have been widely researched, with time in nature now being considered essential to human wellbeing (Barton & Pretty, 2010; Carpenter & Harper, 2016; Hunter et al., 2019). As confidence grew and early fears subsided, the participant’s ability to draw on nature’s calming effects increased, as they experienced *‘relaxation’* and *‘calmness’* from surfing. The ability to spend time in nature to change feelings of stress begins as a physiological response as the parasympathetic nervous system activates to directly reduce the stress response (Ulrich, 2023). So, despite being engaged in a challenging physical activity, the participants began to find space between the waves to *‘just float around’* and to *‘take time and think’*. This ability of nature to reinforce positive emotions and provide a buffer to life’s stresses for those who live in its proximity (Wells & Evans, 2003) was widely experienced by the group, acting to strengthen taha hinengaro and taha wairua.

Summary

The impact of the surfing programme on emotional wellbeing and balance was compounded through opportunities to navigate challenges and overcome fears. Surfing became a vehicle for encouraging positive risk-taking as well as provide opportunity for calmness and clarity.

Taha Whānau: Belonging and supportive connections

Tūtohi 13 Reflective summary of Taha Whānau subthemes from the data rounds

Early in the programme	During the programme	Post programme
Taha Whānau		
Peer Connection and Mutual Support	The Importance of Support from Peers	Friendship and New Connections
Community and Mentorship	Encouraging Others	Being Supported to Learn and Grow
	A Sense of Belonging	Just the Girls
	Single Sex Environment	Mentorship
	The Role of the Senior Student Facilitator	The Role of the Family

This theme provides insight into the role relationships have in support, belonging and connection within a group. The strong data findings of increased social wellbeing through the parallel positive shifts in taha whānau and the MHC-SF social eudaimonic results suggest relationships were key to a positive and engaging experience. A strong sense of trust and support of each other grew throughout the programme, as supported by both social integration and social coherence psychological wellbeing domains increasing by 1.25 and 1.5 points respectively.

The subthemes developed through participants framing their relationships as focused on growth, shared experiences, and strengthened connections. The clear observable positive interactions between participants were obvious, but the more subtle, less visible impacts and insights pointed to participant growth and sense of belonging. The programme fostered connection as a central feature, strengthening ties to self, to peers, student facilitators and as a group.

Tūtohi 14 Insights from: Belonging and Supportive Connections

Insights from: Belonging and Supportive Connections

- Peer to Peer Bonds
- Importance of a Female-Only Non-Judgmental Space
- Tuakana-Teina -the Importance of Mentorship
- Body Image and the Social Construction of Self
- Belonging and Identity Formation

Peer to peer bonds

Previous research (Booth, 2001; Fuchs & Schomer, 2007; Roy & Caudwell, 2014) has described the unique connections surfers make through the shared experience of surfing. For this study, excluding existing friendships, initial peer connection was relatively low despite the early excitement many participants had in *‘meeting new people’*. The ‘opt in’ nature of the programme attracted those with similar intentions of both learning to surf and trying to impact their mental health, but there were many differences between cultural and social backgrounds. The shared experience of the programme quickly drew the participants together, and the ocean became a space where positive interactions and connections were made. This helped some participants overcome social issues, and although Kya admitted she could struggle to socialise at times, she found it *‘easy to talk to everyone when in the surf’*. Over time I observed the participants become at ease with each other, often spending

time floating 'out the back' and talking as a group. The ocean became a moderator of social barriers and provided permission for the group to interact beyond normal school parameters.

Initial connections were strengthened through shared celebrations and commiserations during the learning process, but soon shifted to broader social connections. Several participants found they could experience '*different perspectives*' from others in the group which enhanced their ability to form connections. Similarly, as Lily became curious about participants from other cultures and '*how other people experience life*' she was experiencing a shift in perspective similar to other studies' findings (Pearson et al., 2025). Interactions between group members flowed into broader school life, with some participants reporting they had spent time together in classes through their new connections. Rose understood that '*doing something different*' together was important to build social connection and a sense of belonging, as seen with the deepened sense of connection to New Zealand felt by the immigrant females in Jelleyman and Humberstone's research (2024). Despite the shared social context of living in this coastal town, it was surfing that connected the group, helping to provide a sense of empowerment, belonging and connection. This was reinforced in the final group interview by the participants requesting further activities together after the programme was finished, as long it was '*just us girls*'. It should be noted that later in the year the group requested that we reconnect, so I organised a walk together on our local maunga. The group did not seek out a further connection independently of me.

Importance of a female-only non-judgmental space

Participants' positive experiences of being in a single sex environment closely align to the findings of Evans et al.,(2020), where an all-female space provided the confidence to try new activities in the absence of judgment. It became clear that female-centric activity can be highly supportive, with the social connection enhancing both engagement and participation. Several of the participants shared that it was the first time they felt comfortable in a physical activity setting, and their engagement remained high throughout the programme. Huia's sentiment that -'*it was good to do it as a community, especially with all females*', was echoed by others, and this feeling of community grew throughout the programme, strengthening taha whānau.

These participant reflections reinforced Sport New Zealand's findings that many female youth prefer the non-competitive environments that all-female groups create (Aotearoa, 2023). In contrast to doing physical activity in other spaces, such as during outdoor education classes, the group felt comfortable together, while their experiences with males in physical activity spaces made them '*conscious they are there*'. The strengthening of existing friendships took connections to another level, moving '*beyond our competitiveness*' and into a space where

they were learning, supporting and growing together. Pearsons et al., (2025) overarching model for Outdoor Adventure Activity (OAA) programmes suggests that interactions in all female environments are highly supportive and found this was a key component in building young females' resilience. As one participant stated, the all-female environment '*recharged me*', seeming to provide a buffer for other interactions through the week.

Tuakana-teina - the importance of mentorship

Tuakana-teina is a Māori phrase that refers to the relationship between an older (more experienced) person and a younger person. In the context of this study, tuakana refers to the senior student facilitators, and the support from the researcher. Teina refers to the study participants. The tuakana-teina relationship is a traditional model of peer learning and mentorship, where an older or more experienced person (tuakana) guides and supports a younger or less experienced person (teina). A significant factor in improving female participation in physical activity is to provide same sex mentors and leaders (Evans et al., 2020). The mentorship from the student facilitators became integral to the ocean as a safe space, with their presence providing the freedom to try, to fail, and to support others. In support of the research of Warren et al., (2019), an all-female setting allowed participants to step outside any gendered expectations and become leaders, experts, or active participants. The student facilitators in my research represented female 'experts' in the outdoors, and were females just older than the participants, who had carved out a space in the natural environment and made it clear they belonged. The importance of role modelling for young females is undoubtedly impactful in removing constraints to participation (Culp, 1998), while providing an aspirational understanding of female presence in the outdoors.

The evolution of the student facilitators from programme mentors to a more observational role occurred as the participant group became more confident in their skills. The participant group moved away from requiring or seeking out coaching, into a space where they supported others in the group through providing tips, encouragement and emotional support. There was frequent laughing and cheering to be heard from the beach. This evolution of the group led to autonomy and agency over their surfing experience, and is consistent with the 'Jellies' women's swimming group (Testa, 2024), where participants described belonging to a 'tribe' of females with similar intentions. This sense of autonomy increased as they became more self-sufficient and less leader-focused, enhancing wellbeing through helping to shape identity and belonging as a group of surfers, essentially becoming their own 'tribe'.

Body image and the social construction of self

Thoughts around body image evolved from negative to empowerment for some, and in particular for Esther. Negative body image remains a barrier for many young females in New

Zealand (Sport New Zealand - Ihi Aotearoa, 2023). Due to both the 'uniform' of the activity (wetsuits, swimwear), and the very public activity of surfing, there was a sense of judgment from others that led to heightened self-consciousness for some participants, reflective of the broader population of young females' experiences (Sport New Zealand - Ihi Aotearoa, 2023). However, as in other studies (Testa, 2024), the all-female environment quickly offered psychological safety to the majority of the group, and Esther in particular had a significant improvement in self-confidence. This facilitated a positive self-perception (taha hinengaro) and contributed to an enhanced enjoyment and positive emotions in the programme. Esther began to construct a new understanding of self, and belonging to a group that was non-judgemental and non-competitive was integral to this.

Charlie, however, was unable to overcome this sense of judgment, despite understanding that this was not occurring. Her experience is reflected by those of many young females, who are unable to increase their emotional resilience to a point where participation is possible. This reflects Sport New Zealand's statistics around reduced participation in physical activity, and an increase in negative body image (Sport New Zealand - Ihi Aotearoa, 2023), and is a worrying trend requiring further investigation and intervention.

Interestingly, the impact of social media nor other digital platforms was not featured during interviews or journaling by the participants. While the impacts of digital saturation may be lurking in the background of many young people, in this study it did not feature as a key factor in wellbeing. Explicit questioning around how social media and a comparison culture impact body autonomy and participation may have been better placed to unpack participant experiences. Nevertheless, the findings support that supportive, single-sex spaces remain vital for helping many young females navigate body image barriers and enhance participation.

Belonging and identity formation

Early social distance transformed into a sense of belonging by the end of the programme - to the group and to the identity of 'surfer'. Belonging elicits a sense of enhanced wellbeing through connection and relationships, as experienced by participants in other studies based on surfing (Fuchs & Schomer, 2007; Jelleyman & Humberstone, 2024; Roy & Caudwell, 2014). Being in a single sex environment, having peer encouragement, and mentorship from older students worked to create a safe and affirming space for the participants to explore identities.

Belonging to a group supports members in fostering mutual support through shared experiences. This was mirrored by the findings of Fuchs and Schomer (2007), who found

that surfers form unique, and usually supportive, relationships. Over time, the notion that only ‘*certain people*’ could surf, and that ‘*you gotta be raised surfing*’ were limiting constructs that were discarded. The notion of being and becoming a ‘kiwi kid’ - a young New Zealander who has grown up being shaped by national identity and cultural and social contexts - was felt most strongly by Esther and Elandri as ‘outsiders’, or relatively new immigrants. Similar to Jelleyman and Humberstone (2024) findings from immigrant women learning to surf in New Zealand, these two participants experienced feeling a shift from ‘outsider’ to ‘local’. Elandri’s early understanding that she didn’t belong in this environment transformed to a deep connection to place, to the group and to surfing.

Summary

Social connection had undoubtedly the biggest impact from this programme - from forming new bonds to understanding the supportive nature of an all-female environment. Connection is key, leading to integrative and affirming language such as ‘*community*’, ‘*belonging*’ and ‘*support*’ when communicating feelings within the group. Significant positive results in taha whānau support the narrative from the participants that *Relationships* are critical to supporting young females to build resilience and flourish through outdoor settings.

Taha Wairua: Nature exposure - presence and connection

Tūtohi 15 Reflective summary of Taha Wairua subthemes from the data rounds

Early in the programme	During the programme	Post programme
Taha Wairua		
Anticipation and Accomplishment	Anticipation and Temporal Wellbeing	Being in Nature and the Appreciation of Place
Presence and Connection	Mindfulness and Presence	Kaitiakitanga
Natures Calming Impact	Increased Connection with Nature	Sense of Meaning
	Respect and Appreciation	

This research aligns with emerging evidence about the positive impacts on human health, though there remains limited but emerging evidence on the potential impacts of blue spaces (Britton et al., 2020; Britton & Foley, 2021; Foley & Kistemann, 2015). Unlike many relatively static green spaces, water environments constantly change and create multiple challenges and opportunities for growth and challenge through stillness and reflection. This study found that participants quickly discovered the therapeutic and wellbeing-enhancing attributes of being in the outdoors, in particular in the ocean environment. Nature evoked a range of emotions, from respect, fear, awe, and reverence. The role of nature within this programme evolved throughout, and led to an understanding of the powerful impacts it can have on

people. Nature, and specifically the ocean, actively shaped participants wellbeing as a partner in the programme. This section covers the various impacts that nature and place had on participants.

Through engagement with the outdoors, participants developed stronger connections to place and an appreciation for kaitiakitanga or enviornmental concern. Respect for the natural environment emerged through deeper understanding and reciprocal relationships with the ocean. The sub-themes capture how participants experienced a sense of intimacy with nature, experiencing awe, and becoming apprentices to place through learning in and from it.

The four sub-themes encompass participants storylines around mindful qualities of surfing and the ocean, the grounding influence of nature, and the ability of these experiences to support wellbeing and provide resilience against stress. This section shows the various impacts that nature and place had on participants.

Tūtohi 16 Insights from: Mindfulness and Presence through Nature Exposure

Insights from: Mindfulness and Presence through Nature Exposure
• Nature’s Role in Healing and Grounding
• Surfing as a Meditative, Mindful, and Present-Focused Activity
• A Buffer to Lifes Stressors
• Self Awareness
• An Intimacy with Nature
• The Ocean as Awe Inspiring
• Nature as Co-facilitator
• Becoming Apprentices to Place

Nature’s role in healing and grounding

The ocean became a pseudo counsellor, offering solace to many in the surfing group. This mirrors Georgiou et al.’s (2021) findings, where time in and around blue spaces leads to positive mental health benefits and a calming effect. The reflections of one participant captured this sentiment “...even if you don’t catch a good wave, the ocean just calms you down”. Aligning with participants in Jon Anderson’s (2014) research, the link between being in the ocean and feelings of enhanced wellbeing proved difficult to conceptualise, with group members not always able to articulate why this was occurring, but agreeing this was the case

for them. The ocean's role in healing appears to go beyond the activities of surfing, swimming or other similar uses, and extends to just being at the beach and in proximity to water (Georgiou et al., 2021; Volker & Kistemann, 2011). This idea was evidenced in this study as participants discussed how they would seek out the beach alone or with others to reflect, socialise or exercise. However, it was the addition of the surfing that provided meaning for the group and as a tool for growth and challenge.

Surfing as a meditative, mindful and present-focused activity

Surfing requires participants to be present, within the activity and necessitated by the constantly changing ocean environment. Participants were able to expand on the notion that surfing requires being in the zone (Wheaton et al., 2020), as they shared experiences of being present and being 'put in the moment'. Surfing requires attention and awareness, two factors considered integral to mindfulness (Shapiro et al., 2006; Shapiro & Carlson, 2009). This feeling was echoed by participants, describing having to be present for what's coming next, and one participant described this as the '*mind needing to be with the body*' in order to achieve any goals for the day.

The ocean became a space for mindfulness, presence and personal insight, over time reflecting the shift from the excitement of learning to the appreciation of the small moments - '*I feel like one of the best parts about surfing is, like, in between catching waves*'. Amrhein et al. (2021) discussion of spirituality as connection - with beliefs and values, to others, and to meaningful practices - was demonstrated through many of the points raised by participants. In this way, surfing became a spiritual activity, affirming Amrhein's view that spirituality is felt through lived, embodied experiences. The connections the participants experienced extended beyond the physical act of surfing and encompassed a sense of belonging and engagement in a meaningful activity. The increase in connections across many domains highlighted the holistic nature of the concept and the potential reach of a nature-based activity such as surfing. It affirms the notion that surfing can at times feel ethereal to surfers, often rendering it difficult to describe to non-surfers (Anderson, 2014), but nonetheless leaving behind a lasting impression on participants.

A buffer to life stressors

The findings of Davis and Hayes (2011) and Hulsheger et al.(2012) suggest one benefit of mindfulness is increasing positive emotions, also the first domain from Seligman's PERMA model. In terms of positive psychology, this enhancement and growth of positive emotions reinforces wellbeing, acting as a buffer to life stressors. Participant reflection identified that surfing is mindful and grounded in the now, helping them to crowd out many negative feelings and reinforcing their understanding that it '*clears the head*'. Huia expanded on this

notion, saying - '*stress kind of resides in future thoughts and past thoughts*', and that when surfing, stress '*can't really reside in the moment*'.

This aligns with Fuchs and Somer (2007), where surfing was found to have the capacity to balance participants, supporting them against the demands of the modern world. Their research highlights how full engagement in the present can disrupt rumination and support resilience to stress. The level of focus required for surfing not only reduced immediate stress, but for many this sense of calm extended further into the week.

Self awareness

This study found that surfing and the ocean are supportive in increasing self-awareness - '*the ocean kind of just like brought me to myself*' - as also reported by Wheaton et al.'s (2017) findings that surfing can support some level of self-transformation. The sense of connection provided by surfing extended to the self, and an understanding that life was like the waves, changing all the time. The ocean proved to be an antidote to the stress and life pressures, and despite the changing conditions, participants found opportunities to be '*in sync*' and to '*slow down*'. Reported increased mental clarity and overall enhanced feelings of wellbeing mirror other studies (Britton et al., 2020; White et al., 2021) and add to the growing research on the positive impacts of spending time in blue spaces.

Despite not completing the programme, Charlie had some insights around aspects that did work well for her, recognising that when surfing, she felt an absence of '*pressure*'. However, her awareness of this did not override her feelings of being self-conscious and disconnected. She was not alone in this type of sentiment, with all other participants clearly understanding the restorative impact of the ocean and of surfing yet only two continued with the practice post programme. Due to this, the benefits from extended long-term use of the ocean, such as the review by Overbury et al. (2023) showing extended use enhances mindful presence and reduces stress reactivity, were not fully realised during this study. The findings from Overbury et al. (2023) suggest that repeated exposure supports individuals to move beyond novelty and develop a deeper connection and wellbeing enhancement.

An intimacy with nature

Spending time in the outdoors can lead to an intimacy with nature that is reinforced over time. This study showed that once they had passed the initial learning phase of surfing, group members began to enjoy moments of peace and serenity. Huia's notion that the ocean has some '*mysterious property*' available that can be accessed to make 'everyone just feel better' is widely supported by literature (Britton et al., 2020; Foley & Kistemann, 2015; Volker & Kistemann, 2011). The feeling that '*the ocean just calms you down*' was shared amongst

participants and went beyond the inclusion of surfing as an activity, and I share this sentiment though have also been limited in my explanation as to why and how. The participants shared a sense of intimacy with nature that was increasing over time, with small moments of oneness being felt. Rose's understanding that she didn't need to be actively chasing waves, and could '*just listen to the waves*' if she chose to, highlighted the growth in trust and confidence of the ocean gained over time. Kya shared this type of experience and learned that if she was just sitting out in the ocean on her board that there was '*a quietness to it*'. The early anxieties of learning the skills and environment of surfing moved to an understanding of the supportive nature of their relationship with the ocean, and the salutogenic impacts this relationship was having on them (Antonovsky, 1987).

The ocean as awe-inspiring

Many surfers report that they experience surfing in a spiritual sense (Amrhein et al., 2021; Fuchs & Schomer, 2007), and the participants of this study expressed similar feelings at times. The programme provided opportunities to experience a sense of awe, as Rose shared about nature - '*even if we're just floating like on the surfboards, just taking everything in, I feel sense of awe for sure*'. In these experiences, awe is referenced through conceptualising our place against the vastness and beauty of nature. Awe can also be understood within the context of absorption (Ballew & Omoto, 2018), where the flow state, or complete absorption, achieved at times during surfing can evoke feelings of amazement and wonder. Though the flow state was potentially unlikely to occur during surfing as an activity (due to the beginner nature of the surfers), it was felt as an embodied experience and oneness with the ocean. These feelings were challenging for some to express, which mirrored participants in Anderson's (2014) study, who struggled to convey the feelings they experienced when surfing. Though challenging to articulate, this sense of reverence and awe for the natural environment is shared amongst surfers, leading to an overall increased sense of spirituality (Amrhein et al., 2021).

Nature as a co-facilitator

The ocean was not merely a backdrop to the surfing programme, but rather an active co-facilitator and contributor to the success of participants. As Anderson (2012) describes, surfing emerges through a convergence between the ocean and the surfer, where both collaborate to create the experience as one. This perspective reframes nature as a partner and emphasises that surfing depends on this relationship. In this way, the daily conditions shaped the progress of each individual and provided challenges that required responsiveness from participants and student facilitators. The biophilia theory suggests that nature is not neutral but rather is active in shaping wellbeing (Ulrich, 1993), with the ocean providing a challenging context to experience resilience and growth. For participants,

especially for those who had not grown up near the beach, understanding fluctuating environmental conditions demanded adaptability, deepening connection to their capability and to the ocean.

Establishing kaitiakitanga was challenging given the timeframe of this study, though there was some evidence of this such as increased awareness of environmental conditions, and through small physical acts, - ensuring a beach fire was thoroughly extinguished. This is supported by other studies (Britton & Foley, 2021; Georgiou et al., 2021) that found spending time in nature supported environmental stewardship. While respect and environmental care were increased through belonging, extended periods of time in blue spaces, in particular by swimmers, surfers, and other water users, lead to further increased care of the spaces (Britton & Foley, 2021; Testa, 2024). Given the modest increases in connection to and understanding of the local environment in the timeframe, the programme has the potential to explore pathways for strengthening participants' long-term relationship with and responsibility for the natural environment.

Becoming apprentices to place

There was an evolution from fear of to healthy respect of the ocean environment, especially for those relatively new to the coastal space. The surfing programme provided broader informal ocean education (Fox et al., 2021), evidenced in particular through the experiences of Elandri and Esther, as they had not grown up in a coastal environment. The significant increase in self-reporting of Environmental Mastery through the MHC-SF supported the notion that the participants felt increased confidence through the programme. The daily safety briefings quickly moved from being led by the student facilitators to the participants themselves - they were identifying safe places to surf, rip currents and specific conditions such as ocean depth. They became apprentices to place (Wattchow & Brown, 2011), with their knowledge of the beach environment growing in parallel with their surfing. Again, those less familiar with the environment had the most significant growth in this area, but all were prompted to learn and understand their environment. A greater awareness of environmental fluctuations occurred as the group began to notice new rip currents, interesting high tide marks, and a beach campfire left from an evening group. This enhanced culture of care (Fox et al., 2021) highlighted a sense of ownership over their 'place' and the awareness of the changes occurring within it.

Summary

Taken together, these findings highlight the ability of surfing and the ocean in providing opportunities for growth, grounded experiences, and mindful connections. Through the lenses of Te Whare Tapa Whā and PERMA, the practice enhances both spiritual and

emotional wellbeing, strengthening positive emotions, nurturing relationships and providing meaning and accomplishment to those involved.

Participants experienced the evolution of nature's role from mere backdrop for their activity, through to co-facilitator and place of serenity and awe. A new understanding of the role nature has in wellbeing was developed, with many participants increasing respect for, and responsibility to, their local place. A sense of ownership developed as this place was revisited weekly, enhancing their knowledge and care in parallel. The ocean was perceived as having a spiritual element and provided the participants with calm, quiet and a space for reflection. Ultimately, nature provided an opportunity for participants to reframe their understanding of wellbeing, providing opportunities for growth, meaning and connection to place that promoted care and attention for their surroundings.

Beyond the taha

The wellbeing impacts of the surfing programme extended beyond the categorisations/definitions of the four taha of Te Whare Tapa Whā. The final interviews with participants produced new insights into how they were thinking about their wellbeing, and their understanding of the interconnectedness of all dimensions of health. I have identified this as a holistic conception of wellbeing which encapsulates and extends the four taha to specifically focus on how the participants viewed the idea of flourishing.

Holistic wellbeing: Reframing wellbeing and flourishing beyond the taha

Participants post-programme reflections demonstrated the development of a balanced and holistic sense of wellbeing. Across the interviews, all PERMA domains were discussed, and more expansive concepts such as meaning, awe and purpose were acknowledged. With an increase of 50% of participants moving into the Flourishing domain on the MHC-SF, the evidence suggests they positively benefited and had a meaningful experience in the surfing programme. The surfing experience stretched beyond hedonic pleasure and became a framework for participants to understand their own wellbeing.

This study reveals that young people have the ability to reframe their understanding of wellbeing when exposed to conditions and opportunities that can help them to flourish. Post programme the participants described wellbeing in more complex and expansive ways such as their evolving relationship with nature, reflecting a deeper sense of balance and holistic understanding of wellness. The inclusion of influences such as strengthening peer bonds, celebrating others' accomplishments, having a sense of anticipation, and recognising stillness amongst a challenging activity, reflected this deeper understanding. This section

shows the evolution of wellbeing from an internal state to being shaped by external forces, and the control that can be exerted on those forces.

Tūtohi 17 Insights from: Holistic Wellbeing: Reframing Wellbeing and Flourishing

Insights from: Holistic Wellbeing: Reframing Wellbeing and Flourishing

- Changing the Construction of Mental Wellbeing
- The Impact of Anticipation
- Meaning and Purpose
- Redefining who 'Belongs' in the Nature

Changing the construction mental wellbeing

There was a marked enrichment in language and insight based on self, such as '*found myself*', '*positive, humble and relaxed*', and '*vulnerable*'. These reflections indicate that wellbeing was not experienced as a fixed state, but rather emerged as holistic and multi-faceted, where experiences are not isolated to one domain of Hauora but woven through the multiple domains of taha tinana, taha wairua, taha whānau and taha hinengaro. This understanding helped to contribute to a more integrated sense of self. Beyond simple wellbeing is the ability to Flourish - perhaps best understood as an emergent concept of holistic wellbeing. The conditions required to flourish as defined through the PERMA model, of Positive emotions, Engagement, Relationships, Meaning and Accomplishment (Gable & Haidt, 2005; Keyes, 2007), were met through this programme, exposing participants to a resilience-building opportunity that deepened their sense of integrated health and wellness.

The impact of anticipation

The role of anticipation - or having something to look forward to - fosters a sense of joy and excitement, and can enhance mental health through Positive Emotions and Engagement (Luo et al., 2018). This study found that the anticipation of the surfing session led to an overall increase in satisfaction with the school week. It was clear the surfing programme was a weekly highlight that led to a '*more clear mind*' and understanding that there was a break from the busyness of school and other life commitments was integral. This '*emotional break*' proved vital in engagement of the group and flowed into other areas of school life, extending to a positive outlook.

The importance of this anticipation, for the activity and for increasingly for the outdoors, worked to further enhance wellbeing through fulfilling recommended time spent in nature. White, Alcock, Grellier, Wheeler and Hartig (2019) associate 120 minutes per week in nature

with good health and enhanced wellbeing, an amount of time that this programme covered in just one day. Anticipation not only enhanced the immediate joy and excitement of surfing for these participants, but reinforced the restorative impacts of nature, helping them to understand this as a meaningful contribution to sustained wellbeing.

Meaning and purpose

For one participant, the programme was meaningful beyond learning to surf - it provided her with a purpose to attend school. Her engagement with school and learning had not previously been high, but during and particularly after the programme, she became highly involved in various curricular and extracurricular opportunities. While her wellbeing was difficult to measure quantitatively (findings were variable) and her comments were often brief during interviews, her active participation and determination to improve appeared to open a gateway to explore other new activities and challenges.

Meaning also came from connecting to the coastal environment and being able to appreciate it and other users more. This sense of heightened meaning and purpose emerged as the group experienced enhanced human-ocean connection (Fox et al., 2021). Wellbeing concepts shifted beyond the self to include the environment, indicating a new understanding of the responsibilities of ocean users in New Zealand. This expansion of meaning -beyond personal gain to encapsulate both social and environmental dimensions -suggests the programme may have produced a more profound sense of belonging and environmental stewardship.

Redefining who 'belongs' in nature

Young females have been impacted by a hangover from the days of 'stranger danger' (Wodda, 2018) and a proliferation of messaging from a variety of sources that persists in the rhetoric that they do not belong in outdoor spaces. Early gendered experiences and lack of role models (Evans et al., 2020) continue to join with 'gatekeepers', leaving many young females unwilling to, unaware how to, and at times fearful of, entering the outdoors. This programme provided participants with a new sense of belonging in nature and the outdoors - they were no longer 'outsiders'. They began to use language around having the '*confidence to try*', acknowledging the ocean's role in emotional and spiritual restoration and identity formation.

Belonging fosters a sense of enhanced *Engagement* with each other and the ocean environment, a concept long understood through the reciprocal relationship Māori have with nature, grounded in both whakapa and kaitiakitanga. Similar to the biophilia hypothesis (Ulrich, 1993), both of these concepts suggest humans have an innate relationship and

connection with the natural world. When individuals such as this group feel a sense of belonging - either to others or to a place - they are more likely to engage meaningfully and care for their surroundings, in turn expanding their notion of wellbeing beyond the self.

Recognising the Barriers

This research has highlighted that negative mental health statistics continue to plague New Zealand youth. Disregarding those with diagnosed mental illness, there remains a disproportionate number of youth who consider they have 'bleak' futures and experience low motivation and outlook (Stubbing et al., 2023b). However, the findings of this study present positive news that a wellbeing promotion programme can support youth beyond being well and into a flourishing state but the barriers to these opportunities need to be addressed. This study has identified barriers experienced by young females, supported by the narratives of the participants.

Gendered barriers

For young females to become involved in challenging outdoor activities, the metaphorical and literal gatekeepers need to be recognised, reduced and removed where possible. Young females encounter several barriers to outdoor activities that their male counterparts do not necessarily experience. In a general sense, young females experience more struggles with negative body image (Sport New Zealand - Ihi Aotearoa, 2023), which can hinder their self-selection into particular activities. They are then more likely to feel judged by others and intimidated by current physical activity models within schools that often promote competition (Sport New Zealand - Ihi Aotearoa, 2023). When in a mixed gender situation, many young females will not fully engage or take on roles traditionally held by males. It is acknowledged that there are limitations and likely some negative implications in always providing single sex opportunities; nonetheless, a key recommendation of this study is to provide this option regularly and intentionally.

A second gendered barrier to female participation in outdoor activities is the lack of visible female mentors and role models in nature spaces. This needs to be addressed through persistent representation of females in outdoor spaces and in challenging outdoor activities. Schools provide an ideal space to present young females with older mentors and experts from these activities. It is likely that geographical implications will impact the variety of activities and interests in particular schools, and some students may be involved already in club, group or organisation settings. The example from this programme leaned on the expertise of local surfers and surf lifesavers, who were students at the school, to provide guided safety management, instruction, leadership and mentorship. This enhanced equity by

providing no cost instruction to the group while ensuring appropriate safety ratios were enforced.

The family

The family unit plays a key role in young people's experiences in their formative years, and these become integral to the construction of physical and mental wellbeing. In terms of experiences in nature and in outdoor activity, each family can vary greatly in their involvement, leaving consistency around messaging and experiences difficult to achieve. While families are often a supportive factor for youth, heading into nature is not always a priority due to time constraints, access and family constructs (Cribb, 2009).

Through the young females in this study, there was an understanding that family units vary greatly, and these '*unique situations that children have with their parents*' remove the guarantee that wellbeing strategies will be taught at home, compromising equitable access to health-enhancing opportunities. From the perspective of this study, it is clear that although it is likely youth are receiving some wellbeing support from home, schools should take responsibility to ensure equity. Interestingly, despite being clear that wellbeing opportunities should be accessed through school initially, Huia made the salient point that education can lead to family habits.

But also, through doing this at school, it leads the hope that this generation, when they become parents, they can teach that to their children.

Young females in this study are more likely to surf if they have access through family, either to transport, or through a family member surfing. Kya was very aware that she was continuing to surf because 'mum does', but she clearly understood the privileged position she was in as her mum stayed home and was willing and able to provide transport and time for her after school. Other participants had moved away from the beach and identified this as a key barrier as the family no longer visited regularly. Equity in access through family remains a barrier to participation for youth, again leading to schools as the best environment for wellbeing education and opportunities.

Implications of the Findings

Five implications have been drawn from the discussion findings, synthesising the impacts of each taha of wellbeing into a set of interrelated concepts that reflect the holistic, relational, and place-based nature of youth flourishing in Aotearoa New Zealand. These implications were drawn directly from patterns that appeared repeatedly through the data and were

particularly strong within participant narratives. These were described with depth and often emotion by participants, and were evident through the data sources.

The five implications of the findings are outlined in Tūtohi 18 below, and further explained in the following section, including the practical implications for programme design.

Tūtohi 18 Implications of the findings - key concepts

Implications of the Findings – key concepts	Indicative areas from discussion
Connection matters	Feeling safe to try, increased confidence in group setting, peer bonds in the surf, bonds spillover into school
The Development of Agency	Descriptions of setting/achieving goals, taking over safety briefings, reduced input from student leaders, mastery in skills
Girl Time	Requests for 'girl time', positive body talk, female leadership, first time comfortable in physical activity
Mindfulness and the impact of Nature	Slowing down in familiar outdoor spots, noticing nature, feelings of calm extending into the week, 'in the moment', apprentice to place
The Reconstruction of Mental Wellbeing	Language enrichment (from fun to purpose, grounding and positive), belonging in nature, anticipation

Connection matters

Findings reflected that the social implications of being involved in the surfing group outweighed physical and psychological benefits. The impacts on taha whānau were felt through belonging to the group, as a surfer, and as a 'kiwi kid' - helping to shape identity and connection. Social bonds and interactions formed the backbone of this study, contributing to understanding the importance of peers in supporting positive wellbeing. The programme fostered a sense of enhanced integration and coherence that, for many, flowed in deeper connections in other areas of school life. The implications of this finding may help in understanding how schools can support new or disconnected youth to their community, as well as contribute to an overall culture of student care and wellbeing. Social belonging and acceptance can lead to young people becoming more connected in other areas of their lives,

expanding their contribution across multiple settings, which in turn enhances their own wellbeing.

Programme design implications include the importance of prioritising both stable groups and the repeated engagement in the same place, helping to build familiarity and meaning. Keeping participants with the same peers builds connection and relational safety, as well as provides opportunity for peer-to-peer interactions and moments of shared reflection.

The development of agency

A compelling insight from this study is that agency and autonomy can be developed when belonging and connection are formed. These qualities were evident as participants learned new skills at their own pace and gained the confidence to explore.

As these young females developed autonomy over their progress and experiences, they showed the capacity for growth and enhanced wellbeing. The formation of a trusting and non-judgmental environment provided a safe place for participants to take ownership of their surfing journeys. They were given the freedom to use the ocean in their own way - whether simply floating around or trying new surfing moves.

With this autonomy, participants began to act as leaders of their own experience. They initiated daily safety briefings and communicated their own intentions to student facilitators, saying, for example, '*I will just keep practising*' rather than waiting for instruction. This type of experiential autonomy fosters both self-determination and personal growth, and contributes to the development of their own sense of belonging to a 'tribe' (Testa, 2024).

The implications for programme design include graduating challenge rather than engineering outcomes, allowing participants to experience 'tolerable stress' in a safe environment. Ensuring progress is visible through briefing and debriefing sessions, where in this study achievements were collectively celebrated. Having flexibility in the role of 'instructors' allows participants to do things for themselves if desired, supporting development of personal agency.

Girl time

The single sex environment, paired with female role models, proved to have a positive impact on participant engagement, contribution and the reduction of fear from judgment. Aligning these group experiences with existing literature (Evans et al., 2020; Franceschi et al., 2024; R. Pearson et al., 2025) supports the view that concentrated 'girl time' has significant positive impacts on young females' experiences. This finding highlights a need for

schools to consider gendered groupings at various times to positively contribute to wellbeing and confidence.

The tuakana-teina model - that encapsulates both role modelling of females in the outdoors and allows leadership opportunities - provides a supportive and trusting space that has the potential to develop participant autonomy in their experience.

To maximise these outcomes, programme design should incorporate single sex options, especially in consideration to vulnerable contexts such as surfing, where body image can act as a barrier to participation. Programme design needs to consider equity through female leadership and role model opportunities.

Mindfulness and the impact of nature

A key component of this programme was in providing opportunities to explore mindfulness, or the '*moments between the waves*', as a wellbeing strategy. The experiences shaped times for stillness, reflection and quiet, and expanded understanding of mindfulness beyond common dialogues of silent meditation. Mindfulness was felt through feelings of awe, appreciation and reflection, often provided by the ocean environment. The benefits of mindfulness extend to emotional regulation and increased positive emotions (Davis & Hayes, 2011; Hulsheger et al., 2012), and surfing has the ability to enhance these feelings through a deeper connection to surroundings and nature (Fox et al., 2021). Mindfulness through movement, connection, and awareness is a strategy that can be adopted at any age and can enhance wellbeing and contribute to youth flourishing.

Nature proves a powerful advocate for wellbeing enhancement, helping youth to reframe their understanding of wellbeing. Being in nature procured spiritual and environmental connections that were enhanced as their early discomforts and fears reduced. Nature's role in enhancing wellbeing has likely been reduced as new family constructs and busy scheduling reduce youth access to free play in the outdoors. A key to getting youth back into the outdoors is in taking responsibility to educate young people on where these spaces are and what is available within them, encouraging them into the outdoors to address current nature deficit issues (Louv, 2005).

Nature shapes humans in diverse ways, offering solace, challenge, social interactions, and awe. Our relationship with it is dynamic and reciprocal - nature is not a passive backdrop but an active presence. The understanding of nature's role in wellbeing deepened as familiarity of the environment and connections within the group strengthened. This broadened the notion of wellbeing as integrated, relational and inclusive of external forces.

Programme design implications include providing time for stillness as well as activity, being able to 'just be'. The repeated use of the same place allows for engagement and noticing environmental changes through daily briefings. Engagement to place also provides participants with familiarity, confidence and attachment.

The reconstruction of mental wellbeing

A key point of this study lies in the understanding that mental health and wellbeing are constructed through lived experiences and social interactions (Borch-Jacobsen, 2009). For youth to reframe their own understanding of wellbeing - potentially away from digital interactions and into the real world - they require exposure to the opportunities to do so. These opportunities lie in embodied experiences that require presence and attention, and are rich in connection to self, others or the natural world. The ability to flourish has been diminished in part through fast-paced, often surrogate digital interactions, and this paradigm needs to be disrupted so that youth understand the value and construct of their wellbeing as steeped in relational depth and meaningful engagement in the world around them. The reclamation of these experiences worked to buffer against digital saturation and provide a path to authentic flourishing.

Programme design should allow space for reflection and meaning-making through interviews, journaling, and importantly through informal conversations. There is an opportunity for wellbeing to be positioned beyond the participant, to include relationships, place and our sense of responsibility and care (kaitiakitanga).

The following section outlines a framework for schools to access when planning their own place-responsive outdoor programme, helping to navigate the complexities within education structures against the factors required to enhance youth wellbeing.

Practical Implications

The study uncovered a clear and evident need for school-based wellbeing promotion programmes, where limitations can be mitigated for sustainable outcomes. Participants were clear that schools remain best placed to provide sustainable outcomes, in part to ensure consistency, equity and sustainability in access.

As a deputy principal, I am well aware that introducing new programmes or initiatives into schools can be challenging. This study has provided evidence that enhancing wellbeing can positively impact other areas of schooling through providing stronger connections within the school community and building confidence in trying new activities and initiatives. Schools will

likely feel the need to tether such programmes to formal qualification structures, ensuring they are linked to credits to demonstrate value to students and staff. However, the focus should shift from external award to intrinsic value - highlighting the importance of learning as a pathway to future competence and enhanced wellbeing, rather than as a step for formal educational structures.

The importance of people

No programme can be sustained without the support of people, and in this case, it is the staff within schools. These staff often have a diverse variety of skills, interests and passions that could be utilised for this programme. A first step for many schools may be to gather skills and experience of their staff as well as review these against the safety management policy. As with the students, staff support could follow a tuakana-teina model, where knowledge is passed to other staff to grow expertise. In this sense, tuakana refers to the more experienced staff within each school. It may be appropriate to get community support through enhancing knowledge or gathering resources.

Place-responsive

The role of a place-responsive approach may be key to sustainable programmes. This localised, reflexive practice enables schools to keep programmes at low to no cost, as well as providing youth with activity options they can revisit in their own time. Careful and considerate planning can lead to fulfilling and sustainable programmes for schools, reflective of the local area and expertise. Further reference to the work of Wattchow and Brown (2011) can assist schools in a comprehensive understanding of a place-responsive approach to Education Outside The Classroom (EOTC) experiences.

Agency in activities

Lightly touched upon by participants, though a very important aspect of wellbeing promotion, lies in providing activity choices for youth to participate in. The self-selection nature of this surfing programme immediately prevented access to some youth who would not choose surfing as a context. This highlights the diverse interests, abilities and levels of challenge that youth should have the opportunity to engage with.

Through the experiences of Charlie, whose negative self-image impacted her participation, this study has reinforced that wellbeing is not a one-size-fits-all approach, with youth deserving some agency in discovering and accessing their own long-term strategies to ensure long-term engagement. This programme was not intended as a 'copy and paste', due to its localised context, but rather a framework for various venues and activity options. A menu of options for students can cultivate agency in their wellbeing and be supported in finding their own path to flourishing. Schools may choose to rotate an array of activities over

time through the year to lessen impact during adverse weather months and provide variety in wellbeing exposure opportunities.

Interestingly, the activity option provided by several participants was art, completed in the backdrop of nature. The mindfulness properties some people feel from engaging in art would potentially support enhancing wellbeing. This points to the need for diverse thinking when working to enhance youth wellbeing.

Education on wellbeing

Young people construct their understanding of wellbeing through interactions and experiences, and importantly, through the contribution from education. Participants strongly felt schools were the best place for young people to gain consistent wellbeing learning and that it should be accessible to all young people. Within the current New Zealand curriculum, wellbeing-related education is embedded across subject areas, but the only explicit pathway (Health and Physical Education) is optional after Year 10 (about 14 years). This means opportunities to continue learning about wellbeing are uneven and inequitable.

Educational institutions have the capacity to provide significant reach across their student bodies and contribute to youth understanding of the role wellbeing has on factors such as learning, outlook, autonomy, and social cohesion. Equitable wellbeing practices in schools create sustainable outcomes for youth, who, in turn, can carry forward a kētē of tools and strategies to support their own journey to flourishing. As one participant reflected:

That's, like, another thing, like, people may feel like, children may be feeling like, I guess, left out that they were never taught, aspects like that about what it means to be content, and ways that you can do that, and, like, practices that can help calm you down and stuff like that.

However, barriers remain in how non-curriculum wellbeing promotion initiatives are viewed in schools from a staff and parent perspective. Adults often bring their own educational biases, shaped by lived experiences in schooling, into their expectations of what should be taught. For this reason, wellbeing education opportunities should extend beyond students to staff, whānau and communities, creating a shared understanding of the importance and benefits. Schools also have opportunities to partner with external facilitators and organisations to strengthen this work.

Summary

The shift and growth in understanding of wellbeing provide valuable insight into how youth can be supported to flourish. A positive psychology framework provides the development of skills and attributes, without over-focusing on diagnosing and treating negative mental health

and wellbeing states. When young females experience belonging and resilience through a challenging outdoor activity, they are connecting positively with each PERMA domain. These connections, and subsequent shifts in wellbeing, suggest a programme such as learning to surf has the potential to contribute meaningfully to personal development and to broader social and ecological constructs.

A Framework for Flourishing: A place-responsive guide to youth wellbeing

This study has provided evidence that a place-responsive, embodied outdoors programme has wellbeing benefits for female participants, but the challenge is in developing a sustainable model for other schools. Based on the overriding principles identified through the data analysis, I propose a new model - a framework for flourishing - where youth can be supported to enhance their wellbeing through challenge, connection and reflection.

As an educator, I understand that schools can be challenging spaces to introduce new programmes and initiatives, but more importantly, understand that youth cannot effectively learn when their wellbeing needs are not met. Within each school, the balancing of curriculum needs, timetable structures, and other commitments that vary, make a fixed template difficult to implement. The timing, placement, activity, outdoor space, and year group/s need careful consideration to ensure a sustainable model is put in place. The elements of positive psychology that sit behind this framework for wellbeing promotion should be considered essential to an effective programme, aligning with many of Pearson et al.'s (2025) findings of the components that cultivate female youth resilience and wellbeing.

My overarching model integrates Te Whare Tapa Whā with complementary PERMA principles, creating a guide to understanding a holistic overview of an effective wellbeing programme for female youth. The diagram below represents the three overarching principles this programme used to create a surfing programme focussed on enhancing wellbeing. When a place responsive approach to nature-based activity is used, there is an opportunity to enhance all taha of wellbeing through connection, challenge and kaitiakitanga or greater environmental awareness. Providing a challenging physical activity in this local space enhanced engagement, accomplishment, and joy. It is in the space where these principles come together that the conditions to flourish are found.

As well as these wellbeing principles, the following figure is an overview of the key elements, followed by the guiding questions that inform programme planning. A full explanation of each area is provided beneath.

A FRAMEWORK FOR FLOURISHING

A Place Responsive Guide to Youth Wellbeing



Key Elements

- Single sex environment
- Outdoor physical activity
- Mentorship –tuakana teina
- Measurable outcomes

Whakaahua 7 A framework for flourishing - a place-responsive guide to youth wellbeing model

The wellbeing principles from PERMA and Te Whare Tapa Whā are explained in the table below, showing their complementary nature. These principles guide programme development by prompting educators to intentionally design experiences that address multiple dimensions of wellbeing. They encourage planners to ask “*how will this activity foster positive emotion, engagement, relationships, meaning and accomplishment, while also supporting taha tinana, taha hinengaro, taha whanau and taha wairua?*” This ensures programmes are holistic, culturally responsive and structured to promote wellbeing and flourishing.

Tūtohi 19 Complementary overarching wellbeing principles

PERMA domain	Te Whare Tapa Whā domain	Are there opportunities for participants to:
Positive Emotion	Taha Hinenegaro	Experience joy, fun and anticipation
Engagement	Taha Tinana & Taha Hinegaro	Engage in a challenging experience and experience focussed participation

Relationships	Taha Whānau	Meet and interact with peers, develop mentorship opportunities, experience social connections
Meaning	Taha Wairua	Connect with values and beliefs, place, and people
Accomplishment	Taha Tinana & Taha Wairua	Learn a new skill, explore agency through physical challenge, experience full absorption

Whilst this tūtohi/table maps the Western PERMA principles alongside the Indigenous Te Whare Tapa Whā, this alignment is meant as a practical, conceptual bridge rather than a direct conversion. Merging Western psychology frameworks with holistic Indigenous models of wellbeing involves inherent complexities, with PERMA categorising wellbeing into distinct pillars, while Te Whare Tapa Whā represents an interconnected whare where dimensions rely on the others.

Rather than offering a definitive formula, this tūtohi highlights complementary synergies to guide programme design. By grounding these principles in practice, schools can develop targeted, context-specific initiatives. Key transferable elements from this study include:

- A place-responsive approach
- A single sex environment
- Outdoor physical activity
- Mentorship - tuakana teina
- Measurable outcomes (e.g. Hua Oranga Individual SRQ)

A place-responsive outdoor framework informs programme development, in particular, the use of signposts one (Being present in and with a place), and four (Apprenticing ourselves to outdoor places) (Wattchow & Brown, 2011), as referenced in full in chapter two. These two signposts require consideration of the local environment as a co-facilitator in programme and context development, and encourage the outdoors to be considered beyond human use, and rather as a mindful, present-focused space.

The guiding questions below have been developed for schools to consider in their early planning and to provide a structure for safety management considerations. This guide is derived from Wattchow and Brown (2011) and is intended as orienting questions for educators rather than a formal checklist.

Tūtohi 20 Guiding questions for planning (Modified from Wattchow & Brown (2011))

Place	What nature spaces are available in the local area? What is nature spaces are available within a walk or short drive? What activities are appropriate in these spaces? Are staff and/or students familiar with this place?
People	What are the existing capabilities with staff? Senior students available (e.g. if the school is coastal there may be a large group of surf ifeguards available). What activities can youth revisit? What year group/s will be involved? Are there current school programmes that can be expanded on or adapted? (e.g. school service or mentorship programmes).
Activity	What resources do the school currently own or have access to? Are there other local resources that could be sourced? (e.g. through clubs or groups?) Where in the current school timetable/structure will this take place? What activities would youth continue to have access to? What activities are low or no cost? Is appropriate safety management available for the activity?

Other considerations

There will be school-specific considerations that may not have been raised in the planning tool, such as school size, for example, is there scope for whole-school involvement -and also considerations of parental involvement as volunteers. The complexities within each school require individual attention and should include consideration for non-binary or other gender youth within the model. It is likely that schools may have more than one option of activity and place available for this programme, and may consider providing several options for students to become involved . Having an expansive view of the activity options that could be included is important to providing equity for students. Though the word 'challenge' connotes very hard activity, this is subjective and a range of options provide youth with potential stepping stones to increase their personal level of acceptable risk.

Summary

Developing and implementing a programme based on this framework ensures the use of local resources and expertise, as well as embedding positive psychology practices that can enhance wellbeing in youth. Schools have variable access to resources, places and people, so this method can be a guide in discovering best options for them. An action research approach allows for schools to trial a variety of contexts and adapt the programme to their individual needs while keeping the needs of their students at the forefront. This study tested

the programme in one setting and context but provides evidence that youth wellbeing can be enhanced through thoughtful planning and guidance.

Research Question Reflections

In this section, the findings are revisited in relation to the original research questions, providing direct responses and highlighting impacts and limitations from the study.

What positive shifts in hauora are experienced by participants during a place-responsive outdoor programme?

The combined data from the current study is clear that positive shifts on all measured aspects of hauora occurred, with the most prominent shifts within taha hinengaro and taha whānau. A positive and exciting outcome was the significant shift in social aspects, where the programme led to an enhanced sense of belonging, shaping of identity and the forming of positive relationships. This outcome demonstrates that female youth understand wellbeing as being more than an emotional state and is interconnected with others and our sense of belonging in spaces such as the outdoors. Taha hinengaro was also enhanced, and a participant's narrative indicated this was mainly due to increased feelings of calm and stress relief. The shift in physical wellbeing was supported most strongly by the participant narrative surrounding physical wellbeing benefits, though this was not captured statistically, likely attributable to the already high baseline results. It may be that participants attributed certain feelings of wellbeing - for example, a sense of accomplishment - as being more closely aligned with other taha, such as spiritual rather than physical.

The overall significant shift across all taha supports the positive impact this programme had on participants. Te Whare Tapa Whā was acknowledged as simple and effective for youth to understand, drawing clear data supported by a narrative around each taha.

How does participation in a place-responsive outdoor programme influence participants' sense of kaitiakitanga?

Surfing created a culture of care for participants as they noted their increased interest, understanding and respect for the ocean environment, though this remained as increased awareness and did not extend to action such as picking up rubbish. Those who had less experience and understanding of the ocean environment gained a greater positive impact, and notably, their initial fear turned to respect as they gained new knowledge. As discussed, a longer programme length could have led to greater focus on kaitiakitanga, for example, through organising beach cleans with the broader school community or investigating other ways the beach can be accessed for wellbeing. Physical acts and education would be

recommended as integral to the further development of this programme. The growth in respect of and understanding that New Zealanders have a responsibility to look after the environment was highlighted by several participants. This was evident through narratives like Kya, as she expressed her increased sense of responsibility as a New Zealander, to not 'overdo it' in terms of fishing and exploiting the environment. This showed that the care for their local surf beach was beginning to extend into awareness of broader environmental issues.

In what ways does the programme help participants identify and apply personal strategies for mental wellbeing?

Participants' experiences varied when identifying personal strategies for supporting their wellbeing. Elandri more clearly understood the positive impact that regular exercise was having and implemented her own physical activity programme into her schedule. She began a daily programme that included running, working out and sports team training. Esther was aware that the beach had become a space that she would regularly seek out for solace and calm. She became a more consistent visitor to the beach after the programme finished. Both Aria and Lily became more involved around the school, taking up opportunities for connection and belonging through a variety of activities. This vastly improved Aria's connection to the school and her motivation to attend. Kya began surfing regularly with her mother, something her mother had wanted for some time. Kya had the most access to transport and family members who surfed, which enabled her continued participation. Rose and Mia continued to use the beach with friends, their social wellbeing clearly linked to spending time with peers at spaces they were comfortable.

Interestingly, Charlie was very clear in expressing her understanding of wellbeing strategies that worked for her, but she was the least likely to access these. Her - at times negative - self-esteem, coupled with the pressure she felt to get involved in activities, led her to remove herself from potential health-enhancing opportunities. This may be reflective of the wider population and demands attention to ensure young females are provided with diverse options and barrier free access to wellbeing opportunities.

How does participation in the programme impact positive psychology constructs (e.g. PERMA domains)?

The MHC-SF yielded interesting and diverse results requiring investigation into the three subgroups of eudaimonic social, eudaimonic psychological, and hedonic wellbeing.

The quantitative data place hedonic wellbeing at a low to moderate positive impact, though the qualitative data provided little doubt that participants experienced joy and happiness

through surfing. However, over time, the experiences of participants were framed in more reflective and complex language as a deeper sense of wellbeing was fostered.

Eudaimonic psychological domains cover areas such as **Self-acceptance**, **Environmental Mastery**, **Positive Relationships** and **Purpose in Life**, all of which garnered moderate to high positive increases. However, **Personal Growth** had a small but negative shift. This may be due to the ambiguity of the question - *(in the last month) you had experiences that challenged you to grow and become a better person*, or a potential lack of connection between this concept and the surfing programme. Participant narrative supports growth (social, emotional and spiritual) as a key outcome.

The significant enhancement to eudaimonic social wellbeing highlighted the benefits from peer and mentor involvement, and connection to others in growing and reframing wellbeing. Female youth flourish when provided with an ideal environment to do so, and this includes an enhanced sense of belonging and safe and trusting surroundings.

In a literal sense, the surfing programme provided the opportunity to flourish, as presented through the PERMA model domains.

Positive emotions - participants experienced joy, excitement and calmness through surfing, and were able to express appreciation for their own successes as well as others.

Engagement - the focused attention required for surfing provided mindful moments within the challenging activity. Surfing requires presence and persistence to achieve success.

Relationships - a key factor for participants, social connections were strengthened through the shared experience, support from their peers, and mentorship from the student facilitators. The all-female environment enhanced feelings of safety, confidence and low competitiveness.

Meaning - meaning was derived from enhanced connection to and care of nature and through strengthened cultural identity (being a 'kiwi', and a surfer).

Accomplishment - participants experienced physical skill development and the ability to grow confidence through overcoming fears. They were also able to set and achieve personal goals throughout the programme.

Overall, the participants' growth within the PERMA domains provided an insight into a meaningful and purposeful experience. The expansion of wellbeing beyond hedonic attributes and into eudemonic wellbeing realms indicates a positive impact.

What elements of the programme do participants identify as most impactful for their emotional wellbeing and ongoing mental health?

A significant impact of the programme was the increased understanding that wellbeing spaces, such as the beach, were available and accessible. Over the course of the programme, all participants acknowledged their awareness of the environment - the beach, ocean or just being outside - as health-enhancing, specifically for the sense of calm and stillness it could provide. Despite the beach being relatively close to all of them, there was a sense they had not fully realised the positive impact it was having on them.

Strong evidence pointed to social interactions and belonging as wellbeing enhancing, with participants acknowledging the impact the group setting had on them. The single sex environment was empowering and transformative, leading to reduced feelings of judgment and competition. There is potential for this to be replicated as the participants enter adulthood, understanding the positive impact that all-female environments have on their wellbeing. As supported by other research (Jelleyman & Humberstone, 2024; Overbury et al., 2023; Testa, 2024), females who engage in long-term blue space wellbeing habits have the potential to find their 'tribe' and be supported in health-enhancing habits.

Summary- Research question reflections

The research questions provided a clear focus for this study, while the methodology was the primary driver in collecting and analysing data to answer these questions. The findings offer meaningful contributions to existing wellbeing research, with the most impactful findings highlighted. The programme drew on the Te Whare Tapa Whā and PERMA models, which facilitated coherent findings that aligned and supported the experiences and narratives of participants.

Theoretical and Practical Contributions

Theoretical contributions

This study offers several theoretical contributions, particularly in advancing understanding of how female youth experience and construct their wellbeing. These contributions expand on the responses to the research questions, offering insight and deeper reflections on the implications of this study.

Expanding the concept of flourishing in youth

Broadening the notion of youth flourishing requires rethinking how wellbeing is understood and experienced. Current youth wellbeing constructs are filled with idealised images and a culture of comparison through social media, and it is likely many will never reach this unrealistic sense of health, fitness, wealth, and beauty. Youth require a new understanding of wellbeing that is grounded in real-life experiences.

This study showed that female youth can reframe their understanding of wellbeing, and when provided with appropriate experiences, they can flourish. The programme's constructivist approach enabled youth involvement through female mentors and facilitators, who served as role models in outdoor settings and experts in their respective outdoor activities. Nature and the ocean also helped to construct a new understanding as the participants expanded their notion of wellbeing beyond their internal emotional state, to belonging through shared experience, environmental care, and the spiritual experiences of awe, stillness and solace.

Blending of western and indigenous concepts of wellbeing

Both quantitative measurement tools - the MHC-SF and the Hua Oranga - are appropriate in gathering data for youth mental health, but when they are combined and contextualised for New Zealand youth they become more culturally and socially grounded. While there were benefits and limitations within the Te Whare Tapa Whā and PERMA models of wellbeing, they provide more scope when integrated into broader concepts. This allowed for discussion themes to be founded on more expansive notions beyond simple terminology such as *Relationships*. The interconnected nature of indigenous models of wellbeing such as Te Whare Tapa Whā take this term from simple interpersonal interactions into our ability to connect, belong, and understand our identity within the environment.

Learning beyond the formal curriculum

The surfing programme provided an opportunity for in-school learning that is beyond the requirements of any school qualification. While mental health is part of the Health Education curriculum within the NZC, the subject is not compulsory after Year 10 (approximately 14 years old). It is also hidden amongst a wide variety of topics that Health Education can deliver, such as sexuality education, nutrition, decision-making, and healthy relationships, with many schools delivering the content they can within one hour/lesson per week. Schools offer a place of learning that stretches beyond formal qualifications, with experiences such as arts, sports, music, and the 'softer' skills learned from being around other people, including time management and respectful interactions. This programme provided an opportunity for schools to support youth in strengthening mental health and resilience, skills that can flow

into other areas of life. These skills transcend teen years and can support young people as they leave school and enter adulthood with their own kētē (basket) of knowledge.

Situated and embodied wellbeing

Embodied outdoor experiences are powerful for youth, creating opportunities for growth, challenge and connection (McKenzie et al., 2021; Pearson et al., 2025; Wheaton et al., 2017). It is proven that nature is a powerful antidote to many stressors of modernity (Hunter et al., 2019; Shuda et al., 2020; N. M. Wells & Evans, 2003), but the challenge is in developing an equitable and sustainable model that can overcome barriers inherent within many challenging outdoor activities. A key aspect of this programme was the shared social context, where participants are situated locally to the programme location. This provides an opportunity for further exploration of the activity, as well as sharing with family and friends, or joining local clubs or groups.

Gender specific insights into outdoor activity

The participants were able to provide rich narratives on their experiences as young females and being within an all-female environment. Their insights help to understand the experiences of young females when in outdoor spaces, including how they sense belonging and the barriers they have faced to participation. In contrasting their experiences in the programme to other times when they have been with male counterparts - particularly those who were in outdoor education classes - highlighted their desire to be in a single sex environment at times to allow growth and empowerment without judgement (perceived or not), or competition. While acknowledging that single sex environments are not always possible or practical, the implications of this study suggest these experiences provide growth, autonomy and agency for young females.

Practical contributions

Modelling an evidence-based, scalable intervention

This study has developed and proposed a model that is both replicable and has potential to be scalable within a school context. The strong evidence that the programme supported participants' wellbeing lays a foundation for schools to explore their own place-responsive programme within the suggested framework that this study provides. The framework provides flexibility for schools to consider the most sustainable programme for them, including the activity, year group/age, mentor input, and staffing skills and competencies.

The co-construction of effective programmes

The action research methodology was fundamental to shaping the programme, allowing continuous refinement based on participant feedback. In using Kemmis, McTaggart and Nixon's (2014) action research spiral as a guiding principle, the programme was able to be co-constructed with the student facilitators and participants, reflective of both daily conditions and the progress of individuals. The ocean and environment were also 'active' participants, with surf and weather conditions guiding the daily planning. This reflexive and flexible approach was able to occur due to the experience of the researcher and the tuakana-student facilitators in understanding the environmental changes.

Another advantage of using this model within a school context is that most education professionals are aware of and have likely used this in prior practice. Understanding the model can make it relatively easy for those in other schools to use it for their programme planning and implementation. The action research model allows schools to trial the programme at different times and with various activities until they can develop a sustainable model for their own use.

Promoting female participation in outdoor spaces

The surfing programme provided a small group of young females with the expanded notion of where they can belong, and that outdoor spaces can be accessible, safe and rewarding. For young females to feel welcome in outdoor spaces they need to experience opportunities and see other females in these spaces. The importance of a female-only experiences was outlined in detail by the participants, and this may be crucial in providing a gateway to further experiences for many young females. As identified by the participants, youth are not exposed to the same experiences at home and therefore may not be participating in any nature-based activity. Programmes such as this provide youth with the opportunity to experience outdoor spaces and activities, and to experience a space where females are supporting other females in these spaces.

Tool adaptation and use in a practical environment

The adaptation of the Hua Oranga tool into an individual self-assessment option proved a simple and effective reflective method for youth. Te Whare Tapa Whā as a model of wellbeing is recognisable by youth in Aotearoa, with a general understanding of the characteristics that fall within the four taha. There is scope for this model to be used and tested beyond this research, looking to prove its effectiveness beyond clinical use. The Hua Oranga individual assessment tool could be integrated at various points alongside practical aspects of an outdoor nature-based programme, and could include written aspects where youth are

encouraged to reflect on why they self-reported in that way. On its own, it is a simple, effective tool to track changes in perceived wellbeing for youth.

Limitations and Critical Reflection

Contextual limitations

Localised context

The surfing programme required a specific geography of a surf beach and waves suitable for learning. Due to this localised context and activity specific to the area, the programme cannot be replicated in all areas of New Zealand, and certainly not around the world. While there are many similar sandy beaches in New Zealand, there are also areas that are considered challenging for learn to surf programmes, such as point breaks and rocky areas. Choosing to engage in a learn to surf programme must be carefully considered when planning a context for this programme. The proposed programme framework allows for other, more suitable contexts to be used which would better suit the local area.

Seasonal activity

It is likely that surfing as a context would remain a seasonal, summer-based- activity within this wellbeing model. The winter months necessitate extra equipment such as wetsuits, and both water and air temperatures can become limiting factors in terms of motivation for participation. Both enjoyment and safety may be compromised in inclement weather months, negating the intended positive wellbeing experience.

Long term impact

With a programme period of 10-weeks with some follow up 6 months after, there was limited long term gathering of data surrounding the ongoing impacts of the programme. Given the current negative mental health outcomes for youth, an all-year programme and accompanying longitudinal impacts could provide potential to further enhance wellbeing.

In-school limiting factors

School timetable structures are different for nearly every secondary school in New Zealand, leading to difficulty in providing a single template for duplication. In the case of this school, the programme was set on a specific day and time - Wednesday from 1.30-3 pm which fitted into an unstructured period of time for the participants. While this made the schedule relatively easy to set, there were restrictions in being bound by time and day. As one participant reflected, having to do the programme at this set time meant that the conditions

were not always ideal. The lack of flexibility in timing would be challenging to avoid in most school structures.

Resource intensive

The programme required a high ratio of support for the safety of participants, and also a reasonable amount of equipment (surfboards). This meant the programme was resource-intensive and may be unsustainable for some schools in terms of financial burden, staff supply, and time management. Input from community organisations may better support programmes such as this in some areas.

Participant limiting factors

Self-selection

Participant self-selection was a limiting factor, as an activity bias may have been evident. As the available cohort was all aware from the initial contact that the activity context was surfing, this would have created positive and negative reactions from potential participants. The nature of surfing as an activity would have attracted participants, but also detracted those who may have been interested in the wellbeing aspect but were not confident in surfing or in the ocean. This could be mitigated in part by offering other contexts for schools, and therefore youth, to choose from.

Self reporting

The gathering of quantitative data through SRQ could have presented some issues around biases. As previously discussed, SRQ are not immune to participant mood and engagement, and can fail to capture nuances in responses. The pre-determined responses they chose from may not have accurately reflected their experiences, or gathered the full understanding and meaning.

Homogeneity of the research group

Though it was the intention for this study, the research participants present as a relatively similar subset - they were all females, from the same year level, living in the same town, and from a relatively narrow socioeconomic window. There were some cultural differences, which included two immigrants and a range of Māori and Pākehā participants.

Sample size

The relatively small sample size had many advantages, such as safety and the availability of school equipment. However, the disadvantages of this were the reduced statistical power - potentially rendering it less likely to detect a real effect - and the challenge in generalising the findings to the broader population. However, in the context of this study the sample size was advantageous for rich and detailed data gathering.

Critical reflections

MHC-SF questionnaire

The MHC-SF may house some abstract notions that could be difficult for youth to associate with surfing/outdoor activity and also with wellbeing. For example, question 8 *‘that the way society works made sense to you’*, may be challenging for youth to relate to their understanding of the programme’s intent and their own health outcomes. The MHC-SF was appropriate as it is validated across various studies and contexts, but may have presented some bias or lack of understanding from the participants.

Non-clinical focus

This study looked at young females who had not been diagnosed with mental illness, but rather those who wanted to enhance their wellbeing. This helps to bridge the gap in non-pathological approaches to wellbeing, but does not support those with further needs. This limits generalising applicability to those with mental illness or those having acute mental health needs, without further testing in this area. This was not the scope of this research, but the poor outcomes for those with mental illness do require further attention.

Long-term personal application

For young people to continue in a challenging outdoor activity such as surfing, they need to address any safety or other concerns they have in participation. Most of the participants did not feel they had other people to continue surfing with, and most had no family members who surfed. A major limitation is in feeling unsafe when surfing alone - and rightfully so - and this can lead to non-participation. To support participants in continuing with the activity, they could be provided with suggestions of clubs or groups they could join, or be empowered to start their own group outside of school time.

Discussion Summary

This chapter has highlighted the key findings of the study and synthesised them against existing theory, allowing for the emergence of a broader understanding of wellbeing that is both complex and nuanced.

Through participation in a place-responsive outdoors programme, these young females were empowered to develop their own understanding of wellbeing, constructed through positive

and supportive experiences. They were provided with the opportunity to expand their knowledge through learning a challenging skill while being immersed in nature, with the ocean providing its own contributions to participants' understanding of wellbeing.

In contrast to worrying research that many young New Zealanders feel they have a 'bleak future' (Stubbing et al., 2023b), half of the participants experienced flourishing wellbeing after this programme. They were exposed to a health-enhancing opportunity that provided many of the unique factors required for young females to thrive - challenge, single sex, enhanced connections, support, agency, stress management and physical activity.

A framework for wellbeing promotion has been suggested, using the culturally sensitive Te Whare Tapa Whā model and the principles of PERMA, for specific use in New Zealand schools and contexts. A guiding set of principles for schools to plan their own wellbeing promotion programme has been outlined to ensure sustainability and equity. Barriers have been identified and addressed with suggestions to support schools through programme development. An outline of further research opportunities points to the need for a better understanding of youth mental health promotion and the ideal methods to present strategies to youth.

There has been significant research into the positive impacts of nature spaces on human health, and this study has provided additional evidence of the restorative power of the ocean. This discussion has highlighted the holistic outcomes that a challenging outdoors programme can provide, outlined by the participants' ability to reframe their own sense of and understanding of wellbeing.

Chapter 6 Conclusion

In this chapter I address the aims and objectives of this study and show how they were met. I present the key findings of the thesis, and how these contribute to the current body of research. I identify ways to reduce barriers to female youth accessing a place-responsive outdoors programme, with a focus on agency, equity and sustainability. I close with final thoughts on addressing the youth mental health crisis and the importance of providing opportunities and conditions for young females in Aotearoa to flourish.

Aims and Objectives

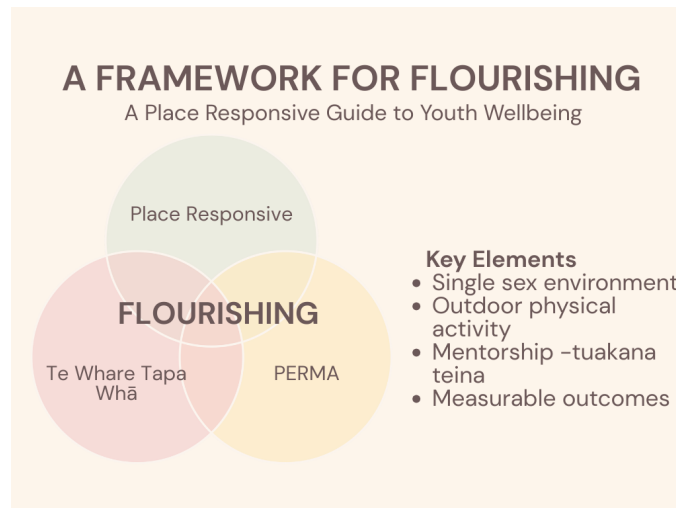
This study aimed to develop and implement an evidence-based, place-responsive outdoors programme for young females, focusing on factors that support and enhance wellbeing. The adoption of a positive psychology model supported growth while participating in the challenging physical activity of surfing. There was a focus on introducing youth to non-pharmaceutical, sustainable, lifestyle-based strategies that could support ongoing wellbeing. The aim was to equip participants with the knowledge to develop sustainable models of outdoor activity that support long-term mental health and flourishing.

The 10-week surfing programme was developed and tested with a group of female youth, providing opportunities to experience challenge and growth in a single sex environment. The measurement of wellbeing through the Hua Oranga and MHC-SF scales provided evidence of positive wellbeing shifts across a holistic range of metrics. The youth in this study were able to provide comprehensive insights into their lived experience, discarding barriers to inclusion and judgment for enriching non-competitive, health-enhancing spaces.

When mapped against the culturally sensitive, complementary domains of PERMA and Te Whare Tapa Whā, the programme provided the opportunity for these youth to flourish. The participants reframed wellbeing beyond internal measures, to incorporate more expansive notions such as connection to place and nature, belonging and identity within a group, and the profound impact of skill learning on autonomy and social acceptance. Through a supportive environment, participants developed an understanding of strategies that could support their own wellbeing, inclusive of the factors integral to this programme.

The following section takes these key findings and considers their contribution to current knowledge, moving the lived experiences of the surfing group into a broader dialogue around embodied youth wellbeing, and the therapeutic benefits of nature-based interventions.

Applications for use



Whakaahua 8 A framework for flourishing - a place-responsive guide to youth wellbeing model

The guiding framework for wellbeing promotion and flourishing was developed and tested for use in secondary schools but can be adapted for youth in any context. There are clear benefits to youth accessing a programme such as this for stress mitigation and wellbeing enhancement through their challenging secondary school years however, the opportunity to access support strategies could be introduced at any time.

Younger tamariki/children may benefit from scaffolded practices that support wellbeing from their first years in education. Early introduction to positive psychology models and challenging, appropriate outdoor experiences can help to frame and construct wellbeing through these influential years. Early initiation may serve to mitigate parental and school biases around education and disrupt future negative mental health outcomes in some youth.

Youth in other educational institutions like New Zealand Health schools (for students with high health needs), and alternative education facilities (for students who may have become alienated from mainstream schools) could benefit from some form of programme such as this. In particular, the Health schools may require some adaptation and careful consideration through planning, utilising the place-responsive and action research guidelines by their own expert staff.

There is also an opportunity to use this model to guide male-only and other gender programmes. The implications of this study suggest there are likely benefits for all youth through following these evidence-based guidelines.

Implications for Further Research

There are several areas for further research that have been highlighted by this study, beyond the specific areas highlighted in the discussion. These encapsulate broader aspects of the study and require further attention to expand growth in human health and wellbeing.

Blue spaces and mental wellbeing in female youth

This study contributes to the growing body of research into blue spaces and the potential impacts on human health and wellbeing. Further research into the efficacy of this programme in other schools would enable further understanding of these spaces, specifically on female youth, and the contribution this may have on mental wellbeing promotion and providing a buffer against future negative outcomes. The expansion into other coastal schools in New Zealand would provide an opportunity to test the Flourishing wellbeing framework beyond one school or group.

Due to New Zealand's geography, blue spaces are often accessible through coastal spaces and an abundance of lakes and rivers, providing opportunities for other immersive, embodied contexts for female youth. These natural assets need to be recognised as part of mental health strategies that could offer relevant, low-cost, culturally reflective, and sustainable pathways to support youth wellbeing in Aotearoa.

Positive psychology models

It is recommended that further research be conducted into the impact a positive psychology model has in promoting wellbeing in youth through a strengths-based approach. Current mental health and wellbeing continues a dominant focus on rehabilitation and treatment, where strengthening youths' characteristics can lead to a more sustained wellbeing. Further research could compare the efficacy of a strength-based based outdoor activity programme against traditional counselling for youth in secondary schools. Measurement of wellbeing could be used to indicate shifts in all domains, again using Te Whare Tapa Whā.

Positive psychology models identify and nurture youths' strengths, positive virtues and experiences, providing them with opportunities to explore identity and enhance resilience. The potential for these models as a framework for wellbeing lies in the ability to shift the narrative from deficit-based to empowerment, by focusing on strengths. Positive psychology provides youth with the opportunity to build their psychological resources and provide a buffer against adversity.

The Impact of a flourishing youth population

The contribution of flourishing mental health in youth would likely have a future ongoing positive effect as they become adults, contributing to a more positive and productive society. Further research could track participants over a longer period of time and track wellbeing changes. A larger cohort would also better support findings. As seen in many Nordic countries that rate highly against World Happiness Metrics (Martela et al., 2020), time spent together in nature from a young age can contribute to a happy, more satisfied population. There are other clear differences between these populations, but spending time in nature appears as a relatively simple and effective tool in enhancing wellbeing. There is scope for further understanding into following youth who have had opportunities to flourish and build resilience as they enter into adulthood with their own wellbeing strategies.

The power of place

In contrast to many existing programmes, there are notable benefits to not being 'taken away' and returned 'restored', but rather in experiencing an outdoor activity in a shared social context. There is scope for further research on the use of Wattchow & Browns place-responsive model (2011) for use in secondary school settings, where programmes have the potential to benefit youth wherever they reside. Examples of further research could include a similar programme provided through a school with access to a lake, and using the context of kayaking, or a school in close proximity to tracks, where mountainbiking is appropriate. The wellbeing impact of these contextualised, place-responsive programmes would be measured through Te Whare Tapa Whā.

New Zealand is rich in locations that provide access to outdoor opportunities, and many schools are already accessing their local area for other learning. Place-responsive guidelines provide an opportunity for low-resource, low-cost and effective programmes that can be replicated and modified over time. The implications of the place-responsive approach have the potential to build connections to place and foster kaitiakitanga, and ultimately strengthen young New Zealanders' connection to Aotearoa.

Wider school impacts

There is scope for further research to identify any other school-based impacts from participation in this programme. The participants' application in other areas of the school could be measured, such as school attendance rates, school engagement or academic results. This could be useful to correlate impacts against the programme's overall efficacy, as well as further legitimise the programme for school leaders.

Mentors

Future research could explore the impact of the programme on the wellbeing of the mentors/student facilitators. There is scope to measure and understand the impact of 'service' to their community, as well as providing an opportunity for the action research framework to continue, allowing for iterations from past participants as they enter into mentor roles. There are multiple roles of the mentor that could be researched - including the impact as a female role model, as a programme facilitator, or the impact of providing community service within the school.

Tuakana-teina cycle

To further embed the programme into schools, future research could monitor the impacts as current programme participants evolve into future programme mentors. The study could follow the participants over time and monitor their wellbeing as they contribute as programme mentors for the next programme cohort, alongside specialist surfers or surf lifesavers. The scope for research covers the impact on whole school wellbeing, and the impact that recurrent, sustainable wellbeing programmes have over time.

Other gender programmes

While the sample for this study was limited to young females, this focus allowed for an in-depth exploration of gendered experiences in the outdoors. However, future research could expand beyond this scope to explore experiences of all male programmes, or across other gender identities. This could allow for multiple programmes to be running, and across multiple contexts.

Female participation

As identified through Sport New Zealand (2023), female youth participation in physical activity is reduced through their teenage years, in part due to negative body image. Further research could investigate the impact of ongoing outdoor programmes, with a single sex environment, on participation rates over time. This should be investigated over the time the reduction begins (approximately 12 years old), and continue through the secondary school years in order to track participation longitudinally.

Summary

The potential for research into enhancing human wellbeing and deepening our connections to the natural world is limitless. As outlined, further research into health-enhancing opportunities for youth in blue spaces, for youth of all genders, and for impacts on mentors and participants' education are just some options. Insights from diverse wellbeing research

can strengthen our capacity to build a resourceful, connected and resilient population who can flourish in the face of life's challenges.

Final thoughts

The calm between the waves

As a current deputy principal and a secondary school educator for over 20 years, I have gained a unique view of young people and how they act in and interpret the world. Over this time, the roles of parents, teachers, coaches, friends, and even the teenagers themselves have shifted significantly. Change has become a constant, and it is no surprise that youth wellbeing has been affected. While there is growing emphasis on wellbeing, in my view from my experience in doing this research, I think that we continue to fall short in supporting young people effectively. When wellbeing is compromised, learning becomes increasingly difficult.

There remains strong evidence of negative mental health outcomes for youth in Aotearoa, and to date, no interventions - pharmaceutical or otherwise - have proven effective in slowing or reducing this downward slide. Despite understanding the profound positive impacts that nature has on us, young females are victims of social constructs that have largely kept them out of these health-affirming spaces (Calin et al., 2021). The construction of mental health has been influenced by powerful forces, leading them into spaces where they are compared and contrasted against curated images of unrealistic lives.

This study has presented evidence that when provided with the right conditions, young females can enhance their wellbeing and even flourish. Females require supportive, inclusive peer connections, female role modelling and importantly, exposure to opportunities that challenge them to grow and build resilience. They require the support and confidence from their gatekeepers to throw those gates open, to understand the changing landscape and adapt to it along with their young person, and maybe to have the courage to enter the world of the outdoors alongside them. Young females need to see themselves in, and be welcomed into, nature spaces and outdoor opportunities, where they can experience the multiple benefits nature provides.

Access to nature may hold a key to wellbeing enhancement for youth, in particular as they gain an understanding of the impacts this can have on them. Biophilia and kaitiakitanga are closely bound concepts, both reflected in the saying 'we are nature and nature is us'. As biophilia posits, nature and humans have evolved together, our wellbeing elaborately tethered (Ulrich, 1993). Māori world view supports this notion, understanding the deep

connection and responsibility we have to our whenua and taiao. This reciprocal relationship binds us together, and our wellbeing is carefully woven as one. The ocean is increasingly being understood for its powerful impact on taha wairua and taha hinengaro through its unique form of restoration. Marine environments have the ability to foster mindfulness, resilience and deepen a sense of belonging through their vast expansiveness and sensory rhythms. When youth are involved in the ocean through kaitiakitanga opportunities, they are benefiting both the ecosystem and themselves, further cultivating the reciprocal relationship and connectedness of each other's health and wellbeing.

Surfing and the ocean are both powerful tools for enhancing wellbeing, as well as metaphors for the complex and variable conditions young people face. Mental wellbeing, like the ocean, holds a quiet depth beneath its often chaotic and uncertain surface. Surfing reflects our ability to navigate these challenges, while riding the waves becomes a symbol of our resilience.

In supporting young females in Aotearoa to construct their wellbeing as holistic, integrated, and complex, we empower them to walk confidently into outdoor spaces and embrace challenges through embodied experiences. These experiences foster deep connections with other females and create social bonds that extend into many aspects of life, building confidence to try new things and to get involved. In doing so, we are equipping them with tools to ensure their own flourishing, teaching them to enjoy the moments between the waves, the quiet space of calm and empowerment.

As Dame Whina Cooper reminded us, *Take care of our children. Take care of what they hear, take care of what they see, take care of what they feel. For how the children grow, so will the shape of Aoteroa.* This study echoes this call and shows that when we provide young females with opportunities to connect with nature, build personal resilience, and experience inclusive outdoor spaces, we are helping to shape a future where wellbeing is protected, enhanced, and they are able to flourish.

References

- Adolescent health*—SEARO. (2025). <https://www.who.int/southeastasia/health-topics/adolescent-health>
- Adventure Specialties Trust. (n.d.). *Strengths-based Outdoor Adventure Therapy and Education Programmes*. Adventure Specialties Trust. Retrieved July 18, 2025, from <https://www.adventurespecialties.co.nz/adventure-therapy/>
- Ahuvia, I. L. (2025). Letter to the Editor: Are young people overpathologising their own mental health? We need empirical research. *Child and Adolescent Mental Health*, 30(4), 579. <https://doi.org/10.1111/camh.70049>
- Amrhein, M., Barkhoff, H., & Heiby, E. M. (2021). The effects of an ocean surfing course intervention on spirituality and depression. *The Sport Journal*. <https://thesportjournal.org/article/the-effects-of-an-ocean-surfing-course-intervention-on-spirituality-and-depression/>
- Anderson, J. (2014). Exploring the space between words and meaning: Understanding the relational sensibility of surf spaces. *Emotion, Space and Society*, 10, 27–34. <https://doi.org/10.1016/j.emospa.2012.11.002>
- Ankers, M., Parry, Y., & Willis, E. (2023). Social constructionism, power, and understanding the health needs of different groups engaged in a shared reality. In P. Liamputtong (Ed.), *Handbook of Social Sciences and Global Public Health*. Springer, Cham. https://doi.org/10.1007/978-3-031-25110-8_141
- Antonovsky, A. (1987). *Unraveling the mystery of health: How people manage stress and stay well*. Jossey-Bass.
- Aotearoa Surf. (n.d.). *Surf Sistas—Women’s Only Surf Group—Te Arai & Mangawhai*. Retrieved July 21, 2025, from <https://aotearoasurf.co.nz/surf-sistas/>
- Ballew, M. T., & Omoto, A. M. (2018). Absorption: How nature experiences promote awe and other positive emotions. *Ecopsychology*, 10(1), 26–35. <https://doi.org/10.1089/eco.2017.0044>

- Barton, J., & Pretty, J. (2010). What is the best dose of nature and green exercise for improving mental health? A multi-study analysis. *Environmental Science and Technology*, 44(10), 3947–3955.
- Beautrais, A. L. (2018). Farm suicides in New Zealand, 2007-2015: A review of coroners' records. *Australia and New Zealand Journal of Psychiatry*, 52(1), 78–86.
<https://doi.org/10.1177/0004867417704058>
- Berkett, K. (2021, June 25). *The rise in anxiety* [Presentation].
- Bernay, R., Graham, E., Devcich, D. A., Rix, G., & Rubie-Davies, C. M. (2016). Pause, breathe, smile: A mixed-methods study of student well-being following participation in an eight-week, locally developed mindfulness program in three New Zealand schools. *Advances in School Mental Health Promotion*, 9(2), 90–106.
<https://doi.org/10.1080/1754730X.2016.1154474>
- Bixler, R. D., & Floyd, M. F. (1997). Nature is scary, disgusting, and uncomfortable. *Environment and Behavior*, 29(4), 443–467.
<https://doi.org/10.1177/001391659702900401>
- Booth, D. (2001). From bikinis to boardshorts: “Wahines” and the paradoxes of surfing culture. *Journal of Sport History*, 28(1), 3–22.
- Borch-Jacobsen, M. (2009). *Making minds and madness: From hysteria to depression*. Cambridge University Press.
- Brennan, D. (2021, March). *How does mental health affect physical health*. WebMD.
https://www.webmd.com/mental-health/how-does-mental-health-affect-physical-health?utm_source=chatgpt.com
- Britton, E., & Foley, R. (2021). Sensing water: Uncovering health and well-being in the sea and surf. *Journal of Sport and Social Issues*, 45(1), 60–87.
<https://doi.org/10.1177/0193723520928597>
- Britton, E., Kindermann, G., Domegan, C., & Carlin, C. (2020). Blue care: A systematic review of blue space interventions for health and wellbeing. *Health Promotion International*, 35(1), 50–69. <https://doi.org/10.1093/heapro/day103>

- Brown, M., & Penney, D. (2014). Solo sailing: An “ordinary girl”, voluntary risk-taking and (ir)responsibility. *Sociology of Sport Journal*, 31, 267–286.
- Calin, Floricica, M., Sandu, Luminita, M., Tastaman, & Cristina-Ioana. (2021). The relationship between time spent on social networks and the level of anxiety and depression in adolescents. *Revista Universitara de Sociologie*, 2021(1), 163–173.
- Canada, G. of C. I. S. (2019). *First Nations Mental Wellness Continuum Framework—Summary Report* [Report]. Government of Canada. <https://www.sac-isc.gc.ca/eng/1576093687903/1576093725971>
- Capaldi, C. A., Dopko, R. L., & Zelenski, J. M. (2014). The relationship between nature connectedness and happiness: A meta-analysis. *Frontiers in Psychology*, 5, 1–15. <https://doi.org/10.3389/fpsyg.2014.00976>
- Carpenter, C., & Harper, N. (2016). Health and wellbeing benefits of activities in the outdoors. In B. Humberstone, H. Prince, & K. Henderson (Eds.), *Routledge international handbook of outdoor studies* (pp. 59–68). Routledge.
- Carr, W., & Kemmis, S. (1986). *Becoming Critical: Education Knowledge and Action Research*. Routledge.
- Chapman, R. (2016). A case study of gendered play in preschools: How early childhood educators’ perceptions of gender influence children’s play. *Early Child Development and Care*, 186(8), 1271–1284. <https://doi.org/10.1080/03004430.2015.1089435>
- Christopher, J. C., & Hickenbottom, S. (2008). Positive psychology, ethnocentrism, and the disguised ideology of individualism. *Theory & Psychology*, 18(5), 563–589. <https://doi.org/10.1177/0959354308093396>
- Community Wellbeing North Canterbury. (2022, June 8). *Surf Wise Therapy*. Community Wellbeing North Canterbury. <https://www.wellbeingnc.org.nz/surf-wise-therapy/>
- Cribb, J. (2009, June). *Focus on Families: New Zealand Families of Yesterday, Today and Tomorrow - Ministry of Social Development*. Ministry of Social Development. <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/journals-and-magazines/social-policy-journal/spj35/35-focus-on-families.html>

- Cullen, J., Marsh, S., Simmonds, L., & Duncan, S. (2024). The impact of digital technologies on children and adolescents in Aotearoa New Zealand: A case for the development of best-practice recommendations for schools. *Waikato Journal of Education*, 29(1–17). <https://doi.org/10.15663/wje.a1095>
- Cullen, J., Muntz, A., Marsh, S., Simmonds, L., Mayes, J., O'Neill, K., & Duncan, S. (2024). Impact of digital screen use on health and wellbeing of children and adolescents: A narrative review. *New Zealand Journal of Physiotherapy*, 52(1), Article 1. <https://doi.org/10.15619/nzjp.v52i1.364>
- Culp, R. H. (1998). Adolescent girls and outdoor recreation: A case study examining constraints and effective programming. *Journal of Leisure Research*, 30(3), 356–379. <https://doi.org/10.1080/00222216.1998.11949838>
- Dankiw, K. A., Tsiros, M. D., Baldock, K. L., & Kumar, S. (2020). The impacts of unstructured nature play on health in early childhood development: A systematic review. *PLoS ONE*, 15(2), 1–22. <https://doi.org/10.1371/journal.pone.0229006>
- David, M. (2002). Problems of participation: The limits of action research. *International Journal of Social Research Methodology*, 5(1), 11–17. (5893585). <https://doi.org/10.1080/13645570110098037>
- Davis, D. M., & Hayes, J. A. (2011). What are the benefits of mindfulness? A Practice review of psychotherapy-related research. *Psychotherapy Theory Research Practice Training*, 48(2), 198–208. <https://doi.org/DOI:10.1037/a0022062>
- Deacon, B. J. (2013). The biomedical model of mental disorder: A critical analysis of its validity, utility, and effects on psychotherapy research. *Clinical Psychology Review, The Future of Evidence-Based Practice in Psychotherapy*, 33(7), 846–861. <https://doi.org/10.1016/j.cpr.2012.09.007>
- Denicolo, P., Long, T., & Bradley-Cole, K. (2016). Understanding the nature of constructivist approaches. In *Understanding the nature of constructivist approaches* (pp. 13–24). SAGE Publications Ltd. <https://methods.sagepub.com/book/mono/constructivist-approaches-and-research-methods/chpt/2-understanding-nature-constructivist-approaches>

- DeVille, N. V., Powers Tomasso, L., Stoddard, O. P., Wilt, G. E., Horton, T. H., Wolf, K. L., Brymer, E., Kahn, Jr, P. H., & James, P. (2021). Time spent in nature is associated with increased pro-environmental attitudes and behaviors. *International Journal of Environmental Research and Public Health*, 18(14), 1–18.
<https://doi.org/10.3390/ijerph18147498>
- Dillon, J., Morris, M., O'Donnell, L., Reid, A., Rickinson, M., & Scott, W. (2005). *Engaging and learning with the outdoors – The final report of the outdoor classroom in a rural context action research project*. National Foundation for Education Research.
- Donnelly, A., O'Reilly, A., Dolphin, L., O'Keeffe, L., & Moore, J. (2019). Measuring the performance of the Mental Health Continuum-Short Form (MHC-SF) in a primary care youth mental health service. *Irish Journal of Psychological Medicine*, 36(3), 201–205.
<https://doi.org/10.1017/ipm.2018.55>
- Doré, I., O'Loughlin, J. L., Sabiston, C. M., & Fournier, L. (2017). Psychometric evaluation of the mental health continuum–short form in french canadian young adults. *The Canadian Journal of Psychiatry*, 62(4), 286–294.
<https://doi.org/10.1177/0706743716675855>
- Durie, M. (1994). *Whaiora- Māori health development*. Oxford University Press.
- Eckersley, R. (2006). Is modern Western culture a health hazard? *International Journal of Epidemiology*, 35(2), 252–258. <https://doi.org/10.1093/ije/dyi235>
- Evans, K., Walters, K., & Anderson, D. (2020). The case for evidence-based outdoor recreation interventions for girls: Helping girls “find their voice” in the outdoors. *Education Sciences*, 10(12), Article 12. <https://doi.org/10.3390/educsci10120363>
- Fleming, T., Crengle, S., Peiris-John, R., Ball, J., Fortune, S., Yao, E. S., Lindsay Latimer, C., Veukiso-Ulugia, A., & Clark, T. C. (2024). Priority actions for improving population youth mental health: An equity framework for Aotearoa New Zealand. *Mental Health & Prevention*, 34, 200340. <https://doi.org/10.1016/j.mhp.2024.200340>
- Fleming, T., Tiatia-Seath, J., Peiris-John, R., Sutcliffe, K., Archer, D., Bavin, L., Crengle, S., & Clark, T. (2020). *Youth19 Rangatahi Smart Survey Initial Findings Hauora Hinengaro /*

- Emotional and Mental Health*. The Youth19 Research Group, The University of Auckland and Victoria University of Wellington, New Zealand. www.youth19.ac.nz
- Foley, R., & Kistemann, T. (2015). Blue space geographies: Enabling health in place. *Health & Place*, 35(Blue Spaces), 157–165.
<https://doi.org/https://doi.org/10.1016/j.healthplace.2015.07.003>
- Forgeard, M. J. C., Jayawickreme, E., Kern, M. L., & Seligman, M. E. P. (2011). Doing the right thing: Measuring wellbeing for public policy. *International Journal of Wellbeing*, 1(1), Article 1.
- Fox, N., Marshall, J., & Dankel, D. J. (2021). Ocean literacy and surfing: Understanding how interactions in coastal ecosystems inform blue space user's awareness of the ocean. *International Journal of Environmental Research and Public Health*, 18(11), 1–21.
<https://doi.org/https://doi.org/10.3390/ijerph18115819>
- Franceschi, L., Small, N., Goldsby, T., Goldsby, M., Padamada, S., Ziegler, M. G., & Mills, P. J. (2024). The groundswell community surf therapy intervention for at-risk women and changes in body acceptance, resilience, and emotional regulation. *Global Advances in Integrative Medicine and Health*, 13, 27536130241278970.
<https://doi.org/10.1177/27536130241278970>
- Frawley, T. H., Selgrath, J. C., Gee, E. K. C., Triviño, T. A., Díaz, M., Lyles, J. M., Seary, R., Crowder, L. B., Garza, C., Hazen, E. L., Romero, T., & Seto, K. L. (2026). Racial and economic disparities in coastal access and engagement mediate the ocean's contribution to human wellbeing. *Nature Communications*, 17(1), 5975.
<https://doi.org/10.1038/s41467-026-75034-4>
- Fuchs, O., & Schomer, H. H. (2007). Beyond Sport: A thematic analysis of surfing. *South African Journal for Research in Sport, Physical Education and Recreation*, 29(2), 11–25.
- Furness, J., McArthur, K., Remnant, D., Jorgensen, D., Bacon, C. J., Moran, R. W., Hing, W., & Climstein, M. (2021). Traumatic surfing injuries in New Zealand: A descriptive epidemiology study. *PeerJ*, 9, e12334. <https://doi.org/10.7717/peerj.12334>

- Furness, K., Williams, M. N., Veale, J. F., & Gardner, D. H. (2017). Maximising potential: The psychological effects of the youth development programme Project K. *New Zealand Journal of Psychology*, 46(1), 14–23.
- Gable, S. L., & Haidt, J. (2005). What (and why) is positive psychology? *Review of General Psychology*, 9(2), 103–110. <https://doi.org/10.1037/1089-2680.9.2.103>
- Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. *World Psychiatry*, 14(2), 231–233. <https://doi.org/10.1002/wps.20231>
- Gassner, M. E., & Russell, K. C. (2008). Relative impact of course components at outward bound Singapore: A retrospective study of long-term outcomes. *Journal of Adventure Education and Outdoor Learning*, 8(2), 133–156.
- Georgiou, M., Morison, G., Smith, N., Tieges, Z., & Chastin, S. (2021). Mechanisms of impact of blue spaces on human health: A systematic literature review and meta-analysis. *International Journal of Environmental Research and Public Health*, 18(5), Article 5. <https://doi.org/10.3390/ijerph18052486>
- Glassman, L. H., Otis, N. P., Michalewicz-Kragh, B., & Walter, K. H. (2021). Gender Differences in psychological outcomes following surf therapy sessions among U.S. service members. *International Journal of Environmental Research and Public Health*, 18(9), 4634. <https://doi.org/10.3390/ijerph18094634>
- Graeme Dingle Foundation. (n.d.). *About Project K*. Graeme Dingle Foundation. Retrieved July 18, 2025, from <https://dinglefoundation.org.nz/project-k/about-project-k/>
- Greenspoon, P. J., & Saklofske, D. H. (2001). Toward an integration of subjective well-being and psychopathology. *Social Indicators Research*, 54(1), Article 1. <https://doi.org/10.1023/A:1007219227883>
- Guba, E. G., & Lincoln, Y. S. (1994). Handbook of Qualitative Research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Competing paradigms in qualitative research* (pp. 105–117). Sage Publications.
- Guo, C., Tomson, G., Guo, J., Li, X., Keller, C., & Söderqvist, F. (2016). Erratum to: Psychometric evaluation of the Mental Health Continuum-Short Form (MHC-SF) in

- Chinese adolescents – a methodological study. *Health and Quality of Life Outcomes*, 14(1), Article 1. <https://doi.org/10.1186/s12955-015-0404-4>
- Haidt, J. (2024). *The anxious generation: How the great rewiring of childhood is causing an epidemic of mental illness*. Penguin Press.
- Harwood, M., Weatherall, M., Talemaitoga, A., Barber, P. A., Gommans, J., Taylor, W., McPherson, K., & McNaughton, H. (2012). An assessment of the Hua Oranga outcome instrument and comparison to other outcome measures in an intervention study with Maori and Pacific people following stroke. *The New Zealand Medical Journal (Online)*, 125(1364), 57–67.
- Hathcoat, J. D., Meixner, C., & Nicholas, M. C. (2019). Ontology and Epistemology. In P. Liamputtong (Ed.), *Handbook of Research Methods in Health Social Sciences* (pp. 99–116). Springer. https://doi.org/10.1007/978-981-10-5251-4_56
- Hattie, J., Marsh, H. W., Neill, J. T., & Richards, G. E. (1997). Adventure education and outward bound: Out-of-class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43–87.
<https://doi.org/https://doi.org/10.3102/00346543067001043>
- Health Research Council of New Zealand. (n.d.). *He puna reo he puna oranga whanau: Impact of urban puna reo on health & wellbeing*. Retrieved September 10, 2025, from https://www.hrc.govt.nz/resources/research-repository/he-puna-reo-he-puna-oranga-whanau-impact-urban-puna-reo-health?utm_source=chatgpt.com
- Heaton, S. (2015). *Rebuilding a “Whare” body of knowledge to inform a Māori perspective of health*. 4(2), 13.
- Henline-Hall, J. (2024). Introduction to quantitative and qualitative research methods. *Radiologic Technology*, 96(1), 45–56.
- Hibiscus Mount Maunganui. (2025). *Wahine Waves*. Hibiscus Mount Maunganui Surf School. <https://surfschool.co.nz/surf-programmes/>
- Hidaka, B. H. (2012). Depression as a disease of modernity: Explanations for increasing prevalence. *Journal of Affective Disorders*, 140(3), 205–214.
<https://doi.org/10.1016/j.jad.2011.12.036>

- Hignett, A., White, M. P., Pahl, S., Jenkin, R., & Le Froy, M. (2018). Evaluation of a surfing programme designed to increase personal well-being and connectedness to the natural environment among 'at risk' young people. *Journal of Adventure Education and Outdoor Learning*, 18(1), 53–69. <https://doi.org/10.1080/14729679.2017.1326829>
- Horwitz, A. V. (2022). The historical legacy of the sociology of mental health. In *Research Handbook on Society and Mental Health* (pp. 1–19). Edward Elgar Publishing. <https://www.elgaronline.com/edcollchap/book/9781800378483/book-part-9781800378483-6.xml>
- Hulsheger, U. R., Alberts, H. J. E., Feinholdt, A., & Lang, J. W. B. (2012). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology*, 98(2), 310–325. <https://doi.org/DOI:10.1037/a0031313>
- Hunter, M. R., Gillespie, B. W., & Yu-Pu Chen, S. (2019). Urban nature experiences reduce stress in the context of daily life based on salivary biomarkers. *Frontiers in Psychology*, 71(10), 8–9.
- Jacka, F. N., Pasco, J. A., Williams, L. J., Leslie, E. R., Dodd, S., Nicholson, G. C., Kotowicz, M. A., & Berk, M. (2011). Lower levels of physical activity in childhood associated with adult depression. *Journal of Science and Medicine in Sport*, 14(3), 222–226. <https://doi.org/https://doi.org/10.1016/j.jsams.2010.10.458>
- Jelleyman, C., & Humberstone, B. (2024). Women migrants' stories of engaging with the ocean. In *The Ocean, Blue Spaces and Outdoor Learning*. Taylor & Francis Group. <http://ebookcentral.proquest.com/lib/aut/detail.action?docID=31355011>
- Jimenez, M. P., DeVille, N. V., Elliott, E. G., Schiff, J. E., Wilt, G. E., Hart, J. E., & James, P. (2021). Associations between nature exposure and health: A review of the evidence. *International Journal of Environmental Research and Public Health*, 18(9), 4790. <https://doi.org/10.3390/ijerph18094790>
- Junça, A., & Caetano, A. (2011). Validation of the flourishing scale and scale of positive and negative experience in Portugal. *Social Indicators Research*, 110(2), 469–478. <https://doi.org/10.1007/s11205-011-9938-y>

- Kemmis, S., McTaggart, R., & Nixon, R. (2013). *The Action Research Planner: Doing Critical Participatory Action Research*. Springer.
<http://ebookcentral.proquest.com/lib/aut/detail.action?docID=3092981>
- Kemmis, S., McTaggart, R., & Nixon, R. (2014). Introducing Critical Participatory Action Research. In S. Kemmis, R. McTaggart, & R. Nixon (Eds.), *The Action Research Planner: Doing Critical Participatory Action Research* (pp. 1–31). Springer.
https://doi.org/10.1007/978-981-4560-67-2_1
- Keyes, C. L. M. (2002). The Mental Health Continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior*, 43(2), 207. <https://doi.org/10.2307/3090197>
- Keyes, C. L. M. (2007). Promoting and protecting mental health as flourishing: A complementary strategy for improving national mental health. *The American Psychologist*, 62(2), 95–108. <https://doi.org/10.1037/0003-066X.62.2.95>
- Khan, S., & Khan, R. A. (2017). Chronic stress leads to anxiety and depression. *Annals of Psychiatry and Mental Health*, 5(1), 1091.
- Kingi, T. K., & Durie, M. (1997). *A Framework for Measuring Māori Health Outcomes* (p. 79). Ministry of Health.
- Kovich, M. K., Simpson, V. L., Foli, K. J., Hass, Z., & Phillips, R. G. (2023). Application of the PERMA model of well-being in undergraduate students. *International Journal of Community Well-Being*, 6(1), 1–20. <https://doi.org/10.1007/s42413-022-00184-4>
- Krueger, A. B., & Stone, A. A. (2014). Measuring subjective wellbeing: Progress and challenges. *Science (New York, N.Y.)*, 346(6205), 42–43.
<https://doi.org/10.1126/science.1256392>
- Krys, K., Haas, B. W., Igou, E. R., Kosiarczyk, A., Kocimska-Bortnowska, A., Kwiatkowska, A., Lun, V. M.-C., Maricchiolo, F., Park, J., Šolcová, I. P., Sirlopú, D., Uchida, Y., Vauclair, C.-M., Vignoles, V. L., Zelenski, J. M., Adamovic, M., Akotia, C. S., Albert, I., Appoh, L., ... Bond, M. H. (2022). Introduction to a culturally sensitive measure of well-being: Combining life satisfaction and interdependent happiness across 49 different cultures. *Journal of Happiness Studies*, 24(2), Article 2.
<https://doi.org/10.1007/s10902-022-00588-1>

- Lamers, S. M. A., Westerhof, G. J., Bohlmeijer, E. T., ten Klooster, P. M., & Keyes, C. L. M. (2011). Evaluating the psychometric properties of the mental health Continuum-Short Form (MHC-SF). *Journal of Clinical Psychology*, 67(1), 99–110.
<https://doi.org/10.1002/jclp.20741>
- Larson, L. R., Szczytko, R., Bowers, E. P., Stephens, L. E., Stevenson, K. T., & Floyd, M. F. (2019). Outdoor time, screen time, and connection to nature: Troubling trends among rural youth? *Environment and Behaviour*, 51(8), 966–991.
- Leonhardt, M., & Overå, S. (2021). Are there differences in video gaming and use of social media among boys and girls?—A mixed methods approach. *International Journal of Environmental Research and Public Health*, 18(11), Article 11.
<https://doi.org/10.3390/ijerph18116085>
- Lillis, S. (2025). Trends in psychological distress: Analysis of NZ health survey data (2011–2023). *Journal of Primary Health Care*. <https://doi.org/10.1071/HC25057>
- Louv, R. (2005). Last child in the woods: Saving our children from nature-deficit disorder. *SCHOLE: A Journal of Leisure Studies and Recreation Education*, 21(1), 136–137.
- Luijten, C. C., Kuppens, S., van de Bongardt, D., & Nieboer, A. P. (2019). Evaluating the psychometric properties of the mental health continuum-short form (MHC-SF) in Dutch adolescents. *Health and Quality of Life Outcomes*, 17(1), 157.
<https://doi.org/10.1186/s12955-019-1221-y>
- Luo, Y., Chen, X., Qi, S., You, X., & Huang, X. (2018). Well-being and anticipation for future positive events: Evidences from an fMRI study. *Frontiers in Psychology*, 8, 1–8.
<https://doi.org/10.3389/fpsyg.2017.02199>
- Manero, A., George, P., Yusoff, A., Olive, L., & White, J. (2024). Understanding surfing as a ‘blue space’ activity for its contributions to health and wellbeing. *Npj Ocean Sustainability*, 3(1), 1–37. <https://doi.org/10.1038/s44183-024-00076-4>
- Martela, F., Greve, B., Rothstein, B., & Saari, J. (2020). *The Nordic Exceptionalism: What Explains Why the Nordic Countries are Constantly Among the Happiest in the World* (World Happiness Report, pp. 128–145). Sustainable Developments Solutions Network.

- Marx, W., Jacka, F., & O'Neil, A. (2021). Lifestyle-based mental health care in psychiatry: Translating evidence into practice. *Australian & New Zealand Journal of Psychiatry*, 55(7), 641–643. <https://doi.org/10.1177/00048674211011250>
- McAnally, H. M., Reeves, L. M., Sligo, J. L., & Hancox, R. J. (2018). Intergenerational changes in adolescents' physical fitness and weight in New Zealand—University of Otago. *The New Zealand Medical Journal (Online)*, 131(1482), 16–28.
- McKenzie, R. J., Chambers, T. P., Nicholson-Perry, K., Pilgrim, J., & Ward, P. B. (2021). “Feels good to get wet”: The unique affordances of surf therapy among Australian youth. *Frontiers in Psychology*, 12, 721238. <https://doi.org/10.3389/fpsyg.2021.721238>
- Mcneill, H. (2009). Maori models of mental wellness. *Te Kaharoa*, 2(1), 96–115. <https://doi.org/10.24135/tekaharoa.v2i1.127>
- Mental Health Foundation. (n.d.). *Pacific approach—Fonofale Model*. Retrieved July 22, 2025, from <https://mentalhealth.org.nz/social-action-grants/pacific-approach>
- Mental Health Foundation. (2022). *Te Whare Tapa Whā*. Mental Health Foundation of New Zealand. <https://mentalhealth.org.nz/te-whare-tapa-wha>
- Mental Health Foundation. (2024). *New survey shows youth mental distress skyrocketing*. Mental Health Foundation. <https://mentalhealth.org.nz/news/post/new-survey-shows-youth-mental-health-rates-skyrocketing>
- Mental Health Foundation of New Zealand. (2025). *Mental Health Foundation*. Mental Health Foundation of New Zealand. <https://mentalhealth.org.nz>
- Menzies, R., Gluckman, P., & Poulton, R. (2020). *Youth mental health in Aotearoa New Zealand: Greater urgency required* [Report]. Koi Tū: The Centre for Informed Futures. (New Zealand). <https://apo.org.au/node/308042>
- Ministry for the Environment. (2019, October 1). *What the marine environment means to New Zealanders*. Ministry for the Environment. <https://environment.govt.nz/publications/our-marine-environment-2019/what-the-marine-environment-means-to-new-zealanders/>

- Ministry of Health - Manatu Hauora. (2024, December 19). *Statistics and research*.
<https://www.health.govt.nz/statistics-research>
- Ministry of Health NZ. (2025, March 20). *Te Whare Tapa Whā model of Māori health*. Manatu Hauora Ministry of Health. <https://www.health.govt.nz/maori-health/maori-health-models/te-whare-tapa-wha>
- Mittelmark, M. B., & Bauer, G. F. (2017). The Meanings of Salutogenesis. In M. B. Mittelmark, S. Sagy, M. Eriksson, G. F. Bauer, J. M. Pelikan, B. Lindström, & G. A. Espnes (Eds.), *The Handbook of Salutogenesis*. Springer.
<http://www.ncbi.nlm.nih.gov/books/NBK435854/>
- Nagata, J. M., Nayak, S., Choi, W., Potes, C., Heuer, A., Memon, Z., Talebloo, J., Li, E. J., Bao, K., Helmer, C. K., Moreno, M. A., & Lavender, J. M. (2026). Health benefits of video games in adolescents and young adults. *Current Pediatrics Reports*, 14(1), 2.
<https://doi.org/10.1007/s40124-026-00376-y>
- Nesi, J. (2020). The impact of social media on youth mental health: Challenges and opportunities. *North Carolina Medical Journal*, 81(2), 116–121.
<https://doi.org/10.18043/ncm.81.2.116>
- Nixdorf, R., Beckmann, J., Oberhoffer, R., Weberrub, H., & Nixdorf, I. (2021). Associations between physical fitness and mental health among German adolescents. *Journal of Sport and Health Research*, 13(1), 125–138.
- numiqo Team. (2025). *numiqo: Online Statistics Calculator* [Computer software].
<https://numiqo.com>
- NZARE. (2018, November 15). The great outdoors: What our young people need. *Ipu Kererū*. <https://nzareblog.wordpress.com/2018/11/16/great-outdoors/>
- Office of the Surgeon General. (2023a). *Social Media and Youth Mental Health*. U.S. Department of Health and Human Services.
<https://www.ncbi.nlm.nih.gov/books/NBK594761/>
- Office of the Surgeon General, O. of the S. (2023b). *Social Media Has Both Positive and Negative Impacts on Children and Adolescents*. US Department of Health and Human Services. <https://www.ncbi.nlm.nih.gov/books/NBK594763/>

- Olive, R. (2019). The trouble with newcomers: Women, localism and the politics of surfing. *Journal of Australian Studies*, 43(1), 39–54.
<https://doi.org/10.1080/14443058.2019.1574861>
- OneWave. (n.d.). *Fluro Friday*. OneWave. Retrieved July 12, 2022, from
<https://www.onewaveisallittakes.com/fluro-friday>
- Outdoor Adventures. (2025). *Kaupapa Hauora 5 days*. Adventure Outdoors Tongariro NZ.
<https://www.adventureoutdoors.co.nz/uncategorised/summer-adventure-weekend-package>
- Overbury, K., Conroy, B. W., & Marks, E. (2023). Swimming in nature: A scoping review of the mental health and wellbeing benefits of open water swimming. *Journal of Environmental Psychology*, 90, 102073. <https://doi.org/10.1016/j.jenvp.2023.102073>
- Parsons, K. J., & Halstead, F. (2022). Gendered childhoods and the inequity of accessing the outdoors. *Area*, 54(4), 574–578.
- (PDF) Theoretical frameworks used to inform qualitative mental health research: A focus on positivism, interpretivism and critical realism. (2024). *ResearchGate*.
<https://doi.org/10.1192/bja.2024.66>
- Pearson, D. G., & Craig, T. (2014). The great outdoors? Exploring the mental health benefits of natural environments. *Frontiers in Psychology*, 5, 1178.
<https://doi.org/10.3389/fpsyg.2014.01178>
- Pearson, R., Owen, M., Inman, J., & Relph, N. (2025). Promoting resilience in female youth through outdoor adventure activities: What works, why, and in which contexts? *Journal of Adventure Education and Outdoor Learning*, 0(0), 1–24.
<https://doi.org/10.1080/14729679.2025.2530094>
- Policy, Strategy and Research Group. (2007). *Over-representation of Māori in the criminal justice system: An explanatory report*. Department of Corrections.
- Rabgay, T., & Kidman, G. (2023). Multiple iterations and messiness in the implementation of action research by Bhutanese secondary science teachers. *Discover Education*, 2(1), Article 1. <https://doi.org/10.1007/s44217-023-00077-4>

- Ramirez, M. J. (2020). The perceived long-term influence of expeditions in participants' lives. *Journal of Outdoor Recreation, Education and Leadership*, 12(2), 251–253.
<https://doi.org/https://doi.org/10.18666/JOREL-2020-V12-I2-9790>
- Rangiwai, B. (2018). Ko au ko te taiao, ko te taiao ko au – I am the environment and the environment is me: A Māori theology of the environment. *Te Kaharoa*, 11(1).
<https://doi.org/10.24135/tekaharoa.v11i1.241>
- Reason, P., & Bradbury, H. (2001). *Handbook of Action Research: Participative Inquiry and Practice*. SAGE.
- Reid, J., Taylor-Moore, K., & Varona, G. (2014). Towards a social-structural model for understanding current disparities in maori health and well-being. *Journal of Loss & Trauma*, 19(6), 514–536. (103891165).
<https://doi.org/10.1080/15325024.2013.809295>
- Roberts, M., Norman, W., Minhinick, N., Wihongi, D., & Kirkwood, C. (1995). Kaitiakitanga: Maori perspectives on conservation. *Pacific Conservation Biology*, 2(1), 7–20.
- Rochford, T. (2004). Whare Tapa Wha: A Māori model of a unified theory of health. *The Journal of Primary Prevention*, 25(1), 41–57.
- Rogers, A. A., Shawcroft, J., Stockdale, L. A., Coyne, S. M., & Fraser, A. M. (2024). Trajectories of parents' gendered play attitudes during early childhood and implications for children's gender development. *Child Development*. <https://research-ebsco-com.ezproxy.aut.ac.nz/c/gw2lrt/viewer/html/o2ofphyuij>
- Roy, G., & Caudwell, J. (2014). Women and surfing spaces in Newquay, UK. In *Routledge Handbook of Sport, Gender and Sexuality* (1st ed.). Routledge.
- Sarris, J., O'Neil, A., Coulson, C. E., Schweitzer, I., & Berk, M. (2014). Lifestyle medicine for depression. *BMC Psychiatry*, 14(1), 1–13. <https://doi.org/10.1186/1471-244X-14-107>
- Scott, H. (2003). Stranger danger: Explaining women's fear of crime. *Western Criminology Review*, 4(3), 203–214.
- Seligman, M. (2010, October 7). *Flourish: Positive Psychology and Positive Interventions* [Lecture]. The Tanner Lectures on Human Values, The University of Michigan.

- Seligman, M. (2011). *Flourish: A Visionary New Understanding of Happiness and Well-being*. Simon and Schuster.
- Shapiro, S. L., & Carlson, L. E. (2009). *The art and science of mindfulness: Integrating mindfulness into psychology and the helping professions*. American Psychological Association.
- Shapiro, S. L., Carlson, L. E., Astin, J. A., & Freedman, B. (2006). Mechanisms of mindfulness. *Journal of Clinical Psychology*, 62(3), 373–386.
<https://doi.org/https://doi.org/10.1002/jclp.20237>
- Shorten, A., & Smith, J. (2017). Mixed methods research: Expanding the evidence base. *Evidence-Based Nursing*, 20(3), 74–75. <https://doi.org/10.1136/eb-2017-102699>
- Shuda, Q., Bougoulas, M. E., & Kass, R. (2020). Effect of nature exposure on perceived and physiologic stress: A systematic review. *Complementary Therapies in Medicine*, 53, 1–8. <https://doi.org/https://doi.org/10.1016/j.ctim.2020.102514>
- Silverman, D. (2015). *Interpreting Qualitative Data*. SAGE.
- Sin, N. L., & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*, 65(5), 467–487. <https://doi.org/10.1002/jclp.20593>
- Singh, K., Bassi, M., Junnarkar, M., & Negri, L. (2015). Mental health and psychosocial functioning in adolescence: An investigation among Indian students from Delhi. *Journal of Adolescence*, 39(1), 59–69.
- Somekh, B. (2005). *Action Research*. McGraw-Hill Education (UK).
- Sport New Zealand - Ihi Aotearoa. (2023). *Active NZ: Snapshot of the Participation Landscape 2023*. Sport New Zealand | Ihi Aotearoa.
<https://sportnz.org.nz/resources/active-nz-snapshot-of-the-participation-landscape-2023/>
- Stenning, A. (2025). Children's play in grey spaces: Ludic geographies and the chromatic turn. *Leisure Studies*, 44(5), 779–793.
<https://doi.org/10.1080/02614367.2025.2466497>

- Stubbing, D. J., Simon-Kumar, N., & Gluckman, S. P. (2023a). A summary of literature reflecting the perspectives of young people in Aotearoa on systemic factors affecting their wellbeing. *Te Hiringa Mahara - Mental Health and Wellbeing Commission*.
- Stubbing, D. J., Simon-Kumar, N., & Gluckman, S. P. (2023b). *A summary of literature reflecting the perspectives of young people in Aotearoa on systemic factors affecting their wellbeing*. Te Hiringa mahara - Mental Health and Wellbeing Commission.
<https://www.mhwc.govt.nz/news-and-resources/youth-wellbeing-insights/>
- Szuhany, K. L., & Simon, N. M. (2022). Anxiety disorders: A review. *JAMA*, 328(24), 2431–2445. <https://doi.org/10.1001/jama.2022.22744>
- Tāhūrangi. (2022). *Tāhūrangi: Curriculum & teaching resources*.
<https://nzcurriculum.tki.org.nz/The-New-Zealand-Curriculum/Health-and-physical-education>
- Tashakkori, A., & Creswell, J. W. (2007). Editorial: Exploring the nature of research questions in mixed methods research. *Journal of Mixed Methods Research*, 1(3), 207–211.
<https://doi.org/10.1177/1558689807302814>
- Taylor, J. (2013). Giving kids a break: How surfing has helped young people in Cornwall overcome mental health and social difficulties. *Mental Health and Social Inclusion*, 17(2), 82–86. <https://doi.org/10.1108/20428301311330135>
- Te Hiringa Mahara—Mental Health and Wellbeing Commission. (2023). *Youth Wellbeing Insights Report*. Te Hiringa Mahara—Mental Health and Wellbeing Commission.
<https://www.mhwc.govt.nz/news-and-resources/youth-wellbeing-insights/>
- Testa, D. (2024). ‘They are my tribe’: How a selforganising women’s group built a sisterhood that improved wellbeing and increased social connectedness. *AOTEAROA NEW ZEALAND SOCIAL WORK*, 36(1), 114–126.
- The Wave Project. (2025). *Improving mental health and wellbeing through Surf Therapy*.
<https://www.waveproject.co.uk/what-we-do/surf-therapy-2/>
- Tuckett, A. G., & Stewart, D. E. (2004). Collecting qualitative data: Part I Journal as a method: experience, rationale and limitations. *Contemporary Nurse*, 16(1–2), 104–113. <https://doi.org/10.5172/conu.16.1-2.104>

- Turecek, S., Brymer, E., & Rahimi-Golkhandan, S. (2025). The relationship between physical activity environment, mental wellbeing, flourishing and thriving: A mixed method study. *Psychology of Sport and Exercise*, 76, 102769.
<https://doi.org/10.1016/j.psychsport.2024.102769>
- Turner, M., O'Shea, M., Thurston, L., Jinnette, R., Beaconsfield, A., Mahoney, S., Ashtree, D. N., Bryan, M., Saunders, D., John, T., Young, L. M., Teychenne, M., Jacka, F., Radovic, L. K., & O'Neil, A. (2025). Exploring the long-term sustainability of lifestyle therapy for reducing depressive symptoms: A mixed methods study of the Curbing Anxiety and depression using Lifestyle Medicine (CALM) non-inferiority trial at 9-month follow-up. *Mental Health and Physical Activity*, 29, 100730.
<https://doi.org/10.1016/j.mhpa.2025.100730>
- Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*, 6(1), 3–17. <https://doi.org/10.1177/2167702617723376>
- Twohig-Bennett, C., & Jones, A. (2018). The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environmental Research*, 166, 628–637. <https://doi.org/10.1016/j.envres.2018.06.030>
- Ulrich, R. S. (1993). The Biophilia Hypothesis. In S. R. Kellert & E. O. Wilson (Eds.), *Biophilia, biophobia, and natural landscapes* (pp. 73–137). Island Press.
- Ulrich, R. S. (2023). Stress reduction theory. In E. P. Marchand & K. Weiss (Eds.), *100 key concepts in environmental psychology* (pp. 143–146). Routledge.
- Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A., & Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology*, 11(3), 201–230. [https://doi.org/10.1016/S0272-4944\(05\)80184-7](https://doi.org/10.1016/S0272-4944(05)80184-7)
- UNESCO. (2024). *Global Education Monitoring Report 2024: Gender Report*. UNESCO.
<https://www.unesco.org/gem-report/en/2024genderreport>

- Vacca, M., Mura, A., Carrogu, G. P., Gaviano, L., Atzori, R., & Petretto, D. R. (2025). Definitions of “mental disorder” from DSM-III to DSM-5. *Behavioral Sciences*, 15(6), 1–18. <https://doi.org/10.3390/bs15060830>
- Volker, S., & Kistemann, T. (2011). The impact of blue space on human health and well-being—Salutogenetic health effects of inland surface waters: A review. *International Journal of Hygiene and Environmental Health*, 214, 449–460.
- Warren, K., Mitten, D., D’Amore, C., & Lotz, E. (2019). The gendered hidden curriculum of adventure education. *Journal of Experiential Education*, 42(2), 140–154. <https://doi.org/10.1177/1053825918813398>
- Waterman, H., Tillen, D., Dickson, R., & De Koning, K. (2001). Action research: A systematic review and guidance for assessment. *Health Technology Assessment*, 5(23). <https://doi.org/10.3310/hta5230>
- Wattchow, B., & Brown, M. (2011). *A Pedagogy of Place*. Monash University Publishing.
- Wells, I., & Giacco, D. (2025). Theoretical frameworks used to inform qualitative mental health research: A focus on positivism, interpretivism and critical realism. *BJPsych Advances*, 31(5), 299–307. <https://doi.org/10.1192/bja.2024.66>
- Wells, N. M., & Evans, G. W. (2003). Nearby nature: A buffer of life stress among rural children. *Environment and Behavior*, 35(3), 311–330. <https://doi.org/10.1177/0013916503035003001>
- Wheaton, B., Roy, G., & Olive, R. (2017). Exploring critical alternatives for youth development through lifestyle sport: Surfing and community development in Aotearoa/New Zealand. *Sustainability*, 9(12), 1–16. <https://doi.org/https://doi.org/10.3390/su9122298>
- Wheaton, B., Waiti, J., Cosgriff, M., & Burrows, L. (2020). Coastal blue space and wellbeing research: Looking beyond western tides. *Leisure Studies*, 39(1), 83–95. <https://doi.org/https://doi-org.ezproxy.aut.ac.nz/10.1080/02614367.2019.1640774>
- Wheaton, B., Waiti, J., Olive, R., & Kearns, R. (2021). Coastal communities, leisure and wellbeing: Advancing a trans-disciplinary agenda for understanding ocean-human relationships in Aotearoa New Zealand. *International Journal of Environmental*

Research and Public Health, 18(450), 1–20.

<https://doi.org/https://doi.org/10.3390/ijerph18020450>

White, M. P., Elliott, L. R., Grellier, J., Economou, T., Bell, S., Bratman, G. N., Cirach, M., Gascon, M., Lima, M. L., Löhmus, M., Nieuwenhuijsen, M., Ojala, A., Roiko, A., Schultz, P. W., van den Bosch, M., & Fleming, L. E. (2021). Associations between green/blue spaces and mental health across 18 countries. *Scientific Reports*, 11(1), 1–12. <https://doi.org/10.1038/s41598-021-87675-0>

WHO. (2020). *The World Health Organisation- Five Well-Being Index (WHO-5)*.

<https://www.corc.uk.net/outcome-experience-measures/the-world-health-organisation-five-well-being-index-who-5/>

WHO. (2022). *Mental health: Strengthening our response*. <https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response>

Wilson, D., Moloney, E., Parr, J. M., Aspinall, C., & Slark, J. (2021). Creating an Indigenous Māori-centred model of relational health: A literature review of Māori models of health. *Journal of Clinical Nursing*, 30(23–24), 3539–3555. <https://doi.org/10.1111/jocn.15859>

Wodda, A. (2018). Stranger Danger! *Journal of Family Strengths*, 18(1), 1–39. <https://doi.org/10.58464/2168-670X.1384>

World Happiness Report. (2024). <https://worldhappiness.report/about/>

Yousefi Afrashteh, M., & Janjani, P. (2023). Psychometric properties of the mental health continuum-short form in Iranian adolescents. *Frontiers in Psychology*, 14, 1–9. <https://doi.org/10.3389/fpsyg.2023.1096218>

Appendices

Appendix A: Ethics Approval

The Appendix contains the AUTECH ethics approval.



26 July 2023

Mike Brown
Faculty of Health and Environmental Sciences

Dear Mike

Re Ethics Application: **23/2 The effects of outdoor spaces and activities on the mental wellbeing of adolescent girls: A case study of a surfing programme in Mt Maunganui, New Zealand**

Thank you for your responses to AUTECH's conditions.

Your ethics application has been approved for three years until 25 July 2026.

Non-Standard Conditions of Approval

1. In the Parent and Student Information Sheet please remove "anonymity" as this is not possible when the participant is known to the researcher;
2. Revision of the tense in the Parent Information Sheet e.g. in the privacy section "your contributions" reads as though the parent is a participant and they are not.

Non-standard conditions do not need to be submitted to or reviewed by AUTECH unless requested but must be completed before commencing your study.

Standard Conditions of Approval

1. The research is to be undertaken in accordance with the [Auckland University of Technology Code of Conduct for Research](#) and as approved by AUTECH.
2. All public facing documents must have the AUTECH approval number and be of a high standard of spelling and grammar. Dates on the Information Sheet(s) and Consent Form(s) must be consistent.
3. Any amendments to the project must be approved by AUTECH prior to being implemented.
4. A progress report is due annually on the anniversary of the approval date.
5. A final report is due at the expiration of the approval period, or, upon completion of project.
6. Any serious or adverse events must be reported to AUTECH, this includes unforeseen issues that might affect continued ethical acceptability of the project.
7. AUTECH grants ethical approval only. You are responsible for obtaining management permission for access from any institution or organisation at which your research is being conducted and you need to meet all ethical, legal, public health, and locality obligations or requirements for the jurisdictions in which the research is being undertaken.

The application number and title need to be referenced on all correspondence related to this project.

All forms are available online <http://www.aut.ac.nz/research/researchethics>

For any enquiries, please contact ethics@aut.ac.nz

(This is a computer-generated letter for which no signature is required)

The AUTECH Secretariat

Auckland University of Technology Ethics Committee

Cc: erinp@mmc.school.nz; charlotte.jelleyman@aut.ac.nz; grant.schofield@aut.ac.nz

Appendix B: Programme timeline

The Appendix contains an overview of the programme and data collection timeline.

Tūtohi 21 Overview of data collection timeline

Timeline	Programme	Qualitative data	Quantitative data
Week 1	Surfing programme begins		Hua Oranga and MHC-SF pre surveys
Week 2		Group interview	
Weeks 6 and 7		Individual interviews	
Week 10	Surfing programme ends	Journals collected	Hua Oranga and MHC-SF post surveys
Week 13		Group interview	
Weeks 31-33		Individual interviews	

The process steps are further explained:

February

Participants completed two surveys - (Hua Oranga and Te Whare tapa whā) to gather base quantitative data on feelings of perceived wellbeing before the start of the surfing programme. This was on the very first day of the programme and prior to going to the first beach-based session.

After two programme session, participants were involved in a focus group interview following the indicative questions as indicated below. All participants were involved in the interview and were able to contribute.

February to April

Participants were involved in a ten-week learn to surf programme, facilitated by senior students. This was once a week for approximately ninety minutes on a Wednesday afternoon. The researcher adapted a surfing programme to suit the timeframe and group size. Participants were prompted to journal after each session, and the researcher kept a weekly journal.

March

Through weeks six and seven of the programme the participants were involved in individual interviews of up to one hour each. These followed the indicative questions as previously included in a semi-structured format.

April

Once the learn to surf programme was complete, the participants completed two surveys – (Hua Oranga and Te Whare tapa whā) to gather post-programme quantitative data on feelings of perceived wellbeing.

All participants were involved in a focus group interview in the week after the programme finished, following the indicative questions but with an added focus on any wellbeing shifts they feel have occurred.

Journals were handed in to the researcher to support qualitative data.

September/October

Participants were involved in individual semi-structured interviews of up to one hour following the indicative questions. There was a focus on understanding any themes from the shifts in their quantitative survey data, with specific questions for each participant based on their results. A deeper investigation into journal entries and comments from previous interviews prompted questions for everyone. These interviews were much more individualised than the previous ones, and enabled participants to contribute their thoughts around topics such as the value of broader school structures.

Appendix C: Indicative focus group and individual interview questions

The Appendix contains the indicative questions from both the group and individual interviews.

Indicative interview questions:

Tell me about this week's surfing session. (expand on high or lowlights).

Shifts in hauora/wellbeing

How do you feel during a surfing session? What led you to feel this way? Further explain. Is this feeling just during/around the activity, or does it extend further into your week?

Thinking of the four aspects of hauora, tell me about anything that has changed (positive or negative). What do you think has led to this change?

Environmental stewardship/kaitiakitanga

Have your feelings about the environment we surf in (beach and ocean) changed since we started the programme? What has led you to feel this way?

Lifestyle-based strategies

Your lifestyle has changed to include weekly beach and surfing sessions during this programme. Tell me about how this has made you feel.

Further implementation

Tell me if you feel an activity like this could be part of your lifestyle going forward. What has made you feel this way?

For individual interviews after the completion of the programme, there was a focus on digging into excerpts from journal entries to further elaborate on key themes or points of interest. The participants were also informed of any key shifts in their survey data, and further detail on these shifts was extrapolated and expanded upon.

Appendix D: Hua Oranga Survey

The Appendix contains the quantitative Hua Oranga survey.



Hua Oranga

Tick the response in each category which best reflects the way you are feeling	
Wairua – spiritual wellbeing	Tick
I feel that my spiritual health is extremely good at present	
I feel that my spiritual health is good at present	
I feel that my spiritual health is just okay at present	
I feel that my spiritual health is not good at present	
I feel that my spiritual health is very bad at present	
Tinana – physical wellbeing	
I feel that my physical health is extremely good at present	
I feel that my physical health is good at present	
I feel that my physical health is just okay at present	
I feel that my physical health is not good at present	
I feel that my physical health is very bad at present	
Hinengaro – mental wellbeing	
I feel that my mental health is extremely good at present	
I feel that my mental health is good at present	
I feel that my mental health is just okay at present	
I feel that my mental health is not good at present	
I feel that my mental health is very bad at present	
Whānau – family and relationship wellbeing	
I feel that my relationships with my whānau are extremely good at present	
I feel that my relationships with my whānau are good at present	
I feel that my relationships with my whānau are just okay at present	
I feel that my relationships with my whānau are not good at present	
I feel that my relationships with my whānau are very bad at present	

Appendix E: MHC-SF Survey

The Appendix contains the quantitative Mental Health Continuum- Short Form (MHC-SF) survey



Mental Health Continuum Short Form

Adolescent MHC-SF (ages 12 to 18)

Please answer the following questions are about how you have been feeling during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following:

During the past month, how often did you feel ...	NEVER	ONCE OR TWICE	ABOUT ONCE A WEEK	2 OR 3 TIMES A WEEK	ALMOST EVERY DAY	EVERY DAY
1. happy						
2. interested in life						
3. satisfied with life						
4. that you had something important to contribute to society						
5. that you belonged to a community (like a social group, your school, or your neighborhood)						
SEE BELOW 6. that our society is a good place, or is becoming a better place, for all people						
7. that people are basically good						
8. that the way our society works made sense to you						
9. that you liked most parts of your personality						
10. good at managing the responsibilities of your daily life						
11. that you had warm and trusting relationships with others						
12. that you had experiences that challenged you to grow and become a better person						
13. confident to think or express your own ideas and opinions						
14. that your life has a sense of direction or meaning to it						

Note: The original wording for item 6 was “that our society is becoming a better place for people like you.” This item does not work in all cultural contexts. However, when validating the MHC-SF, test both versions of item 6 to see which one works best in your context.

Appendix F: Learn to Surf Progressions

The Appendix contains the learn to surf progressions that were followed by the student facilitators.

Adapted from The House Of Surf : The Ultimate Guide (Clifford, 2022))

PART ONE: SKILLS AND SAFETY

STEP 1: POOL SKILLS

Participants will start in the school swimming pool and progress through a series of skills to prepare for their surfing sessions. The following skills will be progressed through in one session:

200m (6 lengths) swim in any stroke, so the researcher and senior students' facilitators are aware of the general water sense of the participants.

Share the signals that will be used when in the ocean. This will include signals for Assistance required, go Left and Right, Turn Around and Return To Shore.

Learning to paddle a surfboard in a fixed water context

STEP 2: SELECTING A BEGINNER SURFBOARD

For both safety and to make learning easier, the participants will use soft top surfboards.

These are owned by the school. When you are just starting out, participants must be riding the right type of surfboard. A surfboard that's going to provide stability to help the learning process.

Soft Top Surfboard: These types of boards are made of soft foam and won't injure you if you get hit.

Length: These surfboards are long (around 7-9ft), as this length makes it easier to catch waves, and is more stable once getting up to feet. They also have a lot of volume (100 litres +), which means they are buoyant.

Soft Fins: Beginner surfboards should have soft, flexible fins. These fins will help to avoid injury if they hit the participants.

STEP 3: LEG ROPE/LEASH

A leash is a cord that attaches the participant to the surfboard to stop it from floating away if they fall off. The leash will be a minimum of 7ft long, thick and sturdy with a velcro strap.

The leash gets attached nice and tight to the back foot, with the coil pointing backwards to avoid it tangling in their toes and causing participants to trip or fall.

PART TWO: OCEAN AWARENESS AND SAFETY

STEP 4: WAVE IDENTIFICATION

As the participants are just starting out, it's important to identify a beginner-friendly surf break.

We will be looking for:

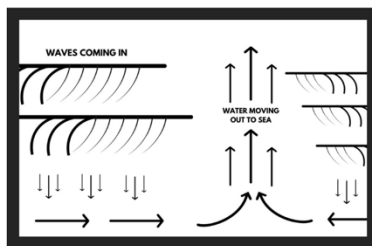
Small, mellow, slow-moving waves: These types of waves are safe and playful, giving you plenty of time to get to your feet.

Beach with no rocks: Find a nice flat beach without any rocks. Omanu Beach is a sandy beach with no rocks.

Avoiding rips: Beginner-friendly surf spots will have fewer, slower-moving rip currents.

Participants will be taught to identify rips and currents at the beach we will regularly be visiting.

HOW RIPS WORK



STEP 5: CHOOSING THE RIGHT CONDITIONS

The landscape in surfing always changes, so choosing the right conditions is important.

Participants will be taught the best conditions in which to learn. Here's what to look for when picking the best surf conditions.

SIZE 1-2ft

WIND Light Offshore

WAVE TYPE Whitewater

WAVE POWER Weak & Gentle

PART THREE: HITTING THE SURF

After participants have gained safety skills and knowledge of surf conditions and equipment, the surfing sessions will begin at the beach.

STEP 6: NAVIGATING THROUGH THE WAVES

Getting from the shore out to the surf will require pushing through/over waves. As a beginner, two main techniques will be taught.

NOSE FIRST TECHNIQUE

Hold the nose of the board by your side and lift the nose of your board over the waves as they come, allowing the whitewater to roll underneath.

TAIL PUSH TECHNIQUE

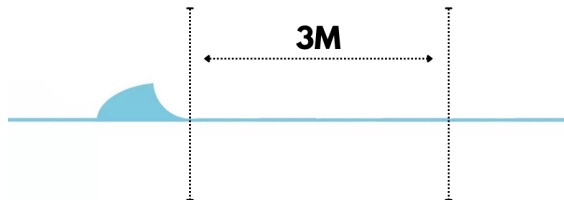
Position yourself at the back of the surfboard and as a wave approaches apply pressure to the tail of the surfboard (lifting the nose of the board up), once again allowing the whitewater to flow underneath.

PRO TIP: NEVER push through, or over a wave with your surfboard in front of your body. The waves' energy will pick the board up and smash it into you. This hurts!

STEP 7: WHEN TO CATCH WAVES

Ok, now comes the fun stuff - actually catching waves.

But when should you start paddling?



You'll want to begin paddling when the wave is about 3m away from you.

This'll give you enough time to build up momentum and allow your surfboard to get picked up by the power of the broken wave.

STEP 8: SELECTING THE RIGHT WAVES

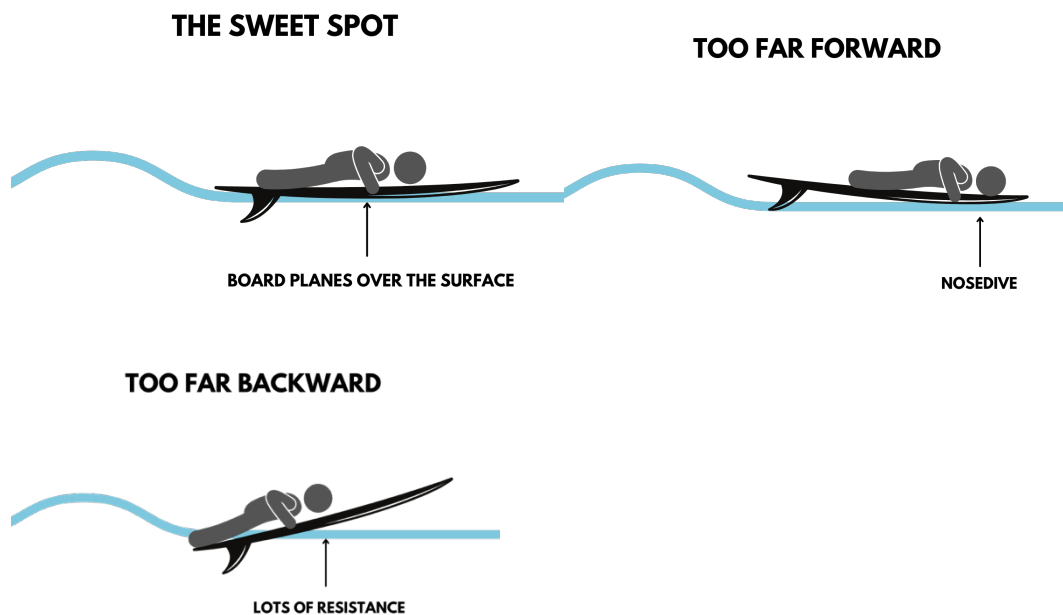
As beginners, participants will be focusing entirely on whitewater waves (whitewater waves are waves that have already broken). Whitewater waves are easier to catch and easier to successfully get to your feet.

Participants will be taught to look for uniform, slow-moving whitewater waves to begin with. A progression on to green/unbroken waves once the basics are covered will be encouraged, moving on to green waves.

STEP 9: POSITIONING ON THE BOARD

Positioning on your surfboard is super important. Too far forward and you'll nosedive. Too far back and there's so much resistance that you won't move anywhere.

The spot to be in is what's known as the 'sweet spot' - not too far forward, and not too far back.



In this position, your surfboard should be flat - planing over the top of the water as you paddle.

STEP 10: PADDLING

There are two key concepts to pay close attention to when paddling:

MAXIMISE PROPULSION

Big, deep, long paddles.

Arched back and high elbows for maximum drive.

Power over speed: Big, powerful paddles are better than lots of weak paddles.

Glide: Rather than being like a motorboat, you instead want to be like an Olympic rowing boat. Glide beats brute power.

MINIMISE RESISTANCE

Keep your legs together and on your board.

Body aligned down the centre of your board.

Weight in the sweet spot.

STEP 11: POPPING UP

There are many different approaches to popping to your feet, with different techniques suitable to different stages of progression. The following will be taught to all participants.

BREAKING DOWN THE POP-UP

Come onto your board as we did when we were practising the prone technique.

Begin paddling. Remember, once the wave has collected you, you still need to paddle an extra three strokes just to be sure.

Once you feel the wave has collected you, place your hands near the pectorals (chicken wing position).

From here, bring your back leg forward and cork your leg towards your body (lizard toe) - if you're doing this right, your back leg will be placed on top of the fins.

Have your hips opened and slightly ajar.

Look forward to the whole process.

From this position, in one continuous movement, lift your body up whilst you press on your hands and your back leg.

Your back leg will lock into place first at a 90-degree angle, as you simultaneously swing your front foot through your hands and place it on the deck of the board at a 45-degree angle.

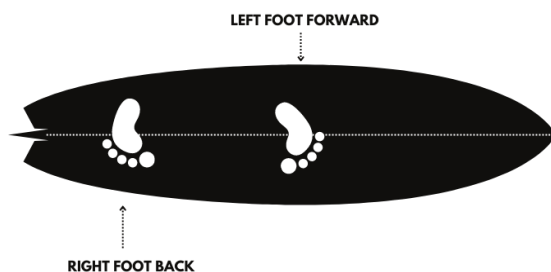
From here, place both hands on either side of the body and continue to look forward. Bend your knees and ride the wave.

STEP 12: STANCE

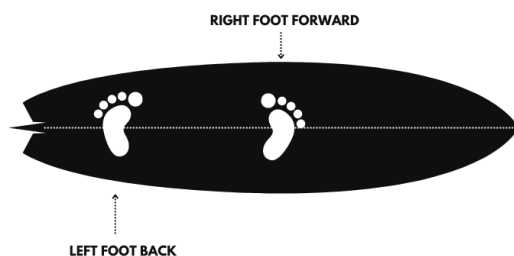
This is the way that you stand on a board.

You'll be either a Goofy footer (right foot forward), or a Regular/Natural footer (left foot forward).

REGULAR/NATURAL STANCE

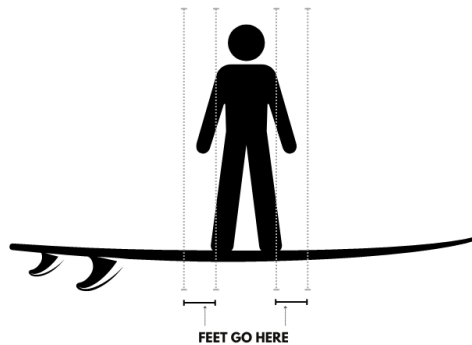


GOOFY STANCE



Once you've deciphered your stance, you'll need to get your feet in the right positions too:

HOW WIDE SHOULD YOUR STANCE BE?



FEET PLACEMENT



Feet a bit wider than
shoulder width apart.

Back foot: 90°

Front foot: 45°

PART FOUR: RIDING THE WAVE

STEP 13: LOOK WHERE YOU'RE GOING

For safety considerations participants will be taught to look around themselves during their surfing sessions. The tip will be to keep your eyes looking where you want to go, rather than down at your feet.

Doing this helps to centre weight over your board and improves balance.

STEP 14: THE DISMOUNT

If the water is really shallow, jumping off can be a little dangerous as the surface beneath is uneven, and can cause a rolled ankle or worse.

Participants will be taught these alternatives to jumping off:

THE STALL: Shift your feet and your weight to the back of the board to stall the board and slow it down. Once the wave has passed you by, it's now safe to dismount.

THE SIT DOWN: Stall the board once again as above, and this time go from a standing position to a sitting position on the board. From here you are then safe to dismount.

THE STARFISH: Rather than jumping off your surfboard trying to land on your feet, instead dismount whereby you're trying to penetrate the water as little as possible. This is done by trying to land flat on your back. *Advanced surfers will use this technique on shallow reef breaks.

STEP 15: RINSE AND REPEAT (keep practicing)

Once the techniques have been taught, participants will progress at their own pace to surfing along a wave.

Appendix G: Glossary of Māori terms

The Appendix contains a glossary of Māori terms used throughout the thesis.

Māori term	Translation
Aotearoa	Māori name for New Zealand
Awa	river, stream, creek, canal, gully, gorge, groove, furrow.
Hauora	be fit, well, healthy, vigorous, in good spirits.
Hinengaro	mind, thought, intellect, consciousness, awareness.
Iwi	extended kinship group, tribe, nation, people, nationality, race - often refers to a large group of people descended from a common ancestor and associated with a distinct territory.
Kaupapa	topic, policy, matter for discussion, plan, purpose, scheme, proposal, agenda, subject, programme, theme, issue, initiative
Kaitiaki	trustee, minder, guard, custodian, guardian, caregiver, keeper, steward.
Kaitiakitanga	guardianship, stewardship, trusteeship, trustee
Kupu	Word, vocabular, saying, talk, message, statement, utterance, lyric
Kura	school, education, learning.
Maunga	mountain, mount, peak.
Mokopuna	grandchildren, grandchild - child or grandchild of a son, daughter, nephew, niece, etc.
Māori	to be Māori, apply in a Māori way.
Mātauranga	knowledge, wisdom, understanding, skill - sometimes used in the plural.
Moana	sea, ocean, large lake
Pākehā	English, foreign, European, exotic - introduced from or originating in

	a foreign country.
Rangatahi	younger generation, youth.
Roto	lake.
Tamariki	children
Taha	part, portion, section.
Taiao	World, Earth, natural world, environment, nature, country
Te Whare Tapa Whā	Māori model of wellbeing
Te āo Māori	Māori worldview
Te Reo Māori	Māori language
Tikanga	correct procedure, custom, habit, lore, method, manner, rule, way, code, meaning, plan, practice, convention, protocol - the customary system of values and practices that have developed over time and are deeply embedded in the social context.
Tinana	physical
Tīpuna	ancestors, grandparents - plural form of <i>tīpuna</i> and the eastern dialect variation of <i>tūpuna</i> .
Tuakana-Teina	refers to the relationship between an older person (tuakana) and a younger person (teina). The meaning is <i>older sibling, younger sibling</i> – where siblings learn from each other.
Wairua	spirit, soul - spirit of a person which exists beyond death. It is the non-physical spirit, distinct from the body and the <i>mauri</i> .
Whakapapa	genealogy, genealogical table, lineage, descent - reciting <i>whakapapa</i> was, and is, an important skill and reflected the importance of genealogies in Māori society in terms of leadership, land and fishing rights, kinship and status.
Whānaungatanga	relationship, kinship, sense of family connection - a relationship through shared experiences and working together which provides people with a sense of belonging.

Whā	four, 4
Whānau	extended family, family group, a familiar term of address to a number of people - the primary economic unit of traditional Māori society. In the modern context the term is sometimes used to include friends who may not have any kinship ties to other members.
Wahine/Wāhine	female gender/women, females, ladies (plural)
Whenua	land - often used in the plural.

Translations are from The Māori Dictionary <https://maoridictionary.co.nz>