Navigating the cultural interface

Indigenous PhD scholars' experience of working toward equity in health research across Australia, Turtle Island Canada, and Aotearoa New Zealand

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Navigating the cultural interface: Indigenous PhD scholars' experience of working toward equity in health research across Australia, Turtle Island Canada, and Aotearoa New Zealand

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Acknowledgement of Country

The Australian Centre for Student Equity and Success acknowledges Indigenous peoples across Australia as the Traditional Owners of the lands on which the nation's campuses are situated. With a history spanning more than 60,000 years as the original educators, Indigenous peoples hold a unique place in our nation. We recognise the importance of their knowledge and culture, and reflect the principles of participation, equity, and cultural respect in our work. We pay our respects to Elders past, present, and future, and consider it an honour to learn from our Indigenous colleagues, partners, and friends.

At a glance

What we did

This project examined the experiences of Indigenous PhD scholars in Australia, Turtle Island Canada, and Aotearoa New Zealand. It explored the ways in which they are championing community-informed and Indigenous-led research at the cultural interface in higher education. This was done through an international strengths-based comparative approach, drawing on in-depth interviews with 12 Indigenous PhD scholars (four from each country) working in the field of health, three of whom also attended a yarning circle.

What we found

1) There are significantly more shared experiences than differing experiences across Indigenous PhD scholar cohorts in Australia, Turtle Island Canada, and Aotearoa New Zealand. These shared experiences are integrally linked to their Indigeneity, the ongoing impacts of colonialism, and the experience of undertaking doctoral programs within Western academic institutions.
2) Indigenous PhD scholars are pursuing doctoral degrees with their communities in mind and see role-modelling as important.
3) Indigenous PhD scholars are engaging with Indigenous knowledge systems within their academic work and contributing to the resurgence of sovereign Indigenous inquiry.
4) Indigenous PhD scholars are undertaking research that informs and creates change for the benefit of their communities in health care, policy, and governance.
5) Tailored programs and pathways are effective for the success of Indigenous doctoral students.
6) Indigenous peer networks, cohorts, Indigenous academics, communities, and Indigenous research units/organisations provide crucial support systems and cultural safety for Indigenous PhD students. Access to Indigenous supervisors or mentors and advisory or governance groups is also important.
7) Indigenous PhD scholars across all three countries continue to experience personal and structural racism and discrimination in Western higher education settings.
8) Financial scholarships and supports provided by governments and universities for living stipends and field work are inadequate.
9) Indigenous PhD scholars experience a colonial burden not carried by their non-Indigenous counterparts.

What we recommend

Section 2 of the report includes a series of recommendations related to initiatives that universities, higher education peak bodies, and governments can implement to better support Indigenous PhD scholars before, during, and after their candidature.

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Abbreviations/nomenclature

ACSES	Australian Centre for Student Equity and Success
ATSIRN	Aboriginal and Torres Strait Islander Researchers' Network
AUS	Australia
CA	Turtle Island Canada
IRNet	National Indigenous Research Capacity Building Network
MAI	Māori and Indigenous Scholar Network and Program
NIRAKN	National Indigenous Research and Knowledge Network
NZ	Aotearoa New Zealand
OCHRe	Our Collaborations in Health Research
PhD	Doctor of Philosophy
Poche Centre	Melbourne Poche Centre for Indigenous Health, The University of Melbourne
RTP	Commonwealth Government Research Training Program
SAGE	Supporting Aboriginal Graduate Enhancement
STEM	Science, Technology, Engineering, and Mathematics
Turtle Island	Term for Canada that is preferred by some Indigenous peoples
Aotearoa	Māori term for New Zealand

1. Executive summary

This project examined the experiences of Indigenous PhD scholars in Australia, Turtle Island Canada, and Aotearoa New Zealand and explored the ways in which they are championing community-informed and Indigenous-led research at the cultural interface in higher education (Durie, 2005; Nakata, 2002, 2007b). Through an international strengths-based comparative approach and drawing on in-depth interviews and a yarning circle with Indigenous PhD scholars working in the field of health, this project builds the evidence base of the factors that contribute to the intellectual, cultural, and social capital that support Indigenous PhD scholars to conduct their projects, within Western academic institutions, in self-determined ways. Understanding the successes of Indigenous researchers in higher education creates stronger pathways to epistemological, ontological, and axiological equity within the academy.

1.1 Background

Universities across the globe have played active roles in the colonising process. Through systemic practices that privilege Western epistemologies and ontologies, Indigenous knowledge systems were either exploited or disparaged, and Indigenous peoples were excluded from educational institutions (González & Colangelo, 2010; Jones et al., 2024; Kuokkanen, 2007; Moreton-Robinson, 2004; Tuhiwai Smith, 2012). Through Indigenous activist interventions that led to a shift in political sensibilities, access to higher education across all three countries improved in the 1960s and 1970s, with targeted policies aimed at improving Indigenous participation coming into effect (Gallop & Bastien, 2016; Morgan, 2003; Pidgeon, 2008; K. Wilson & Wilks, 2015). Over time, these initiatives have resulted in increasing numbers of Indigenous scholars in higher education across all three countries, including those undertaking doctoral studies. In Australia, the number of Indigenous PhD scholars has grown from 55 in 1990 to 600 in 2021, representing 1% of the current doctoral scholar cohort (Australian Government Department of Education, 2023b). In Aotearoa New Zealand, there were 155 Māori PhD scholars in 1998 and 760 in 2021, or 13% of current domestic doctoral degree students (Ministry of Education, 2024). In Turtle Island Canada the number of total enrolments is not collected, but Statistics Canada, instead, record the number of new entrants. In 2021, there were 190 new Indigenous doctoral scholars compared with 150 in 2015 (Statistics Canada, 2024a). In 2019, a study showed that Indigenous PhD scholars made up 1.7% of the doctoral scholar cohort (Statistics Canada, 2019).

While these numbers are promising, international research also shows that academic institutions continue to be unwelcoming and discriminatory places for Indigenous PhD students, with Indigenous PhD scholars reporting experiences of racism, being negatively stereotyped, feeling like they are an imposter and that they do not have access to the necessary support systems to help them thrive (Andrews, Gallant, et al., 2024; E. McKinley et al., 2011; Pidgeon et al., 2014; Trudgett, 2013). While several publications examine the experience of Indigenous PhD scholars within their own nations, there is no scholarship that empirically compares the experience of Indigenous PhD scholars across these three

countries. This study contributes to the growing body of research that focuses on the success of Indigenous PhD scholars in higher education settings and captures the work they are doing to Indigenise academic spaces.

1.2 Methods

This comparative research project was Indigenous-led and used qualitative interviews and a yarning circle that privileged Indigenous world-views and the lived experience (Bessarab & Ng'andu, 2010; Burgess et al., 2021; Creswell, 2013; Denzin & Lincoln, 2008; Rigney, 1999). Centring the voices of Indigenous people from across the nations of Australia, Turtle Island Canada, and Aotearoa New Zealand, we captured the experience of Indigenous PhD scholars, as well as the nature of Indigenous-led research being undertaken in health-related research.

In-person interviews were conducted by Indigenous members of the research team with 12 Indigenous PhD scholars working in the field of health broadly conceived. Questions were semi-structured and focused on the participant's journey into a PhD, their research topic and methodological approach, and their experience of being an Indigenous researcher in a Western academic institution. Of the 12 PhD scholars who were interviewed, three attended the yarning circle. In the yarning circle, researchers reported back initial findings and allowed participants the opportunity to reflect or comment on these. Semi-structured questions were then used to guide group discussions and related to, and extended on, those asked in the interviews. The interviews were de-identified and, using inductive analysis, were coded thematically by all researchers to enable emergent themes to develop through multiple readings (Bingham & Witkowsky, 2022). Ethics approval was granted by the Human Research Ethics Committee of The University of Melbourne (Ethics ID Number: 29120). Appropriate approvals were also sought from international universities that supported the recruitment of their PhD scholars to the study.

1.3 Key findings

Key findings from the project were:

- There are significantly more shared experiences than differing experiences across Indigenous PhD scholar cohorts in Australia, Turtle Island Canada, and Aotearoa New Zealand.
- These shared experiences are integrally linked to the PhD scholars' Indigeneity, the ongoing impacts of colonialism, and the experience of undertaking doctoral programs within Western academic institutions.
- Indigenous PhD scholars are pursuing doctoral degrees with their family and communities in mind and see role-modelling as an important part of their doctoral journey.
- Engaging in higher education is important for Indigenous PhD scholars who see the opportunity to engage Indigenous knowledge systems within their academic work and grow the body of Indigenous-led research that is relevant to Indigenous people.
- Indigenous PhD scholars are undertaking research to inform and create change for the benefit of their communities in academia, health care, policy, and governance.

- Indigenous PhD scholars are engaging in Indigenous methodologies and undertaking their projects in culturally informed and restorative ways.
- Tailored programs and pathways are effective for the success of Indigenous doctoral students.
- Indigenous peer networks, cohorts, Indigenous academics, and Indigenous research units/organisations provide crucial support systems and a sense of cultural safety for Indigenous PhD students.
- Connection to land, culture, and the spiritual and natural worlds is a source of support for Indigenous doctoral scholars.
- Access to Indigenous supervisors or mentors and advisory or governance groups is important for PhD scholars to be able to undertake their projects in culturally appropriate ways.
- Indigenous PhD scholars across all three countries continue to experience personal and structural racism and discrimination in Western higher education settings.
- Financial scholarships and supports provided by governments and universities for living stipends and field work are inadequate.
- Indigenous PhD scholars experience a colonial burden not carried by their non-Indigenous counterparts that includes racism, a lack of social capital, greater financial stress, increased caring and cultural responsibilities, high academic and community expectations, and difficulties associated with holding the dual roles of researcher and community member.

2. Recommendations

The recommendations we include here relate to initiatives that universities, higher education peak bodies, and governments can implement to better support Indigenous PhD scholars before, during, and after their candidature:

- Universities to recognise, nurture, and properly support the contributions Indigenous PhD scholars and academics are making to epistemological, ontological, and axiological equity in the academy.
- University campuses to be inclusive and culturally safe for Indigenous PhD scholars and free from racism.
- Universities to recognise and reward the demands made on Indigenous PhD scholars for their expertise on committees and in relation to strategic policies and programs.
- Tailored pre-enrolment support to be provided to prospective Indigenous PhD scholars that addresses:
  o positioning in the academy
  o accessing potential supervisors
  o submitting a PhD proposal
  o being cognisant of, and applying for, relevant scholarships.
- Universities to ensure that Indigenous PhD scholars have tailored support throughout their candidature, including access to Indigenous peer networks both within the university and beyond it, and opportunities for regular and sustained engagements including, for example:
  o writing workshops/retreats, seminars, and social gatherings
  o funded attendance at relevant national and international fora aimed at bringing Indigenous PhD scholars together.
- Adequate financial support to be provided to Indigenous PhD scholars including:
  o a waiver of university fees
  o a singular full living allowance scholarship for the duration of the candidature (including extensions and intermissions)
  o more part-time scholarship options to be made available to Indigenous PhD scholars
  o no tax implications for studying part-time
  o sufficient funding for field work and community/ethics engagements, where relevant.
- Varied models of extended candidature and scholarship provision for Indigenous PhD scholars that recognise and support the time necessary for Indigenous community engagement, ethics protocols, and knowledge translation activities.
- All supervisors of Indigenous PhD scholars to be provided with training on Indigenous research methodologies and practices, and the particular requirements of Indigenous PhD scholar supervision.
- Flexible supervisory models to be made available to Indigenous scholars including:
  o the ability to have Indigenous community members with Indigenous knowledge, cultural knowledge, or disciplinary expertise in the area of study included as supervisors and remunerated accordingly

- o the opportunity to have an Indigenous community advisory board whose expertise is formally acknowledged and remunerated accordingly.
- Career planning support and mentorship to be provided to Indigenous PhD scholars during their candidature.
- Universities to provide Indigenous specific post-doctoral opportunities to ensure a continuum of academic success.

3. Introduction

In Australia, Turtle Island Canada, and Aotearoa New Zealand, although vastly different, the knowledge systems of Indigenous[1] peoples exist in connection with community, the environment, and the spiritual world. Indigenous peoples have long intellectual traditions as philosophers, teachers, researchers, scientists, agriculturalists, historians, healers, astronomers, and more—sustaining a way of life that responds to and works in concert with community and country (Andrews, Eades, et al., 2024; Bastien, 2004; Hikuroa, 2017; Hutchings et al., 2018; Kidman, 1999; Langton & Corn, 2023; Stewart, 2020; S. Wilson, 2008). Whilst Indigenous experiences differ from nation to nation and from place to place, they share commonalities in their worldviews regarding the interconnection of knowledge systems with place, relationships, and the sustainability of these interconnected futures, as well as a history of the experience of settler-colonisation. Aboriginal and Torres Strait Islander peoples in Australia, Māori in Aotearoa New Zealand, and the Inuit, Métis, and First Nations peoples of Turtle Island Canada were and are subject to violent and sustained experiences of dispossession, exclusion, and harm through ongoing colonising practices. Following invasion of their countries, and regardless of whether treaties were signed, settler governments moved Indigenous people off their homelands, onto missions or reserves, forcibly removed children from their families and denied them access to their land, resources, education, languages, and law (González & Colangelo, 2010; Havemann, 1999).

Universities across the globe also played active roles in the colonising process. Along with the displacement of people and the theft of land, Western imperialist ideologies were used to justify discriminatory practices deeming Indigenous peoples inferior, primitive, and "other" and proliferated these ideas through their transmission in the education system (González & Colangelo, 2010; Jones et al., 2024; Kuokkanen, 2007; Moreton-Robinson, 2004; Tuhiwai Smith, 2012). Through systemic practices that privilege Western epistemologies and ontologies, Indigenous knowledge systems were either exploited or disparaged, and Indigenous peoples were excluded from higher education institutions (Gallop & Bastien, 2016; Morgan, 2003; Pidgeon, 2008; K. Wilson & Wilks, 2015). As a result of sustained activism by Indigenous peoples creating a shift in political sensibilities, access to higher education across all three countries improved in the 1960s and 1970s, with targeted policies aimed at improving Indigenous participation coming into effect (Barman & Battiste, 1995; Battiste et al., 2002; Bradley et al., 2008; Hogarth, 2016; Kidman, 1999; McKenzie, 2005; E. A. McKinley & Smith, 2019; Richardson & Blanchet-Cohen, 2000).

Over time, these initiatives have resulted in increasing numbers of Indigenous scholars in higher education, including those undertaking doctoral studies. While racism and experiences of discrimination persist, there is increasing evidence of the ways Indigenous peoples are engaging in higher education to reconnect with traditions of intellectual endeavour and seek, or establish, spaces that support these (Battiste et al., 2002; Castagno et al., 2022; Durie, 2005; Gallop & Bastien, 2016; Gaudry & Lorenz, 2018; Johnson et al., 2017; Povey et al., 2022; Tuhiwai Smith, 2012). In this project, and with a focus on doctoral

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[1] We use the term "Indigenous" in this paper to refer to Indigenous peoples in Australia, Turtle Island Canada, and Aotearoa New Zealand, but acknowledge that some people prefer "First Peoples" or "First Nations.

studies, we examine the experiences of Indigenous PhD scholars[2] in Australia, Turtle Island Canada, and Aotearoa New Zealand and explore the ways in which they are championing community-informed and Indigenous-led research at the cultural interface in higher education (Durie, 2005; Nakata, 2002, 2007b).

Through an international comparative approach and drawing on in-depth interviews and a yarning circle with Indigenous PhD scholars working in the field of health-related research,[3] this project explores the global experiences of Indigenous PhD scholars, including how they are connecting to one another, community, and place; if and how they integrate cultural/Indigenous knowledge into their research practice; and how they navigate ways to centre this as expertise within the university environment. To examine these experiences, we use Martin Nakata and Mason Durie's articulation of the "cultural interface" or the "interface" to contextualise Indigenous peoples' place within the academy and draw on Jeff Corntassel et al.'s concept of "re-storying" and Jo-ann Archibald's framework of Indigenous storywork, to highlight the ways in which Indigenous PhD scholars are contributing to Indigenising higher education spaces through practices of resilience, cultural resurgence, and relationality (J. Archibald, 2008; Corntassel et al., 2009; Durie, 2005; Nakata, 2007b).

While several studies in Australia, Turtle Island Canada, and Aotearoa New Zealand examine the experience of Indigenous PhD scholars, there is no scholarship that empirically compares the experience of Indigenous PhD scholars across these three countries.[4] This study responds to the call by Anderson and others that comparative research needs to be undertaken in this area (Anderson et al., 2022, p. 88; Hutchings et al., 2019, p. 247). Of particular importance, this study moves away from a deficit-based gap analysis between Indigenous and non-Indigenous experiences to focus on a strengths-based comparative analysis between relative international Indigenous populations (Biddle et al., 2017; McAullay et al., 2020). Understanding the successes of Indigenous peoples in higher education, despite the challenges, informs a stronger pathway to greater epistemological, ontological, and axiological equity within academy. The outcomes of the research will inform the ways universities can better support Indigenous PhD scholars to undertake their doctoral project with an emphasis on Indigenous ways of being, doing, and knowing. It also addresses the vital need to centre the experience of Indigenous peoples in higher education and highlight the impact they are having. Importantly it captures the work that Indigenous PhD scholars are doing, with support from their community and Indigenous academics (past and present), that contribute to Indigenising academic spaces.

Specifically, the key research questions addressed include:

- How do Indigenous PhD scholars in the health disciplines experience their PhD journey?
    - What are they investigating in their PhD projects?
        - What methodologies are they employing?

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[2] We use the term "scholars" instead of "students" to acknowledge the breadth of expertise, lived experience, and depth of knowledge that Indigenous people bring to their PhD.

[3] We have defined "health-related research" as research that relates to health in a holistic sense, taking into account the social, emotional, and cultural well-being and the social determinants of health (National Aboriginal Health Strategy Working Party, 1989).

[4] We would like to acknowledge the comparative work that focuses on areas such as leadership or higher education and that brings together scholars from these regions including but not limited to: J. Q. Q. X. Archibald et al., 2022a; Barney, 2018b; Barnhardt, 1991; González & Colangelo, 2010; Hauser et al., 2009; E. A. McKinley & Smith, 2019; Povey et al., 2022.

- o What are the factors that contribute to their success?
- o What challenges do they face as Indigenous PhD scholars?
- What are the commonalities or differences across the three sites?
- What are the factors that contribute to improving the intellectual, social, and cultural capital of Indigenous PhD scholars within academic institutions?
- How are Indigenous PhD scholars in the health disciplines affecting research practices within the academy?

3.1 The project team

The project team consisted of three Indigenous researchers and one non-Indigenous researcher.

The research was led by Professor Shawana Andrews, a Palawa Trawlwoolway woman, Associate Dean Indigenous, Faculty of Medicine, Dentistry and Health Sciences and The University of Melbourne, and Director of the Melbourne Poche Centre for Indigenous Health (the Poche Centre). Shawana has over 25 years' experience working in Aboriginal health and higher education. Her research areas include Aboriginal graduate research candidate experiences and social capital; place and purpose of Aboriginal health leadership; Aboriginal mothering practices and family violence; Aboriginal feminisms and gendered knowledges; and cultural practice-based methodologies.

Tahlia Eastman is a Tasmanian Aboriginal descendant, the Indigenous Graduate Research Program Coordinator at the Poche Centre, and a Research Fellow with the Indigenous Studies Unit in the Faculty of Medicine, Dentistry and Health Sciences at The University of Melbourne. Her research work explores the concept of passing and its relationship to the sociopolitical landscape of Aboriginal identity in Tasmania.

Dr Emily Munro-Harrison is a Wiradjuri woman and is the Academic Lead Indigenous Health Leadership at the Poche Centre. Her research interests include participatory and creative methods and using research as a tool for activism and change which she has done in a range of settings including in prisons, youth programs, and higher education spaces.

Dr Odette Mazel is a non-Indigenous person and is the Senior Research Fellow at the Poche Centre. Her research areas relate to Indigenous human rights and self-determination, Indigenous health and human rights, Indigenous student access to and experiences of higher education, and the nature of agreement and treaty making with Indigenous communities.

4. Background

Indigenous people are the first peoples and communities of the lands they come from and inhabit, unlike colonial settlers/invaders and migrant peoples who emanate from Europe and other countries (Alfred & Corntassel, 2005). It is this place-based relationship and existence that Alfred and Corntassel suggest, along with the struggle against colonial dispossession, "fundamentally distinguishes Indigenous peoples" from others in their country (Alfred & Corntassel, 2005, p. 597). While the experience of Indigenous peoples differ culturally, politically, and historically, there is a shared experience of connection to land, community, spirituality, and the experience of having to survive against colonial efforts to eradicate their laws, languages, knowledge systems, and structures (Alfred & Corntassel, 2005). "Being Indigenous today," Corntassel et al. suggest, "means struggling to reclaim and regenerate one's relational, place-based existence by challenging the ongoing, destructive forces of colonization" (Corntassel, 2012, p. 88). Part of this challenge occurs through Indigenous peoples' engagement with higher education and the institutions that have excluded Indigenous people and systematically devalued and dismissed their knowledge systems and practices resulting in widespread epistemic injustices (Bennett & Menzel, 2025; Kidd et al., 2017; Maddox & Ninomiya, 2025).

Despite these histories of institutional exclusion and discrimination, Indigenous peoples' participation in higher education across all three countries included in our study has improved considerably as a result of the advocacy and activism by Indigenous communities, leading to changes in government policies in the 1960s and 1970s and the removal of some of the barriers to participation (Gallop & Bastien, 2016; González & Colangelo, 2010; Moreton-Robinson et al., 2011; Theodore et al., 2016; K. Wilson & Wilks, 2015). Since then, undergraduate numbers have increased considerably, the Indigenous academic and professional staff workforce has grown, and curriculum initiatives have become more inclusive of Indigenous content (Behrendt et al., 2012; Gallop & Bastien, 2016; González & Colangelo, 2010; Mayeda et al., 2014; Moreton-Robinson et al., 2011; Pidgeon, 2016; Theodore et al., 2017).

With regards to Indigenous PhD scholars, increases in numbers have been slower to materialise but show an upward trajectory. In Australia, as of 2021, there were 600 (1% of total PhD doctoral enrolments; population parity would be 3.8%) Aboriginal and Torres Strait Islander PhD doctoral scholars out of a total 56,861 scholars enrolled in Australian universities (Australian Government Department of Education, 2023b). Although that number remains well below population parity (1,705), it represents significant growth in PhD numbers from 55 in 1990 (Australian Government Department of Education, 2023a; Australian Government Department of Education, Skills and Employment, 2022; Page et al., 2017; Trudgett et al., 2016). In Aotearoa New Zealand, in 2021, there were 760 enrolled Māori PhD scholars, representing 13% of domestic doctoral degree scholars. This compares to 8.9% in 2011 and 6.6% in 2001. This number is still below population parity (17.8% of enrolments) but is a huge improvement from the 1998 number of 155 Māori PhD scholars enrolled across the country (Ministry of Education, 2024). In Turtle Island Canada, the number of total enrolments is difficult to access. Statistics Canada don't collect the total number of enrolments. Instead, they regularly record the number of new entrants, and in 2021, there were 190 new Indigenous doctoral scholars. This figure makes up 3.4% of all new

enrolments (5,540 total scholars; population parity would be 4.9%) and represents a slow but steady increase from 150 new entrants in 2015 (Statistics Canada, 2024a). In 2019, a unique study was carried out to examine selected population characteristics of post-secondary faculty and researchers. This study showed that Indigenous PhD scholars made up 1.7% of the whole doctoral scholar population (Statistics Canada, 2019). Overall, the proportional representation of Indigenous PhD scholars is very similar in Australia and Turtle/Island Canada, while Aotearoa New Zealand has the highest proportion of the three countries.

In terms of the numbers of Indigenous PhD scholars in health disciplines, a report by the Australian Government Department of Education showed that approximately 51% of Indigenous Higher Degree by Research scholars were enrolled in Science, Technology, Engineering, and Mathematics (STEM) and health fields (Australian Government Department of Education, 2019). In New Zealand, a study by Kokaua and others found that of all Māori PhD graduates, 53.6% did their PhD in mixed field programs, 16.9% in Natural/Physical Science and Health/Vet science (Kokaua et al., 2025). In Canada, the percentage of Indigenous doctoral students enrolling in STEM was approximately 24% (Statistics Canada, 2024b).

While these numbers are promising, research also shows that academic institutions continue to be unwelcoming and discriminatory places for Indigenous students (Bailey, 2016; Bodkin-Andrews & Carlson, 2016; Theodore et al., 2017). With regards to Indigenous PhD scholars, this can be even more pronounced. Indigenous PhD scholars report experiences of racism, being negatively stereotyped, and that they do not have access to the necessary support systems to help them thrive (Anderson et al., 2022; Andrews, Gallant, et al., 2024; Bailey, 2016; Hutchings et al., 2019; E. McKinley et al., 2011; Pidgeon et al., 2014; Trudgett, 2011, 2013). Indigenous methodologies are also often poorly understood by supervisors and accessing outside expertise through Indigenous advisory groups or mentors can be difficult (Gavin, 2022; Gilgen, 2022; Grant & McKinley, 2011; Hogarth, 2022; Hutchings et al., 2019; Moreton-Robinson et al., 2020; Pihama et al., 2018a; Trudgett, 2014). While there are increasing numbers of Indigenous supervisors—an important factor for PhD scholars—these academics are often overburdened by the high demands on their time and expertise (Andrews, Gallant, et al., 2024). Despite these factors, the body of international research focussing on the success of Indigenous PhD scholars in higher education settings continues to grow (Anderson et al., 2022; J. Q. Q. X. Archibald et al., 2022a; Arnold, 2018; Ballangarry & Pugin, 2024; Barney, 2013, 2018a; Berryman et al., 2017; Gavin, 2022; Hogarth, 2022; Hutchings et al., 2018; E. McKinley et al., 2011, 2011; E. A. McKinley & Smith, 2019; Middleton & McKinley, 2010; Moreton-Robinson et al., 2020; Page et al., 2017; Pidgeon et al., 2014; Pihama et al., 2018a, 2019; Trudgett, 2013; Trudgett et al., 2016; Tynan, 2020; M. Wilson et al., 2011). This scholarship highlights the initiatives that support the recruitment and graduation of Indigenous PhD scholars including culturally safe supervision, the importance of Indigenous-specific support services and peer networks, the provision of adequate financial support, and support for and knowledge of Indigenous methodologies.

In the fieldwork sites of this research, as we have acknowledged, there are complex socio-political contexts in which engagement in higher education and the Indigenous academy have emerged. Local, regional, and national initiatives have developed to support Indigenous PhD recruitment, support, and graduation to varying degrees. While not exhaustive, we outline here some of the programs that have been available to Indigenous

PhD scholars at each of the sites. As well as the programs outlined here across the three countries, localised initiatives within and across universities also provide support to Indigenous PhD scholars.

In Aotearoa New Zealand, Māori academics were instrumental in developing Nga Pae o te Māramatanga—Aotearoa New Zealand's first Māori centre of research excellence—in 2002. As a collaboration of 21 research partners, it focusses on research led and conducted by, and for, Māori. One of Nga Pae o te Māramatanga's key initiatives was the development of Te Kupenga o MAI (MAI), a support network for Māori doctoral scholars (*About Te Kupenga o MAI | Ngā Pae o Te Māramatanga*, n.d.). The initial goal of MAI was to graduate 500 Māori PhDs within five years, which it surpassed with 741 Māori PhD scholars graduating in that time (Rātana, 2023). MAI was conceived by Māori academics who understood the struggles within graduate research programs for Māori PhD scholars, especially in relation to the use of Māori methodologies and undertaking research with and for Māori communities. MAI supports Māori scholars to participate in culturally affirming spaces that align with their aspirations, connects students with a national network of other Māori students, and contributes to growing the Māori academy. MAI also facilitates Māori PhD scholars to connect with Indigenous students from other countries (Pihama et al., 2018b, 2019).

Building on the momentum and success of MAI, and with their assistance, the Supporting Aboriginal Graduate Enhancement (SAGE) program was developed at the University of British Columbia in Turtle Island Canada in 2005 and networks universities in proximity to one another through "pods" in British Columbia and "nests" in Ontario, but doesn't operate nationally as yet (*About SAGE*, 2013). SAGE emerged to bring First Nation, Métis, and Inuit graduate scholars together from across disciplines, and to provide an Indigenous knowledge orientation to student learning and mentorship, as well as academic skills development including writing workshops, professional development, and land-based learning (Pidgeon et al., 2014).

In Australia, the National Indigenous Research and Knowledges Network (NIRAKN) was established in 2012 under the Special Research Initiative for the Aboriginal and Torres Strait Islander Researchers' Network (ATSIRN) (National Indigenous Research and Knowledges Network, 2022; *National Indigenous Research and Knowledges Network*, 2020). While no longer in operation, NIRAKN's vision was to develop skilled Aboriginal and Torres Strait Islander researchers to address the urgent needs of Indigenous communities through the delivery of culturally appropriate research, with a focus on developing Aboriginal and Torres Strait Islander knowledge systems to inform and frame that research. Between 2012 and 2020 NIRAKN provided a range of academic development opportunities for Indigenous PhD scholars from across Australia including workshops, seminars, and networking opportunities (Anderson et al., 2022). Other national initiatives to support Indigenous PhD scholars in health include research capacity-building programs run by the Lowitja Institute; support for PhD students through the Our Collaborations in Health Research (OCHRe) Network funded by the National Health and Medical Research Council; the National Indigenous Research Capacity Building Network (IRNet) operated by the Australian Health Research Alliance; and scholarship and support initiatives from the Australian Research Council Centre of Excellence for Indigenous Futures (*Indigenous Futures Centre*, 2024; *Lowitja Institute*, 2025; *National Indigenous Research(Er) Capacity Building Network (IRNet)*, 2025; *National Indigenous Research(Er)Capacity Building Project Action Plan 2019-2021*, 2019; *OCHRe Network*, 2025).

In this paper, and acknowledging these histories and contexts, we build on the scholarly work in this area by drawing together empirical data from Australia, Turtle Island Canada, and Aotearoa New Zealand to gain a better understanding of what is working, and why, for Indigenous PhD scholars across the three international settings. These findings, based on a relational comparative analysis will inform system improvements for the recruitment and graduation of Indigenous PhD scholars and will strengthen global initiatives that support Indigenous approaches to research (Goldberg, 2009; Povey et al., 2024, p. 2). Importantly, this research adds to the literature to show how Indigenous PhD scholars are contributing to the resurgence of Indigenous research practices and the Indigenisation of the academy.

5. Methodological approach

5.1 Theoretical framework

In this project, we use Martin Nakata's articulation of the "cultural interface" and Mason Durie's "interface research" to contextualise Indigenous peoples' place within the academy. We also draw on Jeff Corntassel et al.'s concept of "re-storying" and Jo-ann Archibald's (Q'um Q'um Xiiem) framework of Indigenous storywork, to highlight the ways Indigenous PhD scholars are contributing to Indigenising higher education spaces through practices of resilience, cultural resurgence, and relationality (J. Archibald, 2008; Corntassel et al., 2009; Durie, 2005; Nakata, 2007b).

Higher education institutions and the research conducted within them has historically marginalised, discredited, or exploited Indigenous peoples, their knowledges, and discourse. Colonial research was, as Archibald et al. assert, "more than a theft of cultural property," it was "an intellectual, cultural and spiritual invasion" (J. Q. Q. X. Archibald et al., 2022b, p. 5). Indigenous academics and communities have worked hard to shift this. Pursuing Indigenous knowledges and practices within these contexts can be contentious, with scholars warning of the assimilatory force of dominant discourses, acknowledging the endless personal and political struggle it entails, and questioning whether the academy can be decolonised or in fact Indigenised (J. Archibald, 2008; Battiste et al., 2002; Kovach, 2009; Langton, 1993; Martin, 2003; Moreton-Robinson, 2004; Tuck & Yang, 2012; Tuhiwai Smith, 2012; S. Wilson, 2008). However, many Indigenous scholars agree that these systems are important sites for Indigenous intellectual endeavours. Contemplating the place of Indigenous knowledges within university settings, Martin Nakata and Mason Durie separately articulate the idea of Indigenous peoples operating at an interface. Nakata, an Indigenous Australian Professor from the Torres Strait Islands, describes the cultural interface as "the intersection of the Western and Indigenous domains ... the place where we are active agents in our own lives— where we make our decisions—our life world" (Nakata, 2002, p. 285). Nakata theorises the interface as a complex space where Indigenous and Western knowledges are in contestation. The tension that exists, however, between these two ontologies, he suggests, is productive. As Nakata et al. state, "it is from this location, or in the shadow of this [Western] knowledge, that Indigenous students must illuminate and articulate their own position, forged also from within their own experiences of being Indigenous" (Nakata et al., 2008, p. 142). Nakata asserts that operating at this interface is not passive, but requires persistent acts of "rejection, resistance, subversiveness, pragmatism, ambivalence, accommodation, particularization, cooperation" (Nakata, 2002, p. 285). As a scholarly activity, working at the interface involves:

> (1) Indigenous Peoples' traditional and contemporary knowledge, experience and, analytical standpoints; (2) the representation of these as they have been historically constructed by Western disciplines; as well as (3) the knowledge, methods and practice of the Western disciplines that continue to impact on Indigenous lives and shape Indigenous options. (Nakata, 2007a; Nakata et al., 2014, pp. 8–9)

Importantly, he asserts the right of Indigenous people to create an intellectual space within the academy to assert their own knowledges and practices.

Mason Durie, a Māori Professor and psychiatrist, also theorised the interface as a site in which Western and Indigenous knowledge production coincide. Durie describes the interface as an approach that harnesses "the energy from two systems of understanding in order to create new knowledge that can then be used to advance understanding" (Durie, 2005, p. 306). He describes the interface as a "source of inventiveness" that seeks not to prove the superiority of one system over the other, but to leverage the opportunities from combining both (Durie, 2005, p. 306). There are, he suggests, a number of principles that underlie research conducted in this space. These include "mutual respect" in which the validity of both knowledge systems are recognised; "shared benefits" that recognise Indigenous peoples as active participants in research processes and outcomes; "human dignity" that takes into consideration the worldviews of individuals and populations; and "discovery" that emphasises exploration and invention drawn from both knowledge systems for the future benefit of all (Durie, 2005, pp. 306–308).

Both Nakata and Durie articulate the generative space that is made possible when Indigenous practices and knowledges flourish within academic environments. Higher education spaces are, as they advocate, important places for Indigenous intellectual enquiry and critique. While we acknowledge that universities still have a long way to go before they are culturally safe places for Indigenous students, we work here from the premise that much has been gained from Indigenous peoples' engagement in higher education, and that there is much more to be achieved, especially at the site of graduate research. In this project, we situate the experiences of the Indigenous doctoral students we engage with as operating at this cultural interface. We acknowledge their work of resistance, rejection, and subversiveness, but also recognise the pragmatism and accommodation with which they operate to bring Indigenous knowledges, sensibilities, practices, and principles to the fore.

There is much debate about how work at the cultural interface is conducted. How do Indigenous scholars (along with their allies) continue the work of critiquing Western knowledge systems and how do Indigenous scholars maintain the relational principles and ethical dimensions of Indigenous research (E. McKinley & Smith, 2019)? Indigenous and non-Indigenous scholars have written about the possibilities of decolonisation theory and practice, which emphasise the need to deconstruct colonial systems of knowing, and bring into question the knowledge/power dynamic embedded in colonial scholarship on or about Indigenous peoples (Barman & Battiste, 1995; Battiste, 1998; McLaughlin & Whatman, 2011; Moodie, 2018; Tuhiwai Smith, 2012). These discussions also involve Indigenous scholars forging their own methods that relate and respond to their respective contexts—to reclaim Indigenous ways of being, doing, and knowing (Kovach, 2015; Tuhiwai Smith, 2012). In time, this critical scholarship aims to facilitate the resistance against dominant approaches to research by bringing Indigenous epistemologies and ontologies into the ivory towers, and enabling research to be the tool of transformation (Deloria & Wildcat, 2001; Kuokkanen, 2007; Pidgeon, 2008; Pidgeon et al., 2014). There is also critique of using decolonisation theory as a metaphor for change, which does not necessarily result in the action of decolonisation. Unangax̂ Professor Eve Tuck and social and cultural studies scholar K. Wayne Yang question the feasibility of decolonisation efforts that fail to demand the repatriation of land as central to its cause to undo the violent conditions of colonialism (Tuck & Yang, 2012). They argue that discussions of decolonisation as a metaphor can work to superficialise action and assist in the continuation of settler-colonial futures that recentre whiteness. In this research, we acknowledge these points of contention in our attempt to

understand where and how Indigenous PhD scholars are positioned amidst the rich scholarship generated by Indigenous thinkers across the academy.

There is also growing literature on what the re-Indigenisation, or Indigenisation, of the academy entails (Debassige & Brunette-Debassige, 2018; Gaudry & Corntassel, 2014; Gaudry & Lorenz, 2018; Kovach, 2019; Kuokkanen, 2007; Tuhiwai Smith, 2012). We understand it here to be integrally linked to practices that aim to destabilise unequal power relations within academic systems and to reinvigorate and reclaim Indigenous theoretical and methodological approaches (Battiste, 2016; Gaudry & Lorenz, 2018; Kuokkanen, 2007). It is a practice that sits alongside what Cherokee Nation and Professor of Indigenous studies, Jeff Corntassel, articulates as Indigenous resurgence, in which Indigenous cultures, knowledge, and governance structures are rebuilt and strengthened (Corntassel, 2012). Within academic institutions, resurgence entails the recognition that complex Indigenous knowledges reside in communities who are also best placed to govern the access and transmission of that knowledge (Gaudry & Lorenz, 2018). It involves reinvigorating Indigenous intellectual institutions and building the capacity of Indigenous researchers and their communities to determine their own priorities (Corntassel, 2012; Gaudry & Lorenz, 2018).

Part of this process is what Corntassel et al. calls "re-storying" or what Archibald defines as "Indigenous storywork" (J. Archibald, 2008; Corntassel et al., 2009; see also Munro-Harrison, 2024). Based on the shared Indigenous tradition of oral knowledge sharing, storying, yarning, re-storying, and storywork are important relational approaches to gathering knowledge that are congruent with the Indigenous paradigm (Bessarab & Ng'andu, 2010; Kovach, 2019, p. 124). Re-storying, as Corntassel et al. define it, encompasses the ethics of resistance, resurgence, revival, and sovereignty (Alfred & Corntassel, 2005; Corntassel et al., 2009). It is a form of truth-telling based on principles that involve connecting with country, culture, and community (Corntassel et al., 2009; Corntassel & Bryce, 2012). Jo-ann Archibald (Q'um Q'um Xiiem), a Professor and Chancellor from the Sto:lo First Nation in British Columbia, conceptualises Indigenous storywork as a way of reclaiming Indigenous experiences that have been scripted for too long by others. Centring Indigenous experiences and worldviews, it values and validates Indigenous knowledge systems and processes through an "interrelational understanding of story, people, and place" (J. Archibald, 2008; J. Q. Q. X. Archibald et al., 2022b, p. 8). Leveraging Kirkness and Barnhardt's use of the four R's (respect, relevance, reciprocity, and responsibility) developed to reorient the place of Indigenous people within the academy (Kirkness & Barnhardt, 1991), Indigenous storywork is a theoretical, methodological, and pedagogical framework that comprises seven principles including respect, responsibility, reverence, reciprocity, holism, interrelatedness, and synergy as a guide to Indigenous research (J. Archibald, 2008; J. Q. Q. X. Archibald et al., 2022b). As Archibald and others note, "storywork illuminates pathways to liberation, harmonizing story research agendas with Indigenous resurgence movements globally" (J. Q. Q. X. Archibald et al., 2022b, p. 12).

In our examination of Indigenous PhD scholars' experience of navigating the cultural interface within the Western academy, re-storying or Indigenous storywork provides the scaffolding to articulate how these scholars are enacting freedom and championing resurgence through their research work at the cultural interface. It provides the framing to show how they are conducting research based on Indigenous ways of being, doing, and knowing that is relevant to community, incorporates reciprocity in the research process, and

respects the relationship between researcher and community (Nakata, 2002; Pidgeon & Riley, 2021).

5.2 Methods

This comparative research project was Indigenous-led and used qualitative interviews and a yarning circle that privileged Indigenous world-views and lived experience (Bessarab & Ng'andu, 2010; Burgess et al., 2021; Creswell, 2013; Denzin & Lincoln, 2008; Rigney, 1999). Centring the voices of Indigenous peoples in Australia, Turtle Island Canada, and Aotearoa New Zealand, we captured the experience of Indigenous PhD scholars, as well as the nature of Indigenous-led health related research. Comparative projects can run the risk of homogenising Indigenous experiences, when in fact there are marked differences relating to colonising processes, time, and impact across and within nations (L. Archibald, 2006; Bodkin-Andrews & Carlson, 2016). Acknowledging here the different histories of colonisation across Australia, Turtle Island Canada, and Aotearoa New Zealand, we also recognise the value in examining the similarities and learning from the commonalities. Shifting the focus from a mutual colonial history to a shared, but diverse, Indigenous relational position, our methodological approach allowed for points of interconnectedness, commonality, and difference to emerge, rather than simply "contrasting and comparing" (Goldberg, 2009; Povey et al., 2024, p. 2). Indigenous data governance principles were adhered to by ensuring that the data collected reflects Indigenous people "priorities, values, cultures, worldviews, and diversity" (Maiam nayri Wingara Indigenous Data Sovereignty Collective & Australian Indigenous Governance Institute, 2018).

In-person interviews were completed with 12 Indigenous PhD scholars who conducted health-related research and were recruited through email invitation with support from academic colleagues at international institutions. The PhD scholars were either approached through a group email because of their association with a particular doctoral group or were emailed directly by one of the research team or their colleagues. Snowballing techniques were also utilised where one participant suggested another participant who might be interested in engaging in the project. Four Indigenous PhD scholars were interviewed from Australia, four from Turtle Island Canada, and four from Aotearoa New Zealand. Interviews went for approximately an hour and were all undertaken online through Zoom or Microsoft Teams. Interviews were conducted by one of the Indigenous members of the research team to provide a point of relationality and a safe space for the participant. Although in-person interviews can sometimes improve a sense of connection, a rapport came easily between the interviewers and the participants despite being online. This was possibly due to the shared experiences of being Indigenous as well as doing a PhD. Questions were semi-structured and focused on the participant's journey into a PhD, their research topic and methodological approach, and their experience of being an Indigenous researcher in a Western academic institution. Participants were also asked to reflect on the nuances of navigating the institutional environment, the demands for their expertise as an Indigenous person in the university, the support systems they accessed, their supervisory experience, and the impact that increasing numbers of Indigenous PhD scholars are having on the academy (see Appendix A: Interview questions).

All participants were asked if they'd like to participate in a yarning circle (Atkinson et al., 2021; Bessarab & Ng'andu, 2010). Yarning involves "an Indigenous style of conversation

and storytelling as a method for gathering information" (Bessarab & Ng'andu, 2010, p. 37). With multiple participants, "collaborative yarning" or a yarning circle offers a way to share research findings, build relationships, and further explore experiences, ideas, and concepts in a relational way that can deepen understandings or develop new ideas (Bessarab & Ng'andu, 2010, pp. 40–41). Of the 12 PhD scholars who were interviewed, three attended the yarning circle. This discussion was held online via Zoom. The yarning circle, which took approximately two hours, began with the researchers reporting back initial findings of their study and gave participants the opportunity to reflect or comment on these. Semi-structured questions were used to guide group discussions, but the facilitators also allowed for the conversation to flow in its natural direction. Questions related to and extended on those asked in the interviews but were aimed at expanding conversations about how Indigenous scholars navigate their PhD journey, the supports they have access to, how they have pushed at the boundaries of methodological approaches to research and supervision, and the value (or not) of comparative research (see Appendix B: Yarning circle questions).

In recognition of principles of Indigenous data sovereignty, the recordings of the interviews were transcribed professionally and sent back to the participants for their records and verification (Tahu Kukutai & John Taylor, 2016; Walter et al., 2021). The interviews were de-identified and, using inductive analysis, were manually coded thematically by all researchers to enable emergent themes to develop through multiple readings (Bingham & Witkowsky, 2022). The first analysis and coding were undertaken by Mazel. Researchers Eastman and Munro-Harrison then, working together, conducted the second analysis. Based on Mazel's initial work, the themes were changed and refined through a process of to-and-fro engagement and overall reflections were also recorded. Andrews conducted the final analysis, further distilling the themes and drawing overarching conclusions that considered the first and second rounds of analysis. The research team then came together to discuss the themes that emerged collectively to negotiate the final outcome and decide a framework for reporting. This method aligns with an Indigenous approach to the analysis that involves an iterative process of individual and collective cycle coding and allows for a flexibility in approach (Saldãna, 2021; Smith et al., 2016). Ethics approval was granted by the Human Research Ethics Committee of The University of Melbourne (Ethics ID Number: 29120). Appropriate approvals were also sought from international universities that supported the recruitment of their PhD scholars.

5.3 Limitations

As a pilot project developed to collect preliminary data on the experiences of Indigenous PhD scholars internationally, the number of interviews was limited to 12 across the three sites. While participants came from seven institutions, further research would benefit from an increased number of participants from a wider variety of institutions. Only one participant identified as male, and four of the 12 participants were within their first year of their PhD study. It would be beneficial to have more participants to ensure a better representation of male participants and to have the perspectives of more Indigenous scholars who are further along in their candidature.

The research team were based in Australia and further research would benefit from working collaboratively with scholars from each of the three countries to ensure that locally identified

needs are addressed and that the research brings a deeply informed understanding of the local contexts within which Indigenous PhD scholars are operating.

The focus of our inquiry was on Indigenous PhD scholars in health disciplines (broadly conceived) as this is the field within which the authors are all working. As staff of the Melbourne Poche Centre for Indigenous Health, it was important for us to undertake research that provides insight into the work we do at the Centre to support Indigenous scholars in health, but we acknowledge that studies working across all disciplines would be useful.

6. Findings

6.1 Participants

Twelve Indigenous PhD scholars from Australia, Turtle Island Canada, and Aotearoa New Zealand were interviewed as part of this project. Ten participants identified as female, one as male, and one used she/her/they/them pronouns.[5] Of those 12, 10 were the first in their family to do a PhD. Six participants completed a Masters degree before doing their PhD, three started a Masters degree but transferred to a PhD, two were undertaking a concurrent Masters and PhD program, and one started their PhD following their Bachelors degree. All participants studied full-time at some point, while three transferred to part-time during certain periods of their candidature. All worked either full-time or part-time alongside doing their PhD and 75% of participants (9) had caring responsibilities. All were conducting a project relating to Indigenous peoples, and all received scholarship funding either from philanthropic sources, government, or their communities, Iwis, or Bands. All participants had an Indigenous supervisor or an Indigenous person as part of their PhD advisory committee or in a mentoring relationship. Only one participant was doing their PhD as part of a larger research project. Participants were at varying stages of their candidature. Four (participants 2NZ, 3NZ, 4NZ, and 5AUS) were in the first year of their PhD, two (participants 6AUS and 11CA) were just beyond confirmation, four (participants 7AUS, 9CA, 10CA, and 12CA) were a significant way through their projects, and two (participants 1NZ and 8AUS) had recently submitted but had not been conferred. It must be noted here that PhD programs differ across and within nations. Some have coursework requirements as part of the program, some are done via publication, and some involve a viva or defence. In Australia and Aotearoa New Zealand, a doctoral program is between 3–4 years, while in Turtle Island Canada it is typically 5–6 years. In practice, Indigenous PhD scholars often take longer to complete than the standard program length, due to complexities we discuss in detail below, and often extend their candidature without scholarship support (Grant-Smith et al., 2020).

6.2 Drivers for doing a PhD

Drivers for doing a PhD were varied and involved encouragement from colleagues, a growing interest in academia, and the desire to contribute to change that improves the lives of Indigenous communities. Most of the participants, however, never thought they would do a higher degree by research—it just wasn't on their radar. Only one person said that they've "always thought [they] would do a PhD" (Participant 2NZ). Other participants, instead, reported "falling into" it (Participant 7AUS), either through work, or as a natural extension of their academic journey once they'd started university. Seven participants were working in Indigenous health or community-related roles and became interested in research either because they were involved in a project through work and enjoyed it, or because they wanted to initiate more structural change in healthcare, academia, policy, or government:

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[5] While it would be beneficial to have more male participants, it is well documented that Indigenous men are underrepresented in higher education and in some undergraduate health degrees (Moore et al., 2023; Simpson, 2020).

I was working out in the field for about 17 years before deciding to embark on this journey … [I could] see how badly our mob are treated [and] … I always thought there's got to be another way besides basically holding their hands while they are drowning. (Participant 6AUS)

I spent 22 years working with Indigenous communities in healthcare … It was hard work. It really was taxing … toxic and harmful … There was a lot of racism and structural barriers that made it difficult for Indigenous people to access necessary healthcare to be well in the community, to benefit from the systems that were in place … Someone suggested I should try going deeper rather than farther … which I took to mean going back to school and getting more skills and knowledge … in the pursuit of like health equity, reducing the health disparity, improving outcomes, and improving Indigenous patient experiences. (Participant 10CA)

Five participants were interested to do their PhD as a result of being in the higher education space, completing their Masters degree, and/or being employed in a research or teaching role. They were motivated because they loved doing research or teaching and wanted to take their academic career further, and/or they were driven by a desire to bring Indigenous perspectives and knowledges into academic spaces and contribute to changing the environment so that others coming after would feel more included:

I guess the reason for me wanting to step forward into a PhD is because I want our future to see themselves in the literature. (Participant 4NZ)

I think that's the reason … I mean that's so important for my children, my nieces, my nephews, those coming [up], and it's such a responsibility to them … it's like creating space … How, while I'm here, can I affect the space to make sure that when they come here, they're not going to experience anything negative in any which way? (Participant 11CA)

Many participants were personally encouraged to do a PhD by people they worked with or knew. Sometimes this was the push they needed to enrol:

[W]e just started having conversations and, in the conversations, she recommended or asked if I would ever be interested in a PhD program, because it wasn't really something I wanted to do. (Participant 11CA)

Family and community provided significant incentives for people undertaking a PhD. Some participants were motivated by the experiences of their family, feeling as if they were willing them on, or wanting to undertake research that would improve their lives:

I've had two people close to me pass away as a result of experiencing homelessness [and substance abuse] … That's a big reason why I chose this … and my work will be dedicated to both of them … It is a way to honour them. (Participant 9CA)

[S]adly my mum passed away and she was an academic with two Honorary Doctorates and an Australian Medal. And I was like, oh I can hear her in my head going pull your finger out, like get this done. So, then I started to embark on this journey as well. (Participant 6AUS)

And we had a big discussion as a family about our mum who was probably around about late 50s, early 60s, then going back to school as an adult learner and the

kōrero (discussion) was well, somebody better go and get an education or get a higher education as well. Because it would look really odd that our mum's got a degree of some sort and none of us do. So, I drew the short straw, or I grabbed onto the opportunity … and for us as Māori whānau (family) it's important to model what we want our next generation to achieve … to explore learning, but also to share that learning with others who may not know a lot about Māori in general or Māori approaches or frameworks that work well for us. (Participant 3NZ)

All participants mentioned wanting to improve Indigenous experiences of being in the world. As mentioned, they were motivated to create systemic change, both in the health care system as well as in academia and society more broadly. Cognisant of the disparities in the welfare of Indigenous versus non-Indigenous people because of the effects of colonisation, they were determined to do what they could to turn things around:

[I want to] try and address the equity issues which is difficult when you're in a whole system, [a] whole society that think that Māori are lesser. I've pretty much accepted that that's not going to change in my lifetime so what can I do while I am alive? (Participant 2NZ)

[W]e're Métis, so we had our land stolen from us. How do you turn that around from a generational perspective and I think yeah, investing in myself and making that choice … and I refuse to let the Academy tell me there's no value in what I'm doing. (Participant 12CA)

Participants were aware of the limitations or nuances of working within a Western academic system to pursue change for Indigenous people, but saw it as an important pursuit and an effective avenue:

So, it's very exciting for me to focus on the hopeful and the helpful rather than the doom and the gloom. Because that was a big paradigm shift for me … I don't want to contribute to all the deficits and all the negative narratives about Indigenous people in healthcare. I want to build on the path forward through Indigenous self-determination, and how we're able to apply our own knowledge and traditional medicines. That this works, and that this works for us. It's possible to do it even within the constraint of a colonial institution. (Participant 10CA)

[It's about] getting the world to see us for the strengths that we have rather than the burden that they've continually placed on us collectively … [and from] a community reciprocity standpoint, we need more mob in these kind of senior educated positions from a Western standpoint, because it makes a difference for our ability to feedback what our community needs are, and come to that level of research and policy accountability. (Participant 7AUS)

6.3   Research topics and methods

As mentioned, all participants were undertaking research on a topic relating to Indigenous peoples, and most had a public health focus. Projects included how Indigenous people derive health and wellbeing from environmental relationships, through the revitalisation of culture and connection; reclaiming child and family services by centring Indigenous knowledges and perspectives; examining the effectiveness of treaty-based frameworks in

the operation of health services; measuring homelessness using tools relevant to Indigenous people; improving Indigenous men's healing and recovery from complex trauma; improving the education and practice of psychologists to treat Indigenous people; the effectiveness of traditional healing space for the treatment of addiction and mental health; the policing of Indigenous bodies; how to achieve health equity through a genealogy approach from an Indigenous worldview; the impact of colonial/settler land relations on Indigenous people; and how health care services integrate spiritual care.

All participants were in some way applying an Indigenous lens with many referencing an approach that integrates "responsibility, reciprocity, and relationship" into their research practice (Participant 11CA). They centred Indigenous people's perspectives, and employed Indigenous practices including yarning, yarning/discussion/sharing circles, wānanga (group discussions to deepen knowledge), Kaupapa Māori (a model of research that is done by, with, and for Māori, under Māori protocols, customs, and values), pūrākau (storytelling), and visiting as a research practice. One participant incorporated Indigenous ceremonies, including a fasting ceremony and a sweat lodge. Participants often integrated these with Western methods or methodologies, including grounded theory, autoethnography, and semi-structured interviews, but were always cognisant of their own positionality and standpoint as an Indigenous person. As one participant reflected, "being an Indigenous researcher … shapes and informs how I do things" (Participant 12CA).

Some participants noted the frustration of working within the confines and expectations of a Western PhD program and the siloed approach to disciplinary work in academic settings. As one participant reflected:

> I had to find ways of learning and understanding outside of the university structure because … my way of doing things was not making sense, right? ... I had to figure out and build a community that didn't conform to the structures of the university and the silos … [there was also] this confusion around sort of having a relational accountability in your work … So, I think that for me … [it's] that navigating, not just the university but like disciplinary disjunctor I think. (Participant 12CA)

Participants noted having to push at the boundaries of what a PhD entailed and how it was conducted and often sought to counter the deficit narratives and lack of consultation that have dominated research on or about Indigenous people:

> I'm not going to deficit frame or analyse or problematise the people's kōrero (narratives) that have been shared with me because that's not the point of this … I very much pushed back at those traditional methods of analysis … [I used] a lot of art and imagery in my thesis … so I think it challenges the ideas we have of what a thesis can look like and what a thesis in an Indigenous space can look like. (Participant 1NZ)

> There was no call [from the university] to have external Indigenous community involved. There was no part of the process that said you should negotiate the research goals so that they're meaningful to the people who are researching … [There wasn't] any space for anyone to follow what I call the moral and ethical guidelines around doing what I believe to be respectful Indigenous research … so that was a choice [I made]. (Participant 10CA)

Whilst these processes took considerable time and effort, they were seen as central to conducting a project that was culturally appropriate, meaningful, and impactful.

For many participants who were undertaking research that related to their own family, community, or workplace setting, these protocols were essential. Some engaged with those communities to guide the design of their project and continued to consult them for feedback on research processes and findings along the way. One participant formalised this process through a research relationship agreement. Many participants also relied on their relationships with community and colleagues for access to participants: "[t]he way that I'll kind of recruit people is through networks that I have already established" (Participant 5AUS). As another participant said:

> [I]t's been lots and lots of cups of teas and building of relationships over my lifetime that allows me to access different knowledge-holders in a whole range of different spaces ... this [research] is just making it a formalised version of the cup of tea yarns, I guess. (Participant 4NZ)

Cognisant of the relative lack of Indigenous scholarship versus non-Indigenous scholarship in their fields over time, participants sought to privilege Indigenous views by seeking out and citing Indigenous authors: "I make sure that I prioritise Indigenous authors, just simple things like I make sure I talk about that first rather than putting the white man up first" (Participant 2NZ).

6.4   Support systems

6.4.1   Supervision and advisory committees

All participants had an Indigenous person as part of their supervisory team, their advisory committee, or through a mentor relationship. Some participants had an all-Indigenous supervisory team, some had a mix of Indigenous and non-Indigenous academics, one person had only non-Indigenous supervisors as there were no Indigenous faculty in their department, and one had to engage an Indigenous supervisor from another university. For some, having Indigenous supervisors was a prerequisite for them doing their PhD: "Māori. Purposely all Māori" (Participant 4NZ), but this of course relies on there being Indigenous faculty to access.

Participants reported that having an Indigenous supervisor was important for bringing an understanding about the purpose and content of their project, someone who was cognisant of Indigenous research practices and protocols, but could also bring their lived experience and Indigenous perspective:

> [I]t's really important for students to make sure that they have a really good supervisor that understands, not only the sector that you're trying to explore, but also the Indigenous connection that they come with. (Participant 3NZ)

> So, I was really, really lucky in that sense, for two of my supervisors to be knowledgeable clinically and academically, and be mob, so they had the cultural insight. (Participant 7AUS)

The demand on Indigenous academics to supervise was noted by many, especially if they were one of only a few in the relevant university department:

> As an Indigenous academic, do you turn a student away because you don't have the time if they're Indigenous or do you just delay a little bit because you're the best option to be their supervisor? (Participant 8AUS)

Most participants had very positive supervisory experiences, feeling as if they were supported academically and pastorally:

> In terms of my supervisory committee, they're great; they all have that understanding of why I'm doing what I'm doing and have been nothing but supportive. (Participant 9CA)

> The two I've got have just been absolutely phenomenal at this point. (Participant 3NZ)

> I only had one supervisor, and that was the Indigenous supervisor … It has been an incredible experience. She is a relational person ... [and] is very much responsible for supporting me through this process to be successful. (Participant 10CA)

One participant noted their frustration at the lack of time their supervisors had, recognising that they were in high demand, but noting the impact on their project:

> I think there was definitely times when I needed a bit more [support] yeah … So I would have been finished six months earlier if it weren't for them [being so busy]. (Participant 8AUS)

For those who had non-Indigenous supervisors, participants reported mostly positive experiences but also noted the extra labour that they had to do to upskill them on Indigenous issues or Indigenous methodologies:

> [Y]ou know we spent the hour or the 30 minutes of our meeting talking about Aboriginal and Torres Strait Islander [stuff]. And it was just for her benefit to process the information … I had to be the one to always be delivering the learnings. (Participant 8AUS)

> [C]urrently they don't have a lot of supportive knowledge keepers or people that can help to develop that conversation more with me unfortunately because there's no Indigenous faculty and that creates an issue … There was like a lot of confusion … around my work that sort of translated into a perspective of me as a failed scholar… They were sort of like "This work is nascent, like I don't really get it." Now they're being like "Do you want to go on grants with me?" … So, I had to work through that … There's a lot of work of having to educate up constantly and I think that piece is hard. (Participant 12CA)

In most cases supervisory and committee roles were formalised through the university structure and remunerated appropriately, but across the participant group, there were numerous instances in which scholars accessed support outside of formal university channels:

> I had to follow a path of finding mentors outside of the academic structures … like an apprenticeship model … [T]here was a lot of network building and knowledge

exchange that was happening outside of the academy. So, a lot of the informal spaces I was spending time in ... (Participant 12CA)

Some formed family or community cultural, reference, advisory, or governance groups that helped guide their project, provided an avenue to "just bounce ideas off of" (Participant 5AUS), and ensure they were undertaking their project in culturally appropriate ways: "their main [role] is to look after me spiritually, and emotionally but also keep me grounded and make sure that I am sticking true to our Māori and Indigenous values" (Participant 2NZ).

While those support systems were mostly voluntary, one participant managed to negotiate a paid honorarium for their Indigenous governance group, but this was unusual:

> Very early on in the piece, I put together an Aboriginal governance group led by an Aboriginal elder, a person with lived experience, and an Aboriginal [clinician] who's separate from my team. So, it was really amazing to have oversight governance support … to have an Elder I could call and connect with when needed. So that meant a lot in terms of just being able to have some additional cultural support through the process. (Participant 7AUS)

For others, the system didn't quite work out for them in the same way, with community members able to be engaged, but not with the same authority:

> [M]y community member, is not appointed [at the university] … and I didn't want to make him go through those hoops … so because [of that] he's not able to have an overall say in my pass or fail which I don't agree with and struggle with, because in my opinion, as my community partner representative, he's the most important person on my committee and should be the one making the overall decisions. (Participant 9CA)

Some Indigenous PhD scholars also struggled to find the right supervisors who had the knowledge and skills in their area of interest and sometimes had to weigh up whether to have an Indigenous scholar outside of their field or a non-Indigenous scholar with more expertise in their field of study.

6.4.2   Indigenous support systems

Undertaking a PhD can be isolating and also overwhelming at times. Participants found support through colleagues, their relationships with other PhD scholars, as well as researchers in their faculty with whom they worked with on other projects. While participants noted the support available through their university (including introductory courses, writing workshops, and online groups), it was the Indigenous spaces that had the most impact on them:

> There is a limited amount I get [from non-Indigenous support groups] because we don't understand each other well, whereas if I was in a group of people who were doing Kaupapa Māori [a model of research that is done by, with, and for Māori, under Māori protocols, customs, and values] we would just be off, we would be on fire … Just being around likeminded people, I don't have to explain things. I can just be me and just work in the way that I think is right and continue. It's just like, yeah, I don't have to argue or put forward things or try to do something different. (Participant 2NZ)

Those who were part of an Indigenous-specific group reported feeling better understood and that they could share resources and talk about the ups and downs and ins and outs of their projects without being judged: "the ones that get it the most are the Aboriginal and Torres Strait Islander ones" (Participant 6AUS).

These groups took different forms. Some were informal networks started by the students themselves that grew through connections and word of mouth and involved catchups to "yarn" about the PhD, talk about milestone expectations, and see how everyone was going: "making sure everyone's got connections and feeling supported" (Participant 7AUS). For the PhD scholars, it gave them a sense of being part of a community—that "we're all in this together" (Participant 5AUS). Other groups were more formalised including "research circles" (Participant 10CA) and an "Indig Lab" (Participant 12CA) run within the university or clinical settings or facilitated by an Indigenous support unit. Through structured catchups, seminars, and writing workshops, PhD scholars had access to Elders, were able to meet other Indigenous PhD scholars, and had a place to go to where they felt comfortable and at home:

> I think it's nice to have that green space and to have a space that Aboriginal and Torres Strait Islander students can go to and have a yarn … Like they greeted you like you were long lost friends … it is so welcoming and so inviting. (Participant 5AUS)

These spaces, and the connections made between cohorts provided the cultural and spiritual support participants needed, encouraged them to keep going, even when things became tough, and inspired them to be confident to go about their projects in their own ways:

> [W]e have a program here that's run through our library and learning Te Fale Pouāwhina [The House of the Pillar of Help] which literally means the helping house … They ran a writing wānanga [group discussion to deepen knowledge], so booked out a giant house … like an hour-and-a-half drive so you can't work and be distracted … I say many times that I would not have a Masters, I would not be published, I would not have a PhD without them and those spaces. You can go have a nap, you can go for a walk, you can walk down to the beach like all of the things you actually need to be well, and to be connected to yourself and your culture … while doing a very hard PhD in a system that does not like you. So … those are my kind of spaces where I would get that cultural and spiritual support, I suppose. (Participant 1NZ)

> So, I went, and I sat in [on a PhD presentation buy another Indigenous scholar who was nearing completion] and that was also something for me that showed that it is achievable and like you know, you can do your PhD in whatever form that makes sense for you. It doesn't have to be the way that everybody else does it. (Participant 5AUS)

In Aotearoa New Zealand, the Te Kupenga O MAI, provides another level of support for Māori PhD scholars. As a national program, with sites at universities across the country, its aim is to provide an Indigenous-led support and mentoring program through facilitated courses, seminars, conferences, retreats, and workshops (Pihama et al., 2018b, 2019). These initiatives were well regarded by the Māori participants who gained much from the program, both academically and personally:

[T]o me that has been a gamechanger to have not just myself but nine other reanga [generations] of my people on my journey, being able to come together … as a collective as part of the MAI Program [Māori and Indigenous Scholar Network and program] (Participant 4NZ)

I guess for me, my other cultural support would have been my cohort. I was very lucky to have, actually a lot, through the MAI Network [Māori and Indigenous Scholar Network and program]. (Participant 1NZ)

A couple of participants struggled to find adequate support in this way, either because they were located off campus, or there weren't the groups available: "I haven't really attended or been a part of it [Indigenous Unit], just because I live so far away it's just not realistic for me to go into the office" (Participant 9CA).

Participants also sought support elsewhere, through family and community:

I have my own family. So that is my immediate support network. This has been a whole family endeavour … we've kind of created an extended network of social supports … I also do ceremony and have had created like a ceremonial family through people here in this city ... (Participant 10CA)

Cultural and spiritual support were reported by participants as being important to their PhD journey. They accessed this through their peers and groups, but also by engaging with nature and the land:

[A] lot for me was listening to the environment … you know receiving the tohu (sign) or the messages or the signs from our atua (deities), our deities, and our environment. My PhD used one of our atua wahine (woman deities), Hine-nui-te-pō (female deity guarding the place of departed spirits) who's often talked about as the goddess of death but she's the goddess of transition, of te pō (place of departed spirits) which is the next realm. One of her messengers is a pīwaiwaka (rhipidura fuliginosa—a small NZ bird which has a distinctive tail similar to a fan) our fantail. So, a lot of those would come and visit me and … deliver messages. For me that and the moana (sea) and the ocean were my connections to culture, where I would go when I was like okay, there's something that I can't see, like I need to cleanse if you will. (Participant 1NZ)

[T]he healing modalities that I have of my people are very important. Like just being able to sit in the woods while I'm hunting, or sitting on the ice as I'm ice fishing, you know what I mean? Those things are really important and bringing my family and children with me in this space is very important, too. So, spirit, environment, those things are just as important as physical or human contact … the beings that I respect and acknowledge in like prayer, tobacco … being out on the land, planting, growing, those things are what I have to recognise. We have a, let's call it the Gano:nyok, in our culture and that's something that we teach our children to do, which is to be thankful, to give thanks. (Participant 11CA)

6.4.3   Financial support

Access to financial support for Indigenous PhD scholars differs across Australia, Turtle Island Canada, and Aotearoa New Zealand. In Australia, domestic students are most often eligible for a competitive Research Training Program (RTP) scholarship, which includes tuition fee offsets and a living stipend. Institutional top-up scholarships to increase their living allowance are sometimes available, but access to them varies from institution to institution. Universities are also given financial incentives to graduate Indigenous PhD scholars (Australian Government Department of Education, 2025). In Aotearoa New Zealand, PhD scholars pay tuition fees but have access to student loans and competitive scholarships. Māori students can, in some circumstances, access funds from their Iwi. In Turtle Island Canada, students also pay for the cost of their degree, but again, can apply for scholarships to cover their tuition as well as contribute to their living expenses. Many Indigenous PhD scholars from Turtle Island Canada also access grants or funds from their Bands.

All those interviewed received a scholarship of some sort. Some covered their whole degree, while others had to piece together multiple scholarships to get ongoing funding:

> I managed to get some funding from Ngā Pae o te Māramatanga the Centre for Māori Research Excellence which covered me another year of fees and stipend. I also received a lot of other scholarships from Māori Education Trust, our Ministry of Health, my Iwi (tribe), and New Horizons for Women Trust. I undertook a Fulbright as well during that time. (Participant 1NZ)

Despite their scholarships, almost all said that they still struggled to live on the amount they received. This meant that each of them had to work either part-time or full-time to support themselves financially. For some, and predominantly those from Turtle Island Canada, the scholarships only lasted for a short period of time and did not cover their whole candidature, leaving scholars without resources, particularly at the crucial time of writing up. Some scholars also reported having to pause their candidature to ensure that their time didn't lapse, which meant they didn't receive the stipend for that period:

> I [received] the top paying scholarship, doctoral scholarship in Canada…However, that only lasts three years, so it doesn't even cover a full doctoral program … [and it] is not enough to live in the city. (Participant 9CA)

> So, it's like when you need it the most, like when you need to be supported at home to write and only write, that's when the funding seems to disappear … I'm on a leave of absence [from the PhD] right now, so I have to work, work, work, squirrel that money away and then take two weeks to write. Like it's this constant, yeah, it's just navigating right. (Participant 12CA)

Funding for research activities differed considerably across nations and institutions. Some reported being properly funded for their fieldwork, while others had to fund activities themselves, or access funding from other sources:

> [University funding alone is] not enough if you are going to do like data collection, primary data collection, paying honoraria, for example, which we always want to do for our community members … [and] if we don't have those funds, we really can't do good work. (Participant 9CA)

I've actually been given quite a big stipend scholarship to support me with doing my actual wānanga (group discussions to deepen knowledge), and kaupapa (work), driving all of that this year so it's been really good. (Participant 4NZ)

6.5   Operating at the interface

As Indigenous people undertaking research in Western academic institutions, participants were cognisant of the different experiences they brought to the academy, which often left them feeling inadequate. Participants felt a lack of social capital, felt out of place in university settings, experienced personal and institutional racism, and were called on to be the Indigenous voice in numerous settings, mostly without being compensated for their time. Indigenous peoples are also more likely than their non-Indigenous counterparts to have multiple family and community responsibilities. These are burdens placed on Indigenous students that they must tackle alongside their normal course of study (Adams, 2023; Guenzler, 2024; Travers, 2025). They were, however, determined to undertake their PhD despite this and to find a place within the academy to conduct research in a way that was right for them, and that reflected their cultural values and priorities.

6.5.1   Lack of social capital and imposter syndrome

A lack of social capital relevant to higher education was evident in the experiences of many of the people we interviewed, with participants finding university systems and processes challenging and "unintuitive" (Participant 1NZ). While some of the participants had family members who went to university and even had a PhD, others were the first in their family and were undertaking studies without family or community higher education capital to draw on for support:

> If I want some cultural advice, I'll go to my [family], but when it comes to this, it's like there's no way [they have] any comprehension … [They] know the topic, [they're] like proud and appreciative that I'm doing the work but really has no concept of what goes into it. (Participant 9CA)

Many reported that they fumbled their way through admissions processes and milestone moments such as confirmation, not knowing what to submit when, where, and how:

> Like I never knew about how you get into a PhD program until I did it. I didn't know the nuance of it and what's important, what's not, and what are they judging us on, and how are they looking at us, and why are we being kept out of the space in the first place, right. (Participant 11CA)

> [C]oming from a family of 10, none of us went to university … it wasn't a common conversation in our household … So, I think one of the things that I've been challenged with, or I haven't had a great experience with, has been to learn the new tools in the university … I think it's because I don't understand the process properly which means actually someone hasn't told me what the process is, in my view. (Participant 3NZ)

A number of participants who struggled through these processes, made a point of ensuring that others coming after them wouldn't have the same experience:

I'm now supporting others that are just starting, saying, "Hey don't forget you have got to do this" and "Don't forget there is all of this stuff over here", which wasn't given to me so much … I tend to go out of my way, especially for other Indigenous students coming through, making sure they feel welcome and guiding them and helping them out a bit because it can be really daunting … it's a huge Western system that you are fighting up against. (Participant 6AUS)

Many said that they felt out of place, and how isolating it was being the only Indigenous person in their PhD program:

You get that imposter thing until you've formally got the certificate, eh? That's a whole 'nother thing about colonisation, racism, and this institution that does not like us. (Participant 1NZ)

I don't know of another identified Indigenous student in the … department either at this point. (Participant 11CA)

6.5.2　Institutional racism

Some participants noted how racist the university remains, citing personal experiences of racist behaviour as well as systemic injustices. Interviewees reported that Indigenous Studies programs were being pulled, that funding was shifting away from Indigenous-related projects, that their methodologies weren't being respected, and that there were very few Indigenous identifying faculty:

[S]o, I try and stay a little bit far back as a self-protection mechanism … the discrimination and racism is so … it's really like soft racism here. So, people will be outwardly nice, but they will make you feel uncomfortable, and you will constantly have to explain yourself … your methods … your survey … your work can be delegitimised or seen outside the scholarly canon or the tradition because you're not reproducing something. (Participant 12CA)

I will always remember this one time … I'm walking [with] a whole group of us from the [Indigenous] unit, all different shades, right, and I'm walking along and I'm looking at other people, I'm like, "Why are they giving us those strange looks?" It was the first time I realised that they were being judgy and there was the racism part of it. I thought, hang on, I'd never seen this before, and I was talking to one of my friends and she said, "Yeah, that's just normal." I'm like, "Well no, it shouldn't be, it shouldn't be that way" … [T]here are a lot of very privileged people that go to university who have never even met an Aboriginal person before, and I found that quite interesting as well … You get the questions like, "Oh you don't look Aboriginal" or, you know, about being fair skinned. They say, "Oh yeah, but it didn't really impact you." And I went, "Yeah, it did!" (Participant 6AUS)

Despite these experiences, there was a general understanding that many higher education institutions have changed over time, and many PhD scholars acknowledged and were grateful for the work of those Indigenous scholars and academics that had come before them to improve their experience, protect, and support them along their journey. For some, even in the time they were doing their PhD, much had changed:

They have a big racism problem. It's that kind of place. It's very conservative … [But] from the time that I started until now, a lot has changed. In fact, so much has changed and has been very visible to me that I applied to be a faculty member here … I know what being in dangerous institutions and working within colonial systems is like, because I had that experience already. So, I was pretty guarded … [but] because so much has happened in such a short amount of time, it does make me feel hopeful that I can be part of a place that is committed to changing structurally, and to do the hard work. (Participant 10CA)

Other participants noted a similar shift and referenced the importance of university-wide Indigenous strategic plans, making campuses inclusive through actions such as renaming buildings to honour Indigenous leaders, and having access to more Indigenous academics and professional staff members.

6.5.3   Expectations of Indigenous PhD scholars

Across all three countries, participants reported the pressure of being an Indigenous person undertaking a PhD. They articulated this as having to juggle multiple positionalities and responsibilities. These included experiencing heightened expectations from family, community, or workplaces, constant requests to be the Indigenous voice in institutional settings, and balancing work and study commitments as well as community and family responsibilities. For Indigenous scholars, these extra loads take their toll and affect their ability to focus on their study:

I've had to put it on pause … we had lots of Sorry Business, and during the course of my PhD we started [caring] for my partner's sister in a kinship care situation, and she has complex needs … And the PhD got pushed, and pushed … which delayed my data collection, then having setbacks around ethics … they compounded on each other, and my cultural responsibilities increased, my familial responsibilities increased … (Participant 7AUS)

I was sort of tracking well, then there were three large events that disrupted our family system where that had to shift my focus into working or providing money, leaving my studies a little bit behind to help manage what was going on in the larger family unit … [S]o there's a responsibility that comes with taking care of my aunts and my cousins and my mum … members of my family who are precariously housed or like lost housing … So I'm white passing but there's still the structural violence that impacts my family. (Participant 12CA)

I mean, times are tough at the moment so it's not like we're a rich whānau (family) in good financial circumstances. So, we've all got to live together, we've all got to work together. I also had the seven-month mokopuna (grandchild), or granddaughter, that also lives with us, and I've got my 83-year-old mother. So, we're in a generational household. (Participant 3NZ)

As Indigenous scholars, participants were called upon to participate in various committees, contribute to curriculum reviews, or provide input to university initiatives. At times this was remunerated and highly regarded, but many felt the burden of always having to speak up and argue or represent an Indigenous standpoint:

> [I'm] forever getting asked … "Ah, you're Aboriginal, you are a student, can you be on this?" or "Can you do this" or "Can you do that" … While sometimes it was fruitful and fulfilling, other times it was draining … I'm having to sit in these meetings and hold old white men accountable … And I'm the youngest and the only black fella there. (Participant 6AUS)

> So divisionally some of these places don't have the same ethics and responsibility towards Indigeneity and health equity as others or the university as a whole … So, I'm working and schooling in two places that are not typically meant for my people and a part of the structural oppression, but it's important that I'm there. I contribute in different ways, right … [B]ut it's also draining because I'm the only Indigenous person at both those places and it's frustrating because … you have to meet them all where they're at [and get them to] understand the value of our people … they take so much when you work in those spaces … I would [instead] like to be around my people more and having those uplifting and resilient conversations. (Participant 11CA)

Many participants felt the pressure of being a PhD scholar as a result of personal, family, or community expectations, feeling as if they have to constantly be high-achieving as well as good representatives of community in every setting:

> Sometimes I can feel the pressure from work, like you know, in terms of "Oh yeah, you are going to be a doctor" and all that sort of stuff. I say, "Guys, I'm still in first year, like I'm still early on. (Participant 5AUS)

> [O]ur lives are so full and so complex and there's such a requirement, I suppose, for Indigenous PhDs to be unique and revolutionary and new and novel—that we need to contribute in some way to Indigenous methodologies and methods … when our counterparts in the institution are just strolling along doing a PhD on sea slugs and some tree … There's such a contrast to what's required in our PhD process … we navigate the institutional PhD requirements, the cultural PhD requirements and then—what are you adding to the world, to your cultural world? That's a lot of pressure to have on you as a PhD student, especially if you're the first in your family. You don't have a lot of people to talk to … that's a lot to carry. (Participant 1NZ)

Straddling the community/researcher positionalities was also difficult for some, especially those undertaking research in spaces they have worked in, or with community, and some grappled with critiquing institutional processes whilst also operating within them:

> It's like sometimes I'm the outsider insider. Like sometimes I'm in spaces because I'm seen as a community member and not a researcher. That comes with a different set of obligations and accountabilities. And sometimes I'm a researcher … So, it's just taken me a really long time to work through that stuff. (Participant 12CA)

> There was also the challenge of wanting to critique systems while being in those systems. (Participant 1NZ)

Participants also grappled with their obligations and responsibilities relating to data and data collection, including considerations of how to engage with community in appropriate and respectful ways and weighing up what knowledge should be shared and what should remain with community:

[I'm] really mindful with Indigenous knowledge on what we call here, Kaiponu (to withhold). [It is an] ethical risk analysis, risk assessment about the way in which we're disseminating information and who that information is for … how much of the information goes into the actual doctorate, what parts go back to the people, what parts need deep and further discussion … So, I'm still trying to figure out all of those at the same time. (Participant 4NZ)

Juggling all these responsibilities as well as the colonial burdens of being an Indigenous PhD scholar takes time and energy, but participants felt this was poorly acknowledged by the university and that they didn't always get the flexibility or time compensation that they need to manage these experiences:

They were trying to be supportive but … I think everybody was just as clueless as each other … like the understanding that it's actually like harder for us in this space to operate and the extra drain that it has … There's a lot of you know violent moments that happen. (Participant 8AUS)

I had done my fieldwork but because there was disruption in my family system, I left the university in good standing so I wouldn't have to pay tuition, which meant that then I had no access to any of the funding lines or any employment opportunities … So that's been a real struggle administratively to sort of like get back in. (Participant 12CA)

Life for Indigenous PhDs is far more complex, and I don't think our university takes that into account and they should … I don't think they recognise the realities of an Indigenous PhD journey whatsoever and it pisses me off. (Participant 1NZ)

6.6 Impacts: Indigenising the academy

Despite the difficulties of undertaking a PhD, those we interviewed were excited to be doing their doctorate. They relished the opportunity to be doing something meaningful, to be connected to community, and to be contributing to building the profile of Indigenous knowledges within the academic environment as well as increasing the numbers of Indigenous researchers:

I'm living my dream right now. I get to hang out with all my cousins that were all the coolest people when I was growing up and I get to see them in action … I get to do jobs that I just absolutely love … It also supports the aspirations of my whānau (family), my hapū (subtribe), and my Iwi (tribe). (Participant 4NZ)

[I]t's a learning experience. Character building. So, if it was all easy sailing, I wouldn't be the researcher I am now. A decent one. (Participant 8AUS)

Many also reflected on their personal growth throughout the process, and the privilege of working with community:

I think that's the part that excites me the most like getting out and yarning with people … [and] one of the things that I've learnt the most from all those Aboriginal women and gentlemen is the importance of also being strong within yourself too and acknowledging that you yourself have strength and knowledge. (Participant 5AUS)

I think it's been important for me personally and professionally … it was the learning and the growth I needed for myself. (Participant 1NZ)

When reflecting on what it means to be contributing to the academic space, participants referenced movement building, raising awareness, creating equity, highlighting resilience, and re-invigorating cultural knowledge. It was also about sharing the preciousness of Indigenous knowledge and opening it up for the world to see:

It's movement-building for us, for me … so we have kōrero (sayings) over here—most people would say "ko te reo kei tōku waha", the language exists in my mouth. But we've now been able to say well actually "ko te reo kei āku ringa" (the language is in my hands) which is to be able to demonstrate that language and knowledge does not just sit in the brain and on the tongue, it sits in so many other places in a constant evolving process that you get to learn when you are an Indigenous person … I sort of look at it like a wave that's coming in to shore. Sometimes the wave gets to a peak and then it will start to roll, and you can't stop that from happening. (Participant 4NZ)

[W]e're pretty knowledgeable about healing, and we have so much to give in terms of resilience and strength, collective care, and love for each other, so how can we leverage that ancient wisdom and get everyone else up to scratch. (Participant 7AUS)

Participants also reflected on breaking new ground within the academy through their research and research processes, as well as building the evidence base to improve systems and services for Indigenous community:

I published a lot during my PhD and that was partly because I had no literature to cite because there was nothing remotely close to my field or my research topic at the time … in my field it is a foundation to expand that field and to grow that discipline and to create that discipline. (Participant 1NZ)

So that when their family go to the doctor or access the health system they don't feel like they're getting pushed around, they don't feel like they're being shoved to the side. They feel like they matter, that they're not just a number that they're just trying to get out the door, that they're actually a person. So that's what my hope [is]. (Participant 2NZ)

For many, it was important for them to be part of building the pool of skilled Indigenous academics and researchers and ensuring that for those that come after, being in higher education spaces will be safer, easier, and more encouraging—that they are enabled to do research in a way that suits them:

[N]ow I can supervise other Māori Masters students which I'm doing right now. So, I feel like I'm contributing because I'm helping those students come through in a safe way, in a way that they can be themselves and they can express themselves and not just trying to fit in with the system. (Participant 2NZ)

I'm hoping someone will pick it up and be like "Oh shit, I didn't know you could do that, I'm going to do that!" That would be my hope … that you can do whatever it is you want to do and what feels right to you and you're the expert in that kaupapa

(subject) ... So you present it how you want to present it and yeah go for it. If anyone pushes back on that tell them to come and talk to me! (Participant 1NZ)

When reflecting on what the impact of getting their PhD will have, participants overwhelmingly noted the effect it will have on future generations of Indigenous people:

> So, the ultimate goal for me, there is the NAIDOC [National Aborigines and Islanders Day Observance Committee] theme this year which is all about the young ones and the next generation and I think it's amazing because that's what it's for. It's for the future generations to make sure they have more opportunities than our ancestors did and our parents. That future generations have all the opportunities in the world. (Participant 6AUS)

> I know the commitment for me is more than me finishing a PhD but it's providing something for our future. So, it becomes a responsibility of the whole hāpori (community), to be able to help support all aspirations, no matter what they are. (Participant 4NZ)

> I would say if anything, it would mean more for my children, my future children's children, because hopefully it means that they can step into a world that sees them differently … my uncles, and aunties, and cousins back home … hopefully it will mean that my younger cousins can feel stronger and prouder, and even more connected than they might do right now. (Participant 7AUS)

Extending on the impact for future generations, participants felt that it was also about being a role model—proving that it can be done, no matter your history or circumstance:

> [I want to show that] people like myself, who are still working on the land, still working in communities, still learning language, and building ourself, and regaining culture from the cultural genocide that has been inflicted on people in this country, can still do that and gain scholarship at the same time, right. And I want to be a representation and a reflection of that through my work as much as possible. (Participant 11CA)

> I think for us as Māori whānau (family) it's important to model what we want our next generation to achieve and why it's important to be educated at a higher level, not necessarily to become a doctor or anything but really to explore learning, but also to share that learning with others who may not know a lot about Māori in general or Māori approaches or frameworks that work well for us. (Participant 3NZ)

> And then for my younger cousin … she sees that you can go through things and still stabilise and that stuff can happen but that doesn't define you and if you want to pursue stuff it's hard, it's work, but it's not because you're not smart enough. I think it's allowed her to imagine different possibilities for herself … I reflect on it personally but yeah, we forget how much we're carrying other, our kin in our bundles as we walk too. (Participant 12CA)

When reflecting on what's next, those who were close to submitting or who had finished said that a lot of opportunities had already opened up for them: "They snapped me up really quick and I got two offers on the table prior to finishing" (Participant 8AUS). Some were going on to do postdoctoral fellowships and others wanted to continue researching, teaching, and working in academia. Participants also considered cultural consultancy, working with government, and going back to work in community:

> I personally I don't know if I want to work in the institution. I'm not sure yet, we'll see. But as of right now I would really love to just go and work in my home community, so that's kind of where I'm leaning. But I think that a lot of opportunities will continue to arise. (Participant 9CA)

One participant, who had already had a career in academia and consulting reflected on what was next for them beyond being the catalyst for institutional transformation:

> [S]ometimes my axe doesn't feel like its sharpening because I'm helping everybody else sharpen their axe … I went into the academy for my community for many reasons, but also because I love to learn … [But] if I'm always sort of transforming the system, how do I do anything that is desire based or like intellectually interesting or meaningful … now I'm just starting to ask questions about desire and where do I want to go … what is interesting and going to carry me through intellectually, emotionally …? We are intellectuals. How do we generate those spaces together and what does collectively look like particularly transnationally? What are the conversations, how do we build networks and labs …? (Participant 12CA)

This sense of collectivity and shared experience across borders and countries was reflected on by the participants. It was, for them, an opportunity to hear others' experience, reflect on their own, and consider what it means to be Indigenous in the academy together:

> I really appreciate how much that you can see in terms of our story … I feel like this is how we build our confidence, our kinships. It doesn't matter geographically where we're located, but that we all have these commonalities in our journey. I think it's such a powerful thing. (Participant 10CA)

> I've just really appreciated the validation I got from engaging in these spaces because you know, we find it hard, and sometimes we compare to our peers that aren't on the same path and it's like, why are they making it look so easy. I find that universities can be very invalidating places as well. So, engaging in Black spaces is much more validating and safer. (Participant 8AUS)

> [W]hen we scale our perspectives up to talk about structural issues that shape the experiential … we can really meet there [and have] something quite common in the vocabulary or how we're seeing things or experiencing things that it's not hard to, yes, trace the connections. (Participant 12CA)

The experiences of Indigenous PhD scholars across all three countries show how they are navigating their PhD journey—their motivations for undertaking study, their research and research practices as well as what supports work for them and why. As they straddle the tensions that exist between Indigenous and Western knowledge systems and juggle the demands of being an Indigenous PhD scholar, they also claim a space within the academy that centres Indigenous knowledge and expertise. While their journeys differ, there are also many shared experiences both within and across nations.

7.   Discussion

The experiences of the PhD scholars interviewed for this project provide important insights into what it means to be an Indigenous person undertaking a doctoral degree within the academy. As a comparative project, the similarities in the experiences of Indigenous scholars were significant. Although participants were undertaking different PhD programs with varied requirements, and live and study in different cultural, historical, and political contexts, their experience of navigating and countering colonial academic systems were strikingly similar. As Indigenous scholars, they were operating at the cultural interface— navigating the tension entailed in bridging Indigenous and Western knowledge systems (Durie, 2005; Nakata, 2007b). While they struggled with the ongoing effects of discrimination and the de-valuing of Indigenous knowledges and methodologies, they enacted agency and resistance and were adamant in their resolve to undertake projects in self-determining ways. Their engagement in the intellectual endeavours of Indigenous scholars and knowledge holders is also enabling PhD scholars to understand and enact their own processes of self-determination in the work they are building. Their engagements in the higher education space support the relational and resurgence efforts articulated by Corntassel and others and are evidence of how Indigenous storywork is operating within the academy to Indigenise higher education research (J. Archibald, 2008; J. Q. Q. X. Archibald et al., 2022b; Corntassel, 2012; Gaudry & Corntassel, 2014; Kuokkanen, 2007; Pidgeon, 2016). Importantly, they are creating an intellectual space within the academy to assert their knowledges and practices.

Indigenous peoples have diverse experiences of colonialism as we have noted, and while the similarities across the countries were highly evident, there were of course differences. These were most obvious in respect to financial support, having access to a strong pool of Indigenous academics, and being part of tailored Indigenous-led support programs and a strong cohort of Indigenous PhD scholars as we discuss in more detail below.

7.1   Colonial burdens

The research identified that Indigenous PhD scholars across all three jurisdictions continue to bear a colonial burden that is felt on multiple fronts. They experienced racism and discrimination that was targeted at them personally, and manifested in resistance to their research or their research approach. It was also embedded in institutional structures such as building names, rigid systems, and alienating administrative processes (Bailey, 2016; Bodkin-Andrews & Craven, 2013; E. McKinley et al., 2011; Schofield et al., 2013; Trudgett, 2013; Trudgett et al., 2016). Through the culmination of being in uncomfortable academic environments, being stereotyped, and lacking relevant social capital, Indigenous PhD scholars felt as if they were imposters in the academic space (Anderson et al., 2022; Hogarth, 2022; Pidgeon, 2008; Walter, 2015; K. Wilson & Wilks, 2015). As Indigenous peoples bearing the legacy of dispossession and displacement, PhD scholars are juggling multiple responsibilities. These involved caring and financial responsibilities with their extended kin, family, and community that is disproportionate to that of their non-Indigenous counterparts. Caring responsibilities, sorry business, and cultural obligations often result in scholars having to take time away from their PhD, extending their candidature, and

managing higher levels of cumulative stress. Indigenous PhD scholars also felt the pressure of the expectations of family, work colleagues, and academics. Not only were they expected to be high-achieving and successful, but there was also the added weight of feeling like they must undertake ground-breaking and innovative work as well as be an exemplar of Indigenous people and culture (Australian Human Rights Commission, 2024; Gavin, 2022; Pidgeon, 2019; Pidgeon & Riley, 2021; Trudgett, 2013; M. Wilson et al., 2011). Their role as a researcher within their own communities also posed challenges and competing demands that raised ethical considerations or conflictual obligations (E. McKinley & Smith, 2019). This manifested in having to abide by university time frames and procedures while ensuring that they conduct their work in culturally appropriate ways and with sufficient reciprocal reporting and feedback.

Where scholars had non-Indigenous supervisors, there was an added burden of having to spend time talking with them and educating them about Indigenous issues or methodologies (Berryman et al., 2017; Cavanagh et al., 2022; Grant & McKinley, 2011; Manathunga, 2017; Pihama et al., 2019; Trudgett, 2014; D. Wilson, 2017). A lack of training relating to the supervision of Indigenous PhD scholars and Indigenous methodologies was evident across the international university sector. In addition, Indigenous PhD scholars were often called on to be the Indigenous voice in academic spaces, invited to be on committees, provide responses to strategic plans, or be the sounding board for curriculum change (Trudgett, 2013). While at times this was properly remunerated, for the most part, these commitments were a distraction from their core responsibility to their study.

Lack of financial support also remained a big issue for Indigenous PhD scholars. Scholarships were insufficient and were unlikely to cover the duration of the PhD, which left Indigenous PhD scholars in a position where they had to work either part-time or full-time to survive (Anderson et al., 2022; J. Archibald et al., 1995; Moodie et al., 2018; Pidgeon et al., 2014; Pihama et al., 2018b; Trudgett, 2013). In Australia, at least, PhD scholars are reluctant to enrol part-time as scholarships are then taxed. The inflexibility of scholarships also extends to the inability of PhD scholars to take intermissions beyond sick leave and parental leave. As a result, PhD scholars often put their candidature and scholarships on hold to ensure they don't run out of time. Funds to undertake field work or pay honoraria for Indigenous cultural or advisory committees were also hard to source. This left scholars in a difficult position in which they had to either alter their research approach or rely on the good will of community members and mentors without being able to appropriately compensate them for their time. One of the differences that did emerge across the international cohorts was access to research training scholarships. On enrolling into a PhD program, Indigenous Australian scholars, along with their non-Indigenous peers, are eligible to competitively apply for a Commonwealth Government Research Training Program (RTP) Scholarship (administered by universities) that is a full-time (non-taxed) or part-time (taxed) living allowance that also covers tuition fees. Some Australian universities allocate an RTP to all enrolled Indigenous PhD scholars as part of their Indigenous equity policy, others don't. In both Turtle Island Canada and Aotearoa New Zealand, scholars must pay tuition fees using the scholarships they are competitively awarded, but unlike in Australia, they can access funds from their Bands, Iwis, or communities. Despite these differences, a lack of adequate financial support was reported across all three nations, and many scholarships were piecemeal and required significant amount of time and effort in securing them.

The weight of these cumulative responsibilities paints a picture of the extra burden that Indigenous PhD scholars manage throughout their PhD journey and explains the high rates of attrition and slower completion times for Indigenous scholars (Anderson et al., 2022; Grant-Smith et al., 2020; Moreton-Robinson et al., 2020). There is, however, little appropriate recognition at a university level, or adequate response to these issues. Participants did report that they had benefitted from the support and foundational work of Indigenous academics that came before them and that their experiences were better than that of their predecessors and they believed things were improving overall. However, this didn't negate the difficulties they continued to have as they undertook their studies. It is imperative that, for Indigenous PhD scholars to thrive, universities are cognisant of these experiences and initiate structural support and change to level the playing field for Indigenous PhD scholars.

7.2   Engaging in higher education as a gateway for change

Despite the difficulties and extra burdens that Indigenous PhD scholars face, as well as the history and ongoing experiences of discrimination, higher education was understood as a gateway for change, and scholars expressed their right to succeed at this academic cultural interface. While many Indigenous PhD scholars came to academia in ad hoc ways, all were driven by a desire to improve the experiences of Indigenous peoples, either through informed healthcare interventions, contributions to academia, community organisations, policy, or government initiatives. They saw that undertaking a doctoral degree was an avenue for applying Indigenous knowledges and practices as a way to claim a space within the academic environment that reflected their identity and positionality (Durie, 2005; Nakata, 2007b). Those who had worked in healthcare wanted to move away from "downstream" treatment to "upstream" systemic change and impact that was Indigenous-informed and led. Scholars were also adamant about shifting the focus of research done on or about Indigenous peoples as objects of study, to conducting research that was relevant, community-informed, and Indigenous-controlled (Middleton & McKinley, 2010). While evident in the responses of those we interviewed, we want to reiterate here that systems change is not always the focus of, and should not always be, the work of Indigenous PhD scholars. Many have a research focus on distinct health issues within their disciplines, and the systems change work or the challenge they pose to the academy is often incidental—and sometimes unintentional—but occurs by way of bringing their Indigenous selves and sensibilities to the academy.

For Indigenous PhD scholars, the purpose of doing a PhD also lies in improving the experiences for subsequent generations. They were cognisant of being role models and sparking inter-generational change. They wanted to demonstrate that undertaking a PhD was possible, that it was important to be in these spaces, and that research can be undertaken using Indigenous ways of being, doing, and knowing. This intention, beyond their own PhD, melded purpose and high educational expectations not only for themselves but for generations to come, something governments and universities overlook in their regard for Indigenous education (Pihama et al., 2018b).

Creating counter-spaces was essential for the wellbeing of Indigenous PhD scholars through their doctoral journey (Andrews et al., 2023; Bailey, 2016; Barney, 2013; Gallop & Bastien, 2016; Gaudry & Lorenz, 2018; Hogarth, 2022; Hutchings et al., 2019; Pihama et al., 2018b; Trudgett, 2009; M. Wilson et al., 2011). Tailored programs, peer-to-peer engagement through facilitated workshops, and writing retreats or networking opportunities offered lifelines for scholars who felt that these spaces provided the understanding and recognition they needed to survive the university environment. It was within these spaces, or communities, that scholars felt like they belonged (Andrews et al., 2023; Fredericks et al., 2023; Gallop & Bastien, 2016; Pihama et al., 2018b; M. Wilson et al., 2011). Where there was a strong cohort of Indigenous PhD scholars, this had a positive impact on feelings of wellbeing and connectedness as well as cultural safety in the university environment. Peer-to-peer initiatives were either scholar-driven or operated out of Indigenous units within universities or semi-external bodies. Where Indigenous centres/bodies provided formal programs and facilitated events, scholars benefitted enormously both personally and in relation to their research (Anderson et al., 2022; Andrews et al., 2023; Andrews, Gallant, et al., 2024; Fredericks et al., 2023; Pidgeon et al., 2014; Pihama et al., 2019). Participants from Aotearoa New Zealand regarded the MAI program as an essential part of their PhD journey and an avenue through which they were bolstered to do the research they wanted to do. Although those we interviewed from Turtle Island Canada didn't mention if they had engaged with SAGE, nor did participants in Australia refer to specific centres/bodies, we do know that these bodies have also contributed enormously to scholars in their own contexts (Anderson et al., 2022; Pidgeon et al., 2014). The research also showed that Indigenous PhD scholars relied on their connections with family and community and that cultural and spiritual support was often sought through these avenues or through people's connection to land and the environment (E. McKinley & Smith, 2019).

As is evident in much of the literature, having access to Indigenous staff, mentors, advisors, and supervisors was important for the success of Indigenous PhD scholars (Barney, 2013; Hutchings et al., 2019; E. McKinley et al., 2011; Pihama et al., 2018b; Trudgett, 2011). In spaces where there were more Indigenous academics, PhD scholars were more likely to find supervisors who were skilled in their fields of research and their chosen methodological approach (Anderson et al., 2022; E. McKinley et al., 2011). For scholars in Aotearoa New Zealand and Australia, this seemed more accessible than for those in Turtle Island Canada. Those who had a combination of Indigenous and non-Indigenous scholars also reported feeling well supported, receiving the cultural and intellectual support they needed (Anderson et al., 2022; Cavanagh et al., 2022; E. McKinley et al., 2011; D. Wilson, 2017). Where expertise or cultural knowledge was lacking within university environments, PhD scholars sought support through mentorships, or community governance or advisory bodies. While some universities supported alternative models of support or supervision, in others it was much more difficult to work beyond the structural boundaries in place within the institution. Despite this, Indigenous PhD scholars worked around the road-blocks to ensure that they got the right support to conduct their projects in culturally appropriate ways and to get the personal support they needed over the course of their candidature (Cavanagh et al., 2022; Gavin, 2022; Pidgeon et al., 2014; Trudgett, 2009).

Despite being in places that felt alienating, Indigenous PhD scholars were creating spaces and support systems that harnessed connectedness and relationality. The power of "interconnection with people and place," suggest Pidgeon and Archibald, "is key to understanding Aboriginal student persistence" in academic spaces (Pidgeon et al., 2014, p.

2). Physical and virtual spaces were both important to scholars, as were the opportunities to access Indigenous support outside of the university environment. Where appropriate support structures were unavailable, Indigenous PhD scholars sought them out, initiating their own systems even where there was institutional push-back. Despite the difficulties of engaging in higher education spaces, Indigenous PhD scholars are reclaiming these intellectual spaces and undertaking research for the benefit of their communities and future generations. This research provides evidence, as McKinley and Smith outline, of the "powerful resistance and motivation of Indigenous Peoples to harness the promise and potential of education to advance our aspirations for self-determination and revitalize and strengthen our cultures and languages and our families and communities" (E. McKinley & Smith, 2019, p. 6).

7.3 The resurgence of Indigenous research practices

Our research supports the body of work that shows how Indigenous researchers are re-storying higher education spaces. Through their acts of relationality, resistance, and resurgence, Indigenous PhD scholars are disrupting colonial boundaries and providing insight into what Indigenising the academy means (Corntassel & Bryce, 2012; E. McKinley & Smith, 2019; Pidgeon, 2016). While it is not (and should not) be imperative, the Indigenous PhD scholars we engaged with are contributing enormously to growing the body of research relating to Indigenous peoples. Not only are they undertaking research of benefit to their communities, but they are conducting it in Indigenous ways, building the breadth and depth of scholarship on Indigenous knowledges and methodologies within the academy. Operating at the cultural interface, they are managing the tension inherent in bridging Indigenous and Western epistemologies and ontologies in generative ways (Andrews, Gallant, et al., 2024; J. Q. Q. X. Archibald et al., 2022b; Ballangarry & Pugin, 2024; Kovach, 2009; E. McKinley et al., 2011; E. McKinley & Smith, 2019; Pidgeon & Riley, 2021; Povey et al., 2024; Tuhiwai Smith, 2012; S. Wilson, 2008).

Indigenous PhD scholars continue to face resistance to their methodological approaches, have to justify their practices, and defend their right to conduct projects in their way. They face challenges related to timeframes, with insufficient consideration of the extra time, work, and effort required to meet community engagement and ethical expectations, cultural protocols, and reciprocity. (Andrews, Gallant, et al., 2024; J. Q. Q. X. Archibald et al., 2022b; Gallop & Bastien, 2016; Middleton & McKinley, 2010; Pidgeon, 2008). They must also overcome challenges relating to disciplinary academic protocols, as their work can often span disciplinary methods and approaches (Kuokkanen, 2007; E. McKinley et al., 2011). Operating at the cultural interface is challenging but also rewarding. Indigenous PhD scholars take on their research with a sense of agency, purpose, and responsibility, bringing to their projects their lived experience and relational understanding of story, people, and place (J. Archibald, 2008; J. Q. Q. X. Archibald et al., 2022b).They are determined to engage with Indigenous methodologies and apply cultural knowledge. They were at once challenging the colonial gaze and repurposing the Western academy for Indigenous benefit, applying their own storywork to academic places and processes (J. Archibald, 2008; J. Q. Q. X. Archibald et al., 2022b). Their research addresses the silences and erasure that has been rife within Western research paradigms and has elevated engagement with Indigenous knowledges through scholarship that is strengths-based and future-focussed. In their

articulation of insurgent education, and drawing on the work of Alfred (2004), Gaudry and Corntassel (2014) describe the process of challenging the injustice of colonisation in higher education whilst re-affirming Indigenous world views. In their rally for Indigenous resurgence, they encourage Indigenous intellectuals to become "warriors of the truth", to defend and regenerate, through their scholarship, Indigenous cultural practices for the benefit of Indigenous peoples (Alfred & Corntassel, 2005; Corntassel, 2004; Gaudry & Corntassel, 2014, pp. 184–185). The Indigenous PhD scholars who participated in this project are engaging in warrior scholarship, operating at the front-line within the academy to forge a path in the fight for their right to conduct research in ways that align with their epistemologies and ontologies. It is research that is "relational, intergenerational", and impactful, both for their communities as well as for society more broadly (E. McKinley & Smith, 2019, p. 7).

7.4 Valuing Indigenous epistemes

Universities are centres of knowledge generation and production and are important sites for Indigenous scholars to undertake meaningful work in ways that align with their cultural knowledge and values. In calling for the Indigenisation of the academy, Sámi scholar Rauna Kuokkanen argues that it is up to the academy to address its history, ignorance, and limited conceptions of knowledge and to welcome unconditionally, Indigenous peoples' worldviews and philosophies (Kuokkanen, 2007). She asserts that through profound transformation, and founded on the principles of responsibility and reciprocity, the academy will recognise that Indigenous epistemes are in fact a gift (Kuokkanen, 2007). While there is still a long way to go before Indigenous epistemes are properly valued within higher education institutions, Indigenous PhD scholars (and their predecessors) are, through their own storywork and resurgence efforts, forging change within the academy and beyond it. However, it is incumbent on Western academic institutions to ensure that these scholars are provided the space and resources they need to take up their rightful place within these intellectual institutions. Scholarship on the necessary requirements for Indigenous PhD scholars to succeed globally has existed for some time and is growing. In Indigenous scholars' Verna J. Kirkness and Ray Barnhardt's seminal paper, penned some 30 years ago, they frame the work universities must do to ensure the success of Indigenous students under the 4R's of respect, relevance, reciprocal relationships and responsibility (Kirkness & Barnhardt, 1991).

In our research, this framing provides a useful structure for our findings. It also provides a useful reflection on the fact that universities have had the information they need to instil the necessary changes for some time. They have, however, been resistant and too slow to take up the charge and the focus now must be how to translate these lessons into action. Our research reiterates many of the same messages evident in Kirkness and Barnhardt's paper and in the many studies specifically relating to Indigenous PhD scholars that have come after it (Anderson et al., 2022; Andrews, Gallant, et al., 2024; Ballangarry & Pugin, 2024; Barney, 2013, 2016, 2018b; Behrendt et al., 2012; Berryman et al., 2017; Bodkin-Andrews & Craven, 2013; Gavin, 2022; Gilgen, 2022; Grant & McKinley, 2011; Grant-Smith et al., 2020; Harrison et al., 2017; Hogarth, 2022; Hutchings et al., 2018, 2019; Kidman et al., 2017; E. McKinley et al., 2009, 2011; Moodie et al., 2018; Moreton-Robinson et al., 2020; Pidgeon, 2008, 2014; Pidgeon et al., 2014; Pihama et al., 2018b, 2019; Schofield et al., 2013; Trudgett, 2008, 2011, 2013, 2014; Trudgett et al., 2016; Tynan, 2020; Wilks & Wilson, 2015; M. Wilson et al., 2011). It adds weight to these arguments by bringing together the experiences of Indigenous PhD scholars across colonial contexts.

Respect involves recognising and honouring the cultural integrity of Indigenous peoples, their histories, traditions, and knowledge systems (Kirkness & Barnhardt, 1991). It asks universities to honour their presence on the lands of Indigenous peoples and to provide the space, resources, and support commensurate to need for Indigenous PhD scholars. This can be enacted through upskilling supervisors, increasing the Indigenous academic workforce, and providing tailored support programs for Indigenous PhD scholars. Relevance means recognising the ongoing importance and value of Indigenous knowledges and practices that are grounded in thousands of years of intellectual traditions and generations of lived experience (Kirkness & Barnhardt, 1991). Indigenous knowledges and research practices are to be recognised and valued as an integral component of academic inquiry. This includes allowing sufficient time and resources for Indigenous PhD scholars to engage in ethical and culturally appropriate research practices and providing the flexibility and funding for their access to mentors and advisory groups outside of the university context.

Reciprocity is about mutually respectful relationships between Indigenous and non-Indigenous peoples (Kirkness & Barnhardt, 1991). Reciprocal relationships recognise that multiple knowledge systems exist and that none are superior to any other but that they can beneficially co-exist (Durie, 2005; Jackson, 2016; Nakata, 2002). It is about ensuring that universities are welcoming and safe places for Indigenous PhD scholars free from personal and institutional racism and discrimination. Responsibility recognises the harm colonisation has had on Indigenous peoples and assumes a position of accountability for addressing it (Kirkness & Barnhardt, 1991). It might involve truth-telling processes in which universities take responsibility for past injustices and establish meaningful partnerships with local communities (see for example: Jones et al., 2024). It means supporting the recruitment of Indigenous PhD scholars, financing Indigenous PhD scholars adequately, instilling mentoring programs, and providing pathways into academia post PhD.

Indigenising the academy as Pidgeon states "is not one strategy, or one policy change—it is a culminating and complex living movement that aims to see post-secondary institutions empowering Aboriginal peoples' cultural integrity through respectful relationships through relevant policies, programs, and services" (Pidgeon, 2016, p. 81). Institutions are slow-moving entities. Incremental change has been made and is reflected in the increasing numbers of Indigenous PhD scholars, but further and more targeted and tailored strategies and actions need to be implemented if universities are to be seen to truly value Indigenous peoples, their knowledges and practices. Recognition of the gift of Indigenous epistemes will improve the experience of Indigenous PhD scholars in the academy, expand the body of knowledge being produced, and will contribute to improving the lives of Indigenous communities through increased research that is community formed and Indigenous-led.

8. Conclusion

In this project, we examined the experience of Indigenous PhD scholars undertaking health-related research across Australia, Turtle Island Canada, and Aotearoa New Zealand. While many studies explore the experiences of Indigenous PhD scholars within these countries, this study adds to the literature by bringing together their collective experiences. Taking a strengths-based approach and focusing on a comparative analysis of relative international populations, this study outlines the successes of Indigenous peoples in doctoral programs while acknowledging the ongoing challenges they face in Western academic institutions. Acknowledging the different experiences of colonialism and culture, bringing together Indigenous PhD scholars from across the globe has highlighted, overwhelmingly, the shared experiences they face as they navigate the cultural interface of higher education. As Indigenous peoples undertaking a PhD, they manage a hostile institutional environment that minimises their efforts and devalues their scholarship. They are, however, finding ways to challenge inadequate supervisory practices, systems support, and research processes and are asserting their agency to carve a path that is culturally appropriate and responsive to Indigenous ways of being, doing, and knowing. While they share similar difficulties, they also share a fearlessness and determination to reignite Indigenous methodologies, champion Indigenous knowledges, and be a force for change to improve the lives of Indigenous people.

Indigenous storywork, or re-storying, rests on an ethic of resistance, resurgence, revival, and sovereignty. Centring Indigenous worldviews, it values Indigenous knowledge systems and the relational understandings of story, people, and place (Alfred & Corntassel, 2005; J. Archibald, 2008; J. Q. Q. X. Archibald et al., 2022b; Corntassel et al., 2009). Indigenous PhD scholars across the three countries are resisting prescriptive approaches to their doctoral studies and contributing to the resurgence of sovereign Indigenous inquiry. Their work is part of a larger and sustained Indigenous resurgence in higher education across the three countries and beyond them with an emphasis towards epistemological, ontological, and axiological equity. The shared experiences evident in our research outweigh the differences and, as a collective, their actions are representative of the resurgent work that is being done by Indigenous PhD students to Indigenise the academy.

The outcomes of this research inform the ways universities can better support Indigenous PhD scholars to undertake their doctoral project, but importantly it captures the work that Indigenous PhD scholars are doing that contribute to Indigenising academic spaces. Further comparative research engaging a larger cohort of participants and academics from local contexts would enrich the literature in this field.

Our work has led to the following recommendations, which relate to initiatives that universities, higher education peak bodies, and governments can implement to better support Indigenous PhD scholars before, during, and after their candidature:

- Universities to recognise, nurture, and properly support the contributions Indigenous PhD scholars and academics are making to epistemological, ontological, and axiological equity in the academy.
- University campuses to be inclusive and culturally safe for Indigenous PhD scholars and free from racism.

- Universities to recognise and reward the demands made on Indigenous PhD scholars for their expertise on committees and in relation to strategic policies and programs.
- Tailored pre-enrolment support to be provided to prospective Indigenous PhD scholars that addresses:
  - positioning in the academy
  - accessing potential supervisors
  - submitting a PhD proposal
  - being cognisant of, and applying for, relevant scholarships.
- Universities to ensure that Indigenous PhD scholars have tailored support throughout their candidature, including access to Indigenous peer networks both within the university and beyond it, and opportunities for regular and sustained engagements including, for example:
  - writing workshops/retreats, seminars, and social gatherings
  - funded attendance at relevant national and international fora aimed at bringing Indigenous PhD scholars together.
- Adequate financial support to be provided to Indigenous PhD scholars including:
  - a waiver of university fees
  - a singular full living allowance scholarship for the duration of the candidature (including extensions and intermissions)
  - more part-time scholarship options to be made available to Indigenous PhD scholars
  - no tax implications for studying part-time
  - sufficient funding for field work and community/ethics engagements, where relevant.
- Varied models of extended candidature and scholarship provision for Indigenous PhD scholars that recognise and support the time necessary for Indigenous community engagement, ethics protocols, and knowledge translation activities.
- All supervisors of Indigenous PhD scholars to be provided with training on Indigenous research methodologies and practices, and the particular requirements of Indigenous PhD scholar supervision.
- Flexible supervisory models to be made available to Indigenous scholars including:
  - the ability to have Indigenous community members with Indigenous knowledge, cultural knowledge, or disciplinary expertise in the area of study included as supervisors and remunerated accordingly
  - the opportunity to have an Indigenous community advisory board whose expertise is formally acknowledged and remunerated accordingly.
- Career planning support and mentorship to be provided to Indigenous PhD scholars during their candidature.
- Universities to provide Indigenous specific post-doctoral opportunities to ensure a continuum of academic success.

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10. Appendices

Appendix A: Interview questions

Interview Plan

Indigenous PhD Scholars

Project

Navigating the cultural interface: Indigenous PhD scholars' experience of working toward epistemological equity in health research across Australia, Canada and New Zealand

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INTERVIEW

At the commencement of the interview, the interviewer will:
- outline the research project, relational approach and the context in which it is being conducted;
- explain the process and what the themes of the interview will be; and
- provide the interviewee with the consent form, explain its terms, and invite the interviewee to sign it once the interview is over.

The following is a list of discussion points for participants.
- Initial questions will be open, with further questions to be used as prompts. Some discussion points may be altered or omitted depending on the person / group being interviewed.

1) **About you**
   a) Tell me about yourself
      i. Who is your mob/iwi/band?
      ii. What is your gender identity and age?
      iii. Are you first in your family to go to university/study PhD?
      iv. Where are you from and where do you currently live?
      v. What was your path to the PhD ie. disciplinary, professional or educational background?
2) **Your project**
   a) Tell me about your PhD Project
      i. In what department / institute / centre are you conducting your research?
      ii. Are you studying full-time or part-time?

  iii. What is your project about?
- Why did you choose this topic?
- Is this a personal topic for you?

  iv. Is your project part of a bigger research project?
  v. Are you part of a broader research team?
- What other responsibilities might this entail for you?
- What benefit or challenges does this pose for you?

  vi. If you are not part of a broader project of team – what supports systems do you draw on?
  vii. Can you tell me a bit about the research methodologies you are using and why?
  viii. Can you tell me about if and how you draw on Indigenous knowledge systems in your research?
  ix. Can you tell me about if and how you might engage with community in the conduct of your project?
- Reference group?
- Cultural mentor/s or community Elders/leaders?
- Participants?

3) Your journey

a) Tell me about your journey to being enrolled in a PhD
  i. What field were you working in beforehand?
  ii. Why did you choose this point in time to do a PhD?

b) Why was it important for you to do a PhD / why did you decide to do a PhD?
  i. Academic / professional reasons?
  ii. Personal / cultural reasons?

c) Have other people in your family undertaken undergraduate and/or post-graduate study?
  i. Did this have an influence on your decision to study / do a PhD?
  ii. How has this impacted on your tertiary experience if at all in terms of
- Accessing support systems; or
- Navigating university environment?

d) Are you also working whilst doing your PhD?
  i. Are you employed at the university you study at?
  ii. How do you think this has had an impact on your experience of doing a PhD?

e) Do you have caring responsibilities?
  i. How do your caring responsibilities impact on your PhD if at all?
  ii. How do you balance the demands of caring with your PhD?

f) Do you believe that being an Indigenous person has an impact on your experience as a PhD student?
  i. Why / why not?
  ii. In what ways?

g) Supervisors can play a large role in a student's experience of their PhD. Can you talk to me about your supervisory experience?
  i. Are you happy with the support you are/were provided with?
  ii. If you are drawing on Indigenous methodologies to undertake your work, do you supervisors have the appropriate expertise to support you in this approach?
- Have you got an Indigenous supervisor?
- Have they suggested other avenues for guidance? Or have you sought out other supports in terms of mentors / advisors?

- Do you have an Indigenous person as the Chair of your advisory committee or on your advisory panel?
  - iii. Did your supervisor alert you to other networks / support systems that were useful to you?
  - iv. How could the student / supervisor relationship be improved on from your perspective? What could the Faculty do to assist here?
  - v. How could the student /chair / panel relationship be improved on from your perspective?
- h) How would you describe your overall experience of being a PhD student?
  - i. What factors have had a positive influence on your experience?
    - What is working well for you and why?
  - ii. What factors have had a negative impact on your experience?
    - What are the challenges?

4) Support systems
a) What support have you received from the university from pre-enrolment to the present with regards to peer engagement / academic support / financial support / cultural support?
  - i. Can you tell me if you have engaged in these or other activities and if they have been useful to you? How? Why? Why not
  - ii. If you are part of a co-ordinated Indigenous PhD cohort, what influence, if any, has this had on your experience of doing a PhD?
  - iii. When have you needed / accessed support most? Pre-enrolment / pre/ post confirmation?

b) Do you receive financial support / scholarships / study grants?
  - i. Where from?
  - ii. How did you find about it?
  - iii. Did you have any assistance with the application?
  - iv. What improvements could be made to ensure access to adequate and stable financial support?
c) In what other areas would you like more or improved support?
  - i. What does this look like / entail?
    - Support for those with caring responsibilities??

5) University environment
a) How would you describe the university environment in terms of how supportive or inclusive it is for Indigenous PhD scholars?
  - i. What are the elements that make it supportive / inclusive?
    - Valuing Indigenous knowledge / content?
    - Indigenous academic staff?
    - Place / building names?
    - Welcomes / acknowledgments?
    - Funding Indigenous initiatives?
  - ii. What do you think the university could do better and how?
b) Do you feel added pressure as a result of being an Indigenous PhD student?
  - i. Are there particular expectations you experience?

6) Impacts
a) What are your long-term career goals and how does the PhD contribute to this?
b) What will be the impact of graduating more Indigenous PhD scholars on the way the university conducts its work?
c) What will be the impact on health professions with more qualified Indigenous employees?

d) What does it mean for your family/ your community that you are doing / have completed a PhD?
e) What impact do you think it will have in the longer term on improving access to appropriate health care for Indigenous people?

7) Other
a) Would you be happy for us to contact you in the future to follow up on where your academic journey leads?

Anything else you would like to add?

Appendix B: Yarning circle questions/guideline

Yarning Circle Questions

Indigenous PhD Scholars

Project

Navigating the cultural interface: Indigenous PhD scholars' experience of working toward epistemological equity in health research across Australia, Canada and New Zealand

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YARNING CIRCLE

1) Everyone to introduce themselves and where they are from
2) Would anyone like to describe what it feels like to be an Indigenous PhD scholar in a Western academy?
   a. How does this impact your experience – in both positive and possibly negative ways?
3) Would anyone like to tell us a bit about their project and the methodologies you use?
4) If you are undertaking a PhD project that utilises Indigenous methodologies, how do you navigate this within university processes?
   a. Do your supervisors have the experience you need them to?
   b. Do you seek outside support?
   c. How are you engaging with community if you do and what kinds of responsibilities does this involve?
   d. How has this impacted your projects
5) How could universities better support Indigenous PhD scholars to undertake their projects in self-determined ways?
   a. What peer support is available
   b. Could international connections be beneficial?
      i. How? Why?
      ii. In what ways should these be facilitated?
6) What impact will growing numbers of PhD scholars have on the academy in terms of what kinds of research is being conducted and in what ways?
7) Do you think your research has changed anything within the University (e.g./ the ways supervisors operate, or the supports that are offered, or the ways particular knowledge is valued or acknowledged etc)?

8) Is there anything you would like to change about your institution and what it does to support Indigenous scholars?