INDIGENOUS STUDENTS' JOURNEYS TO AND THROUGH ALLIED HEALTHCARE PROGRAMS

EQUITY FELLOWSHIP REPORT

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List of organisations and their abbreviations

AHPA	Allied Health Professions Australia
AASW	Australian Association of Social Workers
AHPRA	Australian Health Practitioner Regulation Agency
AHRC	Australian Human Rights Commission
AIDA	Australian Indigenous Doctors' Association
AIHW	Australian Institute of Health and Welfare
ALRC	Australia Law Reform Commission
ATSIHWWG	Aboriginal and Torres Strait Islander Health Workforce Working Group
AMA	Australian Medical Association
AMC	Australian Medical Council Ltd
APC	Australian Physiotherapy Council
CHEEDR	Centre for Higher Education Equity and Diversity Research
CIRES	Centre for International Research on Education Systems
DESE	Department of Education, Skills and Employment
IAHA	Indigenous Allied Health Australia
IHEAC	Indigenous Higher Education Advisory Council
NCSEHE	National Centre for Student Equity in Higher Education
NCVER	National Centre for Vocational Education Research
NIAA	National Indigenous Australians Agency
SPA	Speech Pathology Australia
VACCHO	Victorian Aboriginal Community Controlled Health Organisation Inc.
WHO	World Health Organisation

Executive Summary

Background

Communication between practitioner and patient is key in developing a trusting clinical relationship. However, interactions between Aboriginal and/or Torres Strait Islander[1] patients and medical and allied health practitioners can be problematic due to cultural misunderstandings. Many Indigenous people have reported poor past experiences with their non-Indigenous healthcare providers, a significant barrier to the delivery of successful health care for Indigenous people (Downing et al., 2011). Building capacity in the Indigenous health workforce has been suggested as one way of improving the healthcare experience, thereby enhancing Indigenous health outcomes.

At the time of writing, Indigenous people were poorly represented in healthcare professions with 0.4% of medical professionals and 0.4% of allied healthcare professionals identifying as Indigenous (IAHA, 2018; AMA, 2014). Publicly available statistics on the percentage of Indigenous practitioners for many healthcare professions can be found by searching the appropriate regulatory body. However, the numbers of Indigenous students within healthcare fields, particularly the allied health fields, are less well known. Examining Indigenous student participation for specific allied health professions was therefore one aim of the current Fellowship.

Across higher education, Indigenous students comprise 1.7% of the Australian domestic student population in higher education, whilst comprising 3.1% of the Australian working-age population (Department of the Prime Minister and Cabinet, 2018). In addition to having lower enrolment rates, Indigenous students are substantially less likely to complete their studies (Department of the Prime Minister and Cabinet, 2018). By contrast, higher numbers of Indigenous enrolments are found in the vocational education and training (VET) sector, where Indigenous Australians participate at a higher rate than the non-Indigenous population (Windley, 2017).

The difference between VET and higher education participation for Indigenous students has led some scholars to recommend articulated pathways between VET-sector and higher-degree qualifications as a potential means of increasing Indigenous representation in higher education (Frawley et al.,2017a; Smith et al., 2017). Given the higher numbers of Indigenous learners in the VET sector, of interest to the current Fellowship was whether VET qualifications in the healthcare field held potential for increasing Indigenous representation in higher degree healthcare study.

This report details the findings and recommendations from the National Centre for Student Equity in Higher Education [NCSEHE] Research Fellowship entitled *Indigenous Participation in Higher Degree and Vocational Education Healthcare Programs*. This one-year study investigated the national profile of Indigenous students enrolled in select higher education and vocational education allied healthcare study, as well as the institutional factors linked with success in access and retention. In undertaking the Fellowship, existing research and policy documents were considered including the *Behrendt Review* (2012), the *National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework - 2016*–2023, and the *Aboriginal and Torres Strait Islander Health Curriculum Framework*.

[1] In this report, the term 'Indigenous' will be used from here on to refer to Aboriginal and/or Torres Strait Islander people and/or Australian First Nations people. The author acknowledges the diversity of views with regards to using these terms.

Methods

A subset of 10 allied health professions was chosen for inclusion in the Fellowship: psychology, physiotherapy, occupational therapy, podiatry, optometry, audiology, dietetics, exercise physiology, speech pathology, and social work. VET program data on health and human welfare studies and services fields of education were also examined. The Fellowship adopted a mixed methods approach to data collection. Quantitative data on the socio-demographic profile of Indigenous students was sourced from the Department of Education, Skills and Employment (DESE) and the National Centre for Vocational Education Research (NCVER). This data was complemented by qualitative semi-structured interviews and online survey responses provided by Indigenous students and graduates, as well as stakeholders in the higher education and vocational education sectors.

Key Findings

Of the 10 professions examined, psychology, exercise physiology, and social work were the most widely offered areas of study at Australian universities, while optometry and audiology were the smallest disciplines on offer. Psychology, exercise physiology, and social work were also well represented as areas of study at regional universities, whereas dietetics, optometry, and audiology were poorly represented.

Professions differed with regards to the development of Indigenous inclusion policies with nine of the 10 professions signatories, or co-signatories, on Reconciliation Action Plans [RAPs] and three professions – speech pathology, physiotherapy, and psychology – requesting higher education programs include Indigenous admission strategies to enter the profession as part of accreditation standards.

In 2013, total Indigenous enrolment share in higher education was 1.7%, which increased to 2.2% by 2018. Quantitative analysis found a comparable increase of Indigenous enrolment share within the allied health professions from 1.6% in 2013 to 2.1% in 2018, although Indigenous representation varied widely by profession. Removal of the larger professions of social work and psychology from the analysis found Indigenous enrolment share was under 1% for the remaining professions, with no growth over the past decade. Progression in Indigenous enrolment share was therefore found in only a few of the allied healthcare professions included in the study.

Within the VET sector, across all fields of study, approximately 20% of Indigenous program completions were at Certificate IV or Diploma level, compared to 33% of non-Indigenous students. However, when narrowing the analysis to include only qualifications in healthcare, Indigenous students were just as likely to complete qualifications at Certificate IV or above when compared to their non-Indigenous peers. Within the vocational qualifications on offer, Indigenous completions were found to be concentrated in a small number of individual programs of study, with the *Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care* the most prominent. Given the substantial gap in higher education retention rates, it is striking that Indigenous students in VET healthcare qualifications were seen to complete at the same *rate* as their non-Indigenous peers.

For the larger professions of social work and psychology, Indigenous students used previous VET qualifications as a means of admission into allied health study in higher numbers than their non-Indigenous peers, although the numbers of students transitioning from VET to higher education were small. For the remaining professions, there was no difference between Indigenous students and their non-Indigenous peers in the use of VET qualifications for admission. One possible reason for this is because there are limited established pathways between VET and higher education in many of the professions: VET qualification credit transfers, where present, were likely to have been on an ad-hoc or individual basis. Interview participants supported the establishment of clearly defined,

articulated pathways between VET health study and higher education qualifications in allied health: the *Aboriginal and/or Torres Strait Islander Primary Health Care Cert IV* was the qualification most cited to have the potential to align with the curriculum content of other allied health qualifications.

For Indigenous students enrolled in higher education health study, support from others – or a lack thereof – is a consistent theme in the literature (Taylor et al, 2019), and students with supportive family, community, and peer networks are identified as more likely to persist with their studies (Buckskin et al., 2018; Frawley et al., 2017b; Kinnane et al., 2014; West et al., 2016). The Fellowship's findings were consistent with the existing literature: predominant qualitative themes were found to be the importance of the Indigenous Student Support Units in providing academic, financial, social, emotional, and cultural support; and the presence – or absence – of a sense of 'belonging' which was perceived as critical to success.

Although the current Fellowship primarily focused on the allied healthcare field, alignments were found with past recommendations made more broadly within the higher education sector, including but not limited to, the Behrendt and NATSIHEC Reviews. Future growth in Indigenous enrolment share within higher education allied healthcare programs could thus be achieved by continuing to build upon these recommendations, specifically: improving Indigenous governance and leadership within professional bodies, localised target setting by profession and/or institution, strategic expansion of course offerings into regional areas; improved partnerships between the VET sector and higher education providers; credit transfer arrangements for VET qualifications which align with allied health curricula; an education campaign within the VET sector on career transition opportunities; dual enrolments; support for VET articulation from higher education providers; and continued Indigenous Student Success Program (ISSP) funding to support the Indigenous Student Support Centres.

Key recommendations derived from the study are outlined in the following section.

Recommendations

Professional healthcare body recommendations

1. Actively recruit Indigenous members to governance positions and establish Indigenous associations within professions.
2. Create guidelines for higher education providers on recognition of prior learning (RPL), credit transfer, and articulation pathways into the profession to support students from diverse educational backgrounds and mature-aged students.
3. Establish professional mentoring programs for Indigenous allied health students.

Academic Course Convenor recommendations

In agreement with the *Aboriginal and Torres Strait Islander Health Curriculum Framework*:

1. Incorporate Indigenous cultures and knowledges into online content, including Indigenous voices and perspectives wherever possible.
2. Create multiple opportunities for Indigenous students to engage with their Indigenous and non-Indigenous peers, both online and in-person.
3. For clinical placements, provide access to an Indigenous mentor whenever possible, and ensure non-Indigenous field educators have received cultural safety training when being matched with an Indigenous student.
4. In partnership with the Indigenous Student Support Unit and other Indigenous staff, provide tailored placement orientation for Indigenous students.

Higher education provider recommendations

1. In agreement with the Behrendt Review, build and extend pathways from health VET qualifications into higher education, including pursuing better credit transfer arrangements for VET qualifications, such as the Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care, which align with allied health curricula.
2. Expand allied health offerings into regional areas wherever possible including the provision of online alternatives.
3. Provide online and part-time study options wherever possible.
4. Facilitate cultural safety training for all staff and students.
5. Create a nested approach to program delivery in which short courses contribute to credit towards a degree qualification.
6. Develop Indigenous-specific entry pathways for postgraduate program offerings.

Government recommendations

1. In addition to continued federal funding of the Indigenous Student Success Program (ISSP), the Indigenous Regional Low SES Attainment Fund should include objectives for Indigenous VET-to-higher education initiatives, including careers advice, transition support, and simplifying RPL processes.
2. Coordinate a national health careers campaign to educate the community on the varied roles in healthcare, with particular emphasis on engagement/promotion with Indigenous men.

Introduction

Consecutive Australian governments have invested in strategies to reduce the significant health and social inequities experienced by Indigenous Australians. These policy reforms, known colloquially as *Closing the Gap*, came about in response to the 2005 *Social Justice Report* by the Human Rights and Equal Opportunity Commission, which highlighted the poor life expectancy and health outcomes of Indigenous peoples in Australia (Aboriginal and Torres Strait Islander Social Justice Commissioner, 2005).

The term 'closing the gap' was coined to express a commitment by government to reduce the 'gap' between Indigenous and non-Indigenous life expectancy, child mortality, access to education, educational attainment, and employment outcomes.

In late 2008, the Council of Australian Governments (COAG) approved the *National Indigenous Reform Agreement*, which set out six *Closing the Gap* targets:

- *"to close the life expectancy gap within a generation*
- *to halve the gap in mortality rates for Indigenous children under five within a decade*
- *to ensure access to early childhood education for all Indigenous four-year-olds in remote communities within five years*
- *to halve the gap in reading, writing and numeracy achievements for children within a decade*
- *to halve the gap for Indigenous students in year 12 attainment rates by 2020 and*
- *to halve the gap in employment outcomes between Indigenous and non-Indigenous Australians within a decade." (Gardiner-Garden & Simon-Davies, 2012)*

Just over a decade after the initial *Closing the Gap* framework was developed, progress on its targets has been mixed. Of the six targets, two are on track – Year 12 attainment rates and four-year-old enrolment in early childhood education – while the remaining four targets show either no or minimal progress (National Indigenous Australians Agency [NIAA], 2020). In 2018, the employment rate for Indigenous Australians had remained relatively stable over the previous decade at 49%, compared to an employment rate of 75% for non-Indigenous Australians (NIAA, 2020).

In response to increased scholarship into Indigenous pathways and transitions into higher education, notably the Behrendt Review (2012), the *Closing the Gap* targets evolved into *The National Agreement on Closing the Gap* in July 2020, which specified 16 national targets across social and economic areas. These revised targets include increasing the proportion of Indigenous people who have completed a tertiary qualification and increasing the proportion of Indigenous youth who are in employment, education, or training (Department of the Prime Minister and Cabinet, 2020).

Closing the workforce gap between Indigenous and non-Indigenous Australians has therefore become an important national priority, one which feeds into the broader overarching policy of reducing evidenced socio-economic disparities.

Indigenous Australians are less likely to use mainstream health services, in part due to poor past experiences and cultural misunderstanding (Downing et al., 2011). Building Indigenous workforce capacity in the health professions has a crucial role to play in improving the quality of healthcare provision provided to Indigenous people (IAHA, 2018; Wright et al., 2019).

This need for greater capacity in Indigenous healthcare professions has been recognised in the *National Aboriginal and Torres Strait Islander Health Workforce Strategic Framework – 2016–2023*. *D*eveloped by the Aboriginal and Torres Strait Islander Health Workforce Working Group [ATSIHWWG], the framework has a focus on "prioritisation, target setting and monitoring of progress against growing and developing the capacity of the Aboriginal

and Torres Strait Islander health workforce" (2017, p. 3). The document consists of six strategies; strategy 4 is to "[i]ncrease the number of Aboriginal and Torres Strait Islander students studying for qualifications in health" (ATSIHWWG, 2017, p. 9) and strategy 5 is to "[i]mprove completion/graduation and employment rates for Aboriginal and Torres Strait Islander health students" (ATSIHWWG, 2017 p. 10).

However, Indigenous workforce representation in the healthcare professions is poor when compared to that of non-Indigenous Australians. In 2019, Indigenous members accounted for 0.4% of medical practitioners, 0.4% of dental practitioners, and 1.3% of nurses and midwives (Department of Health, 2019a). In all other healthcare professions, known collectively as allied health, 0.4% were registered under the National Registration and Accreditation Scheme (NRAS) in 2017 as Indigenous (IAHA, 2018).

The Australian Bureau of Statistics has a broader definition of allied health than the NRAS; it includes non-university-qualified support workers. Using this broader dataset, the percentage of Indigenous allied healthcare workers rose over three census periods (2006 to 2016; see Table 1). Proportionally, however, there was no increase in the overall allied health workforce between 2011 and 2016. Furthermore, because significantly more people identified as Indigenous by 2016, the 'gap' between the national Indigenous population and the Indigenous allied health workforce proportions doubled in size.

Table 1. Percentage of Indigenous allied healthcare workers in Australia: 2006–2016. Data Source: Australian Bureau of Statistics census data (2006, 2011, 2016).

	2006	2011	2016
National Indigenous population %	2.3%	2.5%	3.3%
National Indigenous allied health workforce population %	1.4%	1.7%	1.7%
Gap	**0.9%**	**0.8%**	**1.6%**

Although policy effort has gone into encouraging Indigenous pathways into the primary healthcare professions such as medicine and nursing (Duvivier et al., 2015), the allied health professions have received far less attention (IAHA, 2018). Depending on the profession, entry into allied health study can be competitive and based on academic achievement – factors known to limit student equity (Duvivier et al., 2015). Many higher education providers are also choosing to offer specialisation into allied health only at postgraduate level, which further restricts equitable access to these courses.

The focus of this Fellowship was to investigate models of successful pathways for Indigenous students into university-qualifying allied health professions. The following section provides an overview of what we currently know about Indigenous recruitment and retention within higher education, with an emphasis on allied healthcare.

Chapter 1: Background

1.1 Introduction

In 2017, Indigenous students comprised only 1.7% of the Australian domestic higher education student population, while comprising 3.1% of the Australian working age population (Department of the Prime Minister and Cabinet, 2018). While the participation of Indigenous Australians in post-secondary education has doubled over the past decade, the overall number of Indigenous students participating remains low compared to their non-Indigenous student peers (Wilks & Wilson 2015).

In addition to lower enrolment rates, Indigenous students also face a lower completion rate than non-Indigenous students. In 2015, only 40.5% of Indigenous students who commenced higher education studies at university completed their degree, compared to 66.4% of non-Indigenous students (Department of the Prime Minister and Cabinet, 2018).

Historically, Indigenous students have participated at higher rates in Vocational Education and Training (VET) than higher education. Indigenous participation in VET courses over the last two decades has steadily increased from 4.1% in 2002 to 4.6% by 2012 (Wilks & Wilson 2015). In 2012, enrolled Indigenous VET students accounted for approximately 15.3% of the total Indigenous population (Wilks & Wilson, 2015). In converting these participation rates to population percentages, Windley (2017) demonstrates that Indigenous Australians participate in VET at a higher rate than the non-Indigenous population.

Economic, academic, and geographic accessibility have been identified as key factors as to why more Indigenous students undertake VET qualifications in comparison to higher education qualifications (Behrendt et al., 2012, Kinnane et al., 2014). According to Windley (2017, p. 17), “Indigenous students may also be attracted to VET by its method of study, work-based and workplace learning approaches, the ability to ‘earn as you learn’ during VET training, curricular content, or the career options that a VET qualification provides”.

Indigenous students are less likely than their non-Indigenous counterparts to complete year 12 (Behrendt et al., 2012). The Indigenous uptake of VET qualifications may be higher because it is a more academically and economically accessible option for Indigenous students who may not have achieved the academic requirements necessary to enter higher education at a university level. Geographically, VET courses are also typically more accessible than higher education courses, making access easier for Indigenous Australians living outside major cities (Pollard, 2018).

Given the higher numbers of Indigenous students in the VET sector, research suggests that recognising VET sector qualifications as entry into higher education offers a potential pathway for increasing Indigenous student enrolments (Bradley et al., 2008; Frawley et al., 2017b; Smith et al., 2017). However, while enrolment in VET courses has steadily increased, Indigenous student enrolments have tended to be in lower-level certificate courses, such as Certificate I, II and III (Behrendt et al., 2012), whereas higher-level certificates at Certificate IV and above are required to provide the bridging skills and pathway needed for entry into higher education (Behrendt et al., 2012).

In examining Indigenous post-secondary education, the Behrendt Review argued that “VET can act as a diversion from higher education” by “diverting university capable students away from higher education” (2012, p. 41). Moreover, it noted there was “evidence that the VET sector is not providing a pathway into higher education for large numbers of Aboriginal and Torres Strait Islander VET graduates, even when they are completing higher-level courses” (2012, p. 43). According to the Behrendt Review, among the factors that have worked to prevent Indigenous students from successfully transitioning from VET study to university higher education study are a lack of awareness about how to transition from one to the

other, and an inconsistent approach to credit transfers (Behrendt et al. 2012; Frawley et al., 2017b). Meanwhile, the Bradley Review of Higher Education (2008) identified that structural rigidities, along with differences in curriculum, pedagogy, and assessment, all played a role in limiting the transition from VET to university higher education.

Because fewer Indigenous Australians hold higher education qualifications, they are also less likely to belong to a profession: only 14% of Indigenous Australians list their occupation as 'professional' in 2016 national census data, compared to 23% of non-Indigenous Australians (AIHW, 2019). Compared with non-Indigenous Australians, employed Indigenous Australians are 1.5 times more likely to work in the health and social assistance sector (IAHA, 2018; AIHW, 2019). However, these largely represent VET sector qualifications with remuneration for those holding health VET qualifications amongst the lowest paid in both government and non-government organisations (Topp et al., 2018) and with greater status and professional development opportunities awarded to their university-qualified allied health counterparts (Anderson, 2015).

As stated earlier, increasing the representation of Indigenous peoples in the professions is a vital step towards meeting the *Closing the Gap* targets. Although higher education providers play a leading role in supporting Indigenous students into professional areas of study, professional bodies are also important players in the healthcare space. Together with higher education providers, professional bodies determine the prerequisites for entry and qualification into the professions, and these bodies are therefore in a powerful position to advocate for bringing more Indigenous people into these areas of study.

The following section will review the role of professional bodies in the inclusion of Indigenous entry into the allied healthcare professions and provide an overview of current policy.

1.2 The role of professional bodies

Allied health is a suite of professions that provide healthcare services distinct from medicine, dentistry, and nursing. In addition, Allied Health Professions Australia [AHPA] (2020) specifies that to qualify as allied health, the chosen profession must:

- fulfil requirements to meet a higher education qualification at AQF Level 7 or above;
- and be accredited by a national regulatory professional body.

Using this definition, over 28 professions would be classified as providing allied healthcare services in Australia. Each allied health profession has strict regulatory requirements ensuring that only suitably trained and qualified graduates are clinically registered and able to work within Australia under the banner of their chosen profession.

The Australian Health Practitioner Regulation Agency (AHPRA) is the largest of these regulatory bodies and oversees several professions under its National Registration and Accreditation Scheme (NRAS) (Department of Health, 2019b). Allied health professions not registered with AHPRA are self-regulated.

It is essential that higher education providers follow the accreditation guidelines set out by each health profession's regulatory body. Without regulatory body approval, graduates cannot qualify for the necessary requirements to work in the field, and the program has far less appeal to potential applicants. Accrediting standards therefore play a significant role in shaping the focus of higher education programs within allied health, including entry into the profession.

The importance of professional bodies in facilitating inclusive entry is best illustrated by an example from the medical field. The Australian Indigenous Doctors' Association [AIDA], together with Medical Deans Australia and New Zealand, has established comprehensive strategies for including Indigenous recruitment, training, and curriculum in medical

education; just two of these are the 2004 Medical Deans' *CDAMS Indigenous Health Curriculum Framework* and the 2005 *Healthy Futures: Defining Best Practice in the Recruitment and Retention of Indigenous Medical Students* (AIDA, 2005; Cavanagh, 2012; Phillips, 2004). In June 2005, the LIME Network – Leaders in Indigenous Medical Education – was established to help future students navigate the available pathways and supports to enter the profession (The LIME Network, 2020). The Australian Medical Association [AMA], responsible for accrediting medical practitioner programs across Australia, has included Indigenous doctor training in clause 1.8.3 of its accreditation standards, which specify that "the medical education provider actively recruits, trains and supports Indigenous staff" (Australian Medical Council Ltd., 2012, p. 6). In response to this requirement, all medical school programs across Australia include an Indigenous special entry scheme for potential applicants.

This collective policy effort has made significant inroads to Indigenous medical practitioner numbers. According to the *Healthy Futures* report, there were 90 Indigenous Australian doctors, and 102 Indigenous students enrolled in medicine in 2004. At the time Indigenous doctors accounted for just 0.18% of the medical profession and 1.1% of the medical student population. In 2014, the AIDA reported 204 registered Indigenous medical doctors – over double the numbers recorded a decade earlier – and the number of Indigenous students studying medicine had tripled to 310 (AMA, 2014). Clearly much more work needs to be done to reach population parity of 3%; however, these increases are a remarkable achievement when one considers how low Indigenous representation was in the field.

Within allied healthcare, Indigenous health curriculum frameworks have been developed to provide support for education providers in health; the best known of these is the *Australian National Aboriginal and Torres Strait Islander Health Curriculum Framework* (Department of Health, 2014). Following publication of the *Framework*, many allied healthcare professional body accreditation requirements mandated the inclusion of Indigenous health content within the curriculum (Australian Association of Social Workers, 2012; Physiotherapy Board of Australia & Physiotherapy Board of New Zealand, 2015; Speech Pathology Australia, 2018).

The current Fellowship was interested in whether allied healthcare professional peak bodies had made inroads in developing strategies referring to the shortage of Indigenous members within the professions. A select number of allied health professions are subsidised under Medicare arrangements: audiologists, chiropractors, diabetes educators, dietitians, exercise physiologists, occupational therapists, optometrists, orthoptists, osteopaths, physiotherapists, podiatrists, psychologists, social workers and speech pathologists (Department of Health, 2019c). For this reason, a sub-set of ten subsidised allied health professions were selected for further analysis in the Fellowship (see Figure 1). These were randomly selected to represent five AHPRA members (psychology, physiotherapy, occupational therapy, podiatry, and optometry) and five self-regulated professions (audiology, dietetics, exercise physiology, speech pathology, and social work).

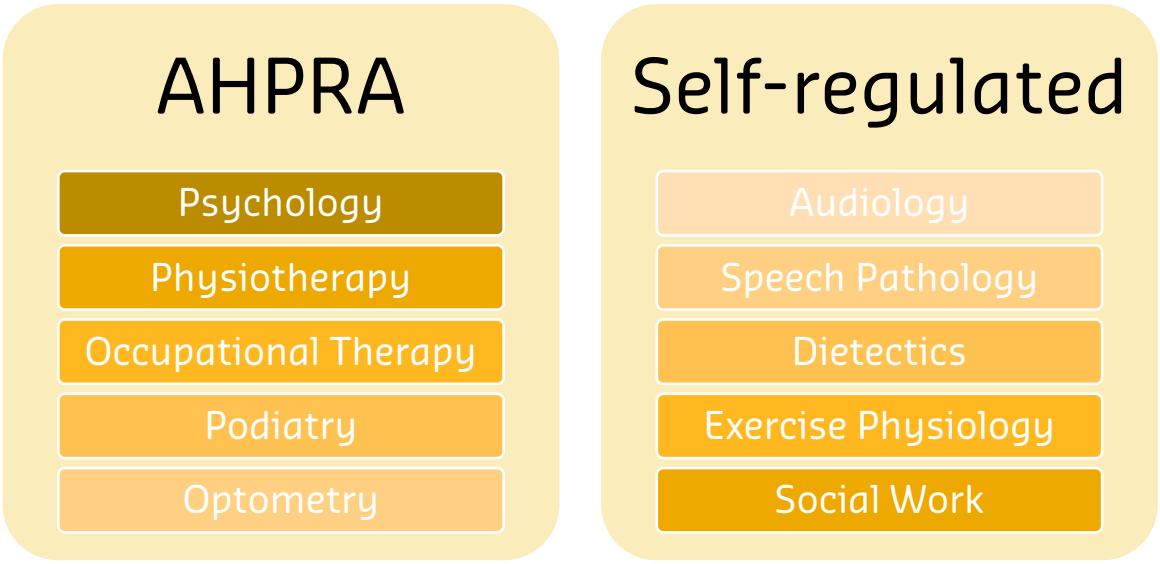


Figure 1. The ten allied healthcare professions included in the study.

The websites of the professional accrediting bodies for each of the ten professions included in the study were searched in February 2020, using the terms 'Aboriginal' or 'Indigenous'. In addition, the accreditation section of each website was searched manually to identify if the competency standards for each profession made any reference to Aboriginal or Indigenous inclusion. Documents were included in the analysis if the wording specifically targeted the topics of 'education', 'training' or 'workforce'.

The search strategy found that nine of the ten professional bodies were signatories or co-signatories on Reconciliation Action Plans (RAP) which included an aim of increasing access to the profession for Indigenous peoples. The RAP program was launched in 2006 and was designed to help organisations develop a business plan to outline the practical steps they would take to support reconciliation and respect between Indigenous and non-Indigenous Australians. The plans are facilitated by Reconciliation Australia and consequently there is a high degree of fidelity between the individual organisational plans.

Audiology was the exception: its professional body acknowledges the lack of Indigenous qualified audiologists in a 2019 position statement (Audiology Australia, 2019); however, the search identified no additional documents of relevance. The accreditation standards of three professions – speech pathology, physiotherapy, and psychology – mentioned Indigenous equity strategies to enter the profession (Australian Physiotherapy Council, 2016; Dudgeon et al., 2016; Speech Pathology Australia, 2018). For these three professions, accreditation standards did not prescribe how programs should tailor their admissions structures, which creates the potential to interpret those standards in various ways. Notably, none of the policy documents found in the study had set out specific targets; that is, regulatory bodies were not seen to press course providers to set measurable benchmarks against their equity strategies.

It seems the onus is on individual program providers to set their Indigenous student admission targets, and there are no incentives – or penalties – if they fail to meet these. Thus, the evidence suggests that at the time of the Fellowship, professional bodies were still at the early stages of incorporating meaningful policies to increase Indigenous representation in the allied healthcare professions. Furthermore, they were more likely to place accountabilities on higher education institutions to supply Indigenous graduates than they were on their members to employ such graduates. The shying away of measurable outcomes by players is likely to restrict momentum in this space.

The following section will provide an overview of the widening participation literature on Indigenous students in higher education, with an emphasis on allied health programs of study.

1.3 Indigenous students in health degrees: Widening participation barriers and drivers

Higher education providers are at the tail end of a lifetime of inequity for many Indigenous students and there is a limit to what widening participation schemes can achieve in alleviating disadvantage without radical investment in structural changes earlier on in the lifespan (AIDA, 2005). Nevertheless, universities can play a vital role in recognising those applicants who have the potential to succeed.

A large body of literature exists around the factors influencing Indigenous access, retention, and success in higher education in Australia (Behrendt et al., 2012; Buckskin et al., 2018; Bunda et al., 2012; Frawley et al., 2017b; James & Devlin, 2006; Kinnane et al., 2014). Most of these studies looked at 'the university' as a whole and it is only recently that more interest has been given to Indigenous widening participation within specific faculties or professions.

What follows is a summary of the factors that hinder or support Indigenous recruitment, success, and retention into higher-degree health professions, utilizing Lizzio's (2006) five senses of student success.

Lizzio (2006) proposes a conceptual framework for describing the variables linked with student retention. Lizzio's work defines five 'senses' that are needed to support student success: Capable, Connected, Purpose, Academic Culture, and Resourceful (see Figure 2). As Lizzio writes, these five senses were not intended to be prescriptive, but rather to provide a "shared language for reflection" (2006, p. 1). Here, these five senses of student success offer a means of categorising the main findings of the literature and are summarised in Figure 3.

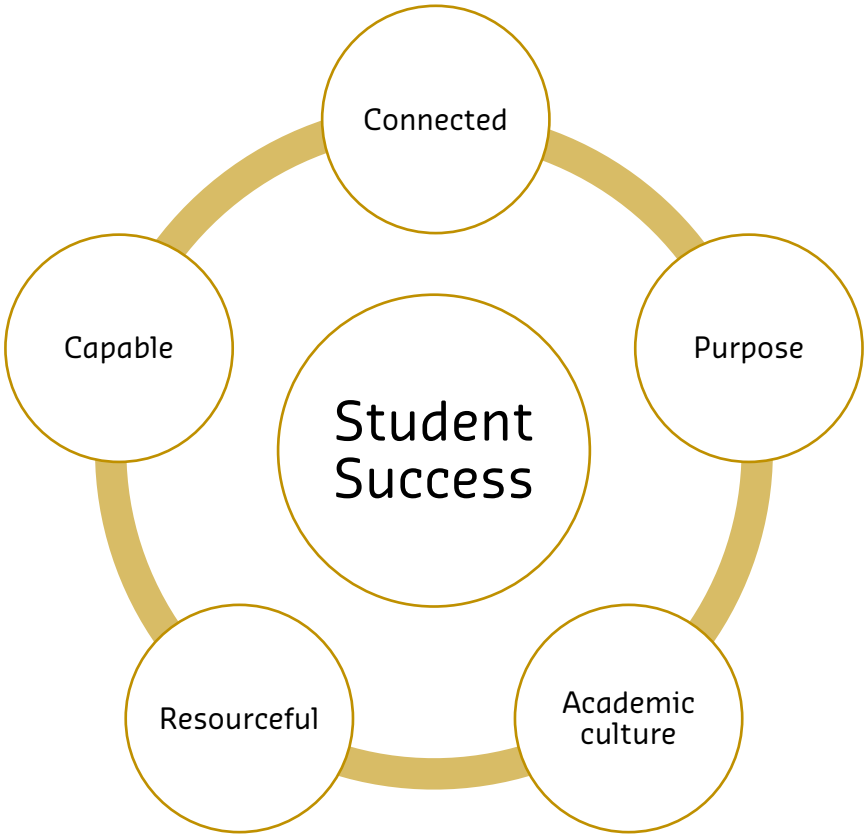


Figure 2. The five senses of student success (Lizzio, 2006).

Capability

Lizzio (2006) describes student capability as how prepared the student is for tertiary study. For Indigenous students entering health degrees, higher education providers can assist in developing student capability by providing accessible and timely information about the course of study, course expectations and student support services on offer – for a comprehensive review of these recommendations see Taylor et al. (2019).

Additional factors that have been identified as helpful in the preparation stage of study are: Recognition of Prior Learning (RPL), including course credits or advanced standing; offering multiple pathways for entry (Frawley et al., 2017b; Lawson et al., 2007; Paul, 2013); and providing financial assistance in the form of scholarships, cadetships, and/or ABSTUDY (Usher et al, 2005; West et al., 2016).

Many health programs, particularly in medicine, describe the comprehensive orientation programs they provide to Indigenous students, which outline course expectations, introduce the student support programs on offer, and provide opportunities to meet fellow students and staff (Stuart & Gorman, 2015; Usher et al., 2005). Course quotas with specific places for Indigenous applicants have also been recommended (Lawson et al., 2007).

Conversely, the literature reports that when Indigenous students faced a challenging admission process, such as difficulties in applying for RPL and a lack of articulated pathways from VET qualifications into higher education, they felt stressed, disempowered, and undervalued (Meiklejohn et al., 2003; Stuart & Gorman, 2015).

Connectedness

Student connectedness is “the quality of relationships with peers, with staff and their (the student’s) feelings of identification or affiliation with their School or University” (Lizzio, 2006, p. 2).

For Indigenous health students, support from others – or a lack thereof – is a consistent theme in the literature (Taylor et al., 2019). Indigenous students with supportive family, community, and peer networks have been identified to be more likely to persist with their studies (Meiklejohn et al., 2003; Stuart & Gorman, 2015; Usher et al., 2005; West et al., 2016).

Similarly, higher education providers can assist Indigenous students in health degrees by facilitating welcoming and positive relationships with the Indigenous Support Unit and with non-Indigenous academics (Stuart & Gorman, 2015; Usher et al., 2005; West et al., 2016), as well providing opportunities to meet Indigenous role models and mentors (Stuart & Gorman, 2015). For example, a midwifery program reported the benefits of an Indigenous Academic Liaison Midwife in supporting and advocating for students (Schulz et al., 2018).

Indigenous Support Units, in particular, have been identified as having an essential role to play as they provide academic support through tutoring and peer learning and support; practical support via information on finances and accommodation; and emotional and cultural support (Farrington et al., 2001; Stuart & Gorman, 2015; Usher et al., 2005; West et al., 2016).

Just as connectedness can aid students in their study experience, a lack of support from family or significant others can hinder them, contributing to feelings of isolation and stress (Stuart & Gorman, 2015). This is complicated further for Indigenous students who must balance family and caring responsibilities, and who feel obligated to meet family and community commitments (Shalley et al., 2019; Young et al., 2007).

Racism and discrimination from non-Indigenous peers and staff have been reported in the literature as one of the major barriers to successful course completion for Indigenous students. Examples include questioning over their cultural identity, and students being treated negatively by others due to the perception that they are receiving ‘special treatment’ (Cavanagh, 2012; Stuart & Gorman, 2015; Usher et al., 2005; West et al., 2016, 64).

Purpose

Purpose refers to students’ motivation to undertake their chosen area of study (Lizzio, 2006). The literature reports that Indigenous students select health as a field of study to improve future employment prospects (Ellender et al., 2008; Stuart & Gorman, 2015; West et al., 2016) as well as to “make a difference” for their community (Chur-Hansen et al., 2008; Ellender et al., 2008; Stuart & Gorman, 2015). Several authors also note students’ purpose of becoming a role model for their community (Stuart & Gorman, 2015, West et al., 2016).

Resourcefulness

Lizzio (2006) describes resourcefulness as the student’s ability to successfully navigate the challenges of higher education.

Confidence, resilience, self-efficacy, and perseverance are personal qualities which have been linked with Indigenous student retention in the health fields (Stuart & Gorman, 2015; Usher et al., 2005). Another factor that has been positively associated with study persistence is students’ comfort with actively seeking support when they need it (West et al., 2016). Additionally, Indigenous mature-aged students with life and/or work experience reported finding this valuable in helping them navigate higher education (Farrington et al., 2001; Usher et al., 2005).

Higher education providers can support confidence and resilience in Indigenous students by offering flexibility in the mode in which study is undertaken, the pace of study, as well as communicating opportunities for future study should the student decide to defer (Meiklejohn et al., 2003; Usher et al., 2005).

Academic culture

Academic culture refers to the inherent values, customs, language and 'ways of doing' university life (Lizzio, 2006). Of relevance for Indigenous students is fostering a culture which respects Indigenous identity. More than one author has stressed that a culturally safe university environment can only be provided if strong organisational leadership shares this vision (Buckskin et al., 2018; Fowler et al., 2018; Harris et al., 2012). The literature also recommends a shared commitment to cultural safety training for all academic staff (Harris et al., 2012), although the best way of implementing these programs remains a source of contention (Cavanagh, 2012).

Finally, the literature recommends curriculum inclusions that lead to better retention rates for Indigenous students, and which reinforce that Indigenous health is an important part of the academic curriculum: including Indigenous content in health curricula; including Indigenous educators and researchers wherever possible; consulting with Indigenous people on the nature of the material included; and providing cultural safety training for students and staff (Cavanagh, 2012; Fowler et al., 2018).

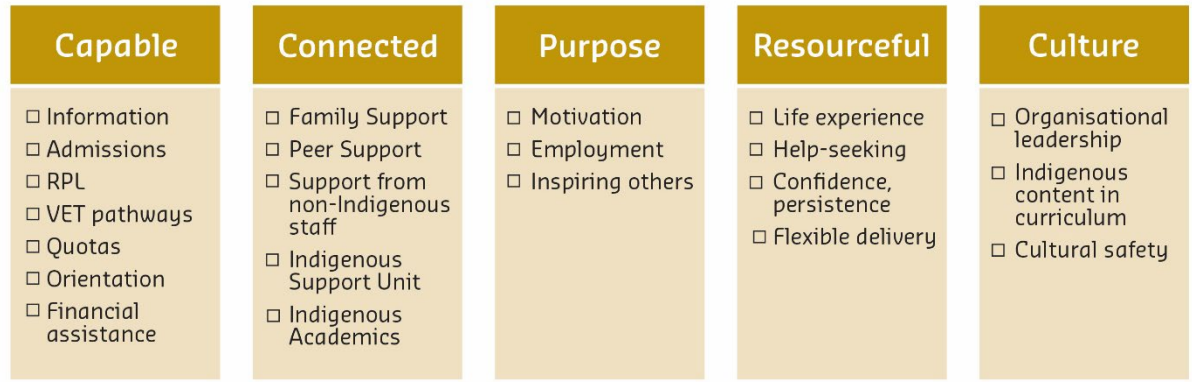


Figure 3. Summary of the factors reported to support Indigenous retention and success in healthcare degrees.

1.4 COVID-19

The current Fellowship was awarded in October 2019 and commenced in January 2020. At the time, few could have predicted the emergence and scale of the novel coronavirus SARS-CoV-2 and the subsequent COVID-19 pandemic it caused, which hit Australia during March 2020.

On March 11, 2020, the World Health Organisation [WHO] declared COVID-19 a global pandemic (WHO, 2020). Telehealth was catapulted into the spotlight, as it became one of the key solutions governments and health authorities around the world deployed to help contain and combat COVID-19 risks (Waters, 2020).

The higher education sector, too, was forced to rapidly adjust to the pandemic: campuses closed, face-to-face teaching was cancelled, and content shifted to online delivery. Scholars both nationally and globally raised concerns about the potential for COVID-19 to exacerbate student equity issues, including amongst Indigenous students (Drane et al., 2020; Maloney & Kim, 2020). For students enrolled in health courses the move to purely online learning

created several additional challenges, including clinical health placements that were paused or cancelled, which left students at risk of not being able to graduate.

Although COVID-19 was not foreseen, it nonetheless played a role in shaping the outcomes of the Fellowship. All research activity was shifted to an online format, and face-to-face community engagement and project dissemination was postponed. Although COVID-19 was not directly asked about in data collection, it came up naturally in conversation with participants, given its substantial impact on daily life.

COVID-19 thus formed a significant component of the research setting of the Fellowship, or as Given (2020) describes it, "…the physical, social, and cultural site in which the researcher conducts the study" (p. 787); and its influence was duly considered in the study analysis and interpretation.

1.5 Summary

There is a critical need for high-quality, culturally safe, and responsive healthcare service delivery that contributes to the health and wellbeing of Indigenous Australians. Increasing the representation of Indigenous peoples in the healthcare professions is an important part of meeting this goal.

Strategies which have been recommended in the literature to support Indigenous recruitment into and participation in health degrees are: streamlined admissions processes, peer and academic support, linking in with the Indigenous Student Support Unit, financial support, cultural safety, and the inclusion of Indigenous content in the curriculum.

This Fellowship investigated quantitative data on Indigenous students in healthcare VET and higher education qualifications and explored stakeholder views on the potential to expand articulation pathways.

The next chapter details how this research was undertaken with stakeholders and Indigenous students and graduates.

Chapter 2: Research design and methodology

The Fellowship adopted a mixed methods approach to explore the research topic from a range of perspectives. This chapter details the methodological approach taken in the project.

Indigenous Allied Health Australia [IAHA] supported the study and provided consultation and participant recruitment assistance to ensure the research was relevant to IAHA's strategic aims (IAHA, 2018).

The project adhered to the ethical guidelines provided by both La Trobe University and the Australian Institute of Aboriginal and Torres Strait Islander Studies to always ensure that the researchers followed and adhered to Indigenous cultural protocols, data sovereignty, and ways of managing knowledge and interacting socially.

2.1 2 Researcher as Insider

Unluer (2012) writes that it is important to acknowledge the background of the researchers in qualitative research to ensure full transparency and to increase research credibility. This is particularly important in research with Indigenous peoples to ensure the research is framed by the priorities and needs of Indigenous communities, rather than by the researcher (Rigney, 2006).

Andrea Simpson (AS), project fellow, is a non-Indigenous audiologist and researcher who migrated to Australia from South Africa in 2000. She has had extensive experience of working with Indigenous Australians through her clinical practice and research. Her interest in this project stemmed from her personal experience of working clinically in remote Indigenous communities as well as her professional role as Course Coordinator for the Audiology program at La Trobe University. Andrea was responsible for project coordination, research design, data collection, data analysis, and report write-up.

The project was supported by a part-time project officer, Kim Alley (KA). Kim is an Indigenous (Murri) academic and researcher who is completing her PhD in Politics. She has extensive experience of working one-on-one with Indigenous students as a tutor in the ITAS programs run by Indigenous Student Units at The University of Melbourne, Australian Catholic University and Swinburne University. She has also worked with the North West Regional Indigenous Family Violence Action Group, conducting research to help develop a model for an Indigenous Healing Service. Kim was responsible for web searching, advising on the cultural integrity of the methodology, participant recruitment, carrying out interviews, and qualitative coding and analysis.

The research team chose to use an intercultural communication approach throughout the project as a way of embracing cultural identity and knowledge in interactions (Singh, 2010). This approach encourages participants to admit uncertainty, challenge assumptions, practise empathy, and embrace diversity throughout the research process.

2.2 Research questions

The Fellowship aimed to answer the following questions of interest:

- What is the current policy landscape of Indigenous inclusion for entry into select allied health professions?
- What is the national profile of Indigenous students enrolled in select allied health higher education programs?
- Which health-related VET courses at Certificate IV and above offer the most potential in acting as pathways into higher education allied health programs?

- What are the institutional factors linked with success in attracting and retaining Indigenous students in select allied health study?
- How have Indigenous allied health students and graduates entered their chosen professions, and how was this experienced at an individual level?

2.3 Research activities

To address these research questions, a policy review was carried out examining the inclusion of Indigenous peoples in education and training policies by allied health professional peak bodies as well as higher education providers (described in Section 1.2). Secondly, national data from the Department of Education, Skills and Employment [DESE] as well as the National Centre for Vocational Education Research [NCVER] on Indigenous students enrolled in select health programs of study was analysed.

Finally, semi-structured interviews and online surveys were carried out with stakeholders in higher and vocational education and Indigenous allied health professionals and students.

As explained in Section 1.2, a subset of ten allied health professions was selected for further analysis. These professions were randomly selected to represent five Australian Health Practitioner Regulation Agency [AHPRA] members – psychology, physiotherapy, occupational therapy, podiatry, and optometry – as well as five self-regulated professions – audiology, dietetics, exercise physiology, speech pathology, and social work.

Seven of these professions (physiotherapy, occupational therapy, podiatry, dietetics, exercise physiology, speech pathology, and social work) offer applicants the choice of entering the profession either through a four-year undergraduate degree, or a two-year graduate degree for those with an existing degree in another field. One profession (optometry) is offered through a combined Bachelor/Master's degree of five years duration or a four-year postgraduate clinical doctorate. One profession (audiology) is entered via a graduate pathway and is a two-year postgraduate qualification. Psychology requires a three-year undergraduate degree in psychology, a fourth-year Honours degree, and a Master's degree of a minimum one year's duration in order to qualify. As the Master's degree is the required qualification needed in order to register, this was the program examined for evidence of Indigenous alternative pathway schemes.

The study was approved by the La Trobe University Human Ethics Committee in three parts: Department of Education, Skills, and Employment data analysis (HEC20117), stakeholder survey and interviews (HEC20134), and Indigenous student and graduate survey and interviews (HEC20174).

Figure 4. An overview of the research activities undertaken in the Fellowship.

2.4 Research design

Quantitative data collection and analysis

Higher education data collection and analysis

To determine the national demographic profile of Indigenous students in allied health study, data was requested from the Department of Education, Skills and Employment [DESE] in April 2020. Field of education data was generated for nine of the ten professions of interest (audiology, dietetics, psychology, social work, occupational therapy, optometry, speech pathology, podiatry, and physiotherapy). Exercise physiology was unable to be included in the analysis as the profession did not have a standalone field of education code.

Longitudinal analysis of departmental data from 2008–2018 was carried out on the access and participation of Indigenous students across nine allied health professions.

The patterns of Indigenous enrolments were tabulated for the most recent results (2018) for each demographic factor. For privacy reasons, DESE opts to tabulate enrolment counts between 1 and 4 as "<5". Where it was not possible to determine this value from the totals, a value of 2 was used for the purposes of tabulation and analysis. Cases where the level of the demographic factor was unknown were excluded from tables and analysis.

To formally assess the relationship between each demographic variable and Indigenous enrolments, chi-squared tests were used. Where there were insufficient data in each category for analysis, categories were collapsed.

Vocational education data collection and analysis

Data on Indigenous students enrolled in VET qualifications was sourced from VOCSTATS, an interactive software tool which allows users to access data from the National Centre for Vocation Education Research's [NCVER] data collections and surveys.

VOCSTATS categorises VET program/course data by 12 fields of education, of which the fields 'Health' and 'Society and Culture' were the two most relevant to the current project. A further 12 and 13 sub-categories are found within the Health and Society and Culture fields, respectively. Descriptive analysis was carried out on all 12 sub-categories of the Health field as this was the main area of interest for the project. The sub-category of 'Human welfare studies and services' within the field of Society and Culture was included in the analysis as qualifications within this area are relevant to further study in Social Work. A limitation of the analysis is that some programs of interest may have been missed by focusing on only these fields of education. In addition, the sub-categories are broad and do not provide information on the qualifications contained within each sub-category.

Descriptive analysis was carried out on Indigenous completions of Certificate IV qualifications and above in 2018 as these qualifications can act as pathways into higher education study.

Internet-based searches

A series of web searches were carried out in early 2020. For the first search, the websites of professional peak bodies for each of the ten professions included in the study were searched and analysed as policy as text. A deep search of each website was carried out by entering 'site: …' followed by the search term 'Aboriginal OR Indigenous OR First Nations' into Google's search bar in February 2020. In addition, the accreditation section of each website was searched manually to identify if the competency standards for each profession made any reference to Aboriginal, Torres Strait Islander and/or Indigenous inclusion. Web pages were included in the analysis if any content made mention of the topics of 'education', 'training' or 'workforce'.

Secondly, the websites of higher education providers offering accredited programs of study for each of the ten allied health professions were searched during March–April 2020. The websites of 46 higher education providers were included in the search. When surveying the information on each program of study's website, the following information was entered into Excel: (1) if the program of study offered an Indigenous-specific entry pathway; and (2) what type of entry pathway was offered. Course page listings, Aboriginal or Indigenous Student Units and relevant provider policy documents were included in the search.

Online survey and interview collection and analysis

Stakeholders in the higher education and vocational education sectors were invited to partake in an online survey or semi-structured interview. The study was advertised through the National Centre for Student Equity in Higher Education [NCSEHE] and Indigenous Allied Health Australia [IAHA] as well as bulk email invites to university and vocational education staff whose contact details were sourced via publicly available web pages.

Participants in this study included current Indigenous university students enrolled in allied health study, Indigenous graduates working in allied health, Indigenous higher education student support and engagement staff, Indigenous peak body representatives, equity practitioners, higher education staff, and vocational education staff.

All participants were offered the choice between participating in an interview (approximately 45–60 minutes) via the online Zoom software platform or completing a survey (approximately 15 minutes) made available via a Qualtrics hyperlink. Details of the interview questions for stakeholders and Indigenous students and graduates are available in Appendices 1 and 2, respectively.

Survey responses were downloaded from Qualtrics into an Excel spreadsheet. Individual interview audio recordings were transcribed by an external professional transcription service. All files were then uploaded into the NVivo software package for analysis.

Open set responses were coded using a line-by-line method. Analysis was undertaken using the thematic methodology for in-depth qualitative research as described by Braun and Clarke (2006). The primary goal of thematic analysis for qualitative research is to identify, analyse and report common ideas – or themes – that are evident in participants' interviews (Braun & Clarke, 2006). This method of data analysis was selected for its flexible applicability to a wide variety of qualitative studies, regardless of their research question, sample size or data collection method.

KA initially coded the data from each interview by designating labels to encapsulate the key idea. All responses were coded multiple times as new themes emerged, ensuring all interviews were assessed for all themes present. AS individually reviewed the coded data; then the researchers met as a team to discuss the identified themes to determine mutually agreed-upon patterns. These patterns and core themes were then reviewed against the original transcripts to ensure that they maintained the voices of the participants and were anchored in their experience.

Chapter 3 describes the quantitative and qualitative findings of the project.

Chapter 3: Findings

Findings will be presented in the order in which research activities were undertaken during the Fellowship. The first section will present the outcomes of the Internet-based search of higher education providers. The second section will provide the quantitative analysis from the Department of Education, Skills and Employment [DESE] as well as the National Centre for Vocational Education Research [NCVER] on Indigenous students enrolled in select health programs of study. Finally, the third section will discuss the results of the qualitative semi-structured interviews and online surveys carried out with stakeholders in higher and vocational education as well as Indigenous health students and graduates.

3.1 Indigenous entry pathways into allied health

Forty-six higher education providers were identified nationally which offered study in one or more of the ten allied health professions included in the study. Of these, 37 were public universities and nine were private providers, including five universities and four higher education colleges.

Of the ten professions examined, psychology, exercise physiology, and social work were the most widely offered areas of study at Australian universities: 40, 30, and 30 Australian higher education providers offered courses in these respective fields (Table 2). Physiotherapy was offered at a total of 21 higher education providers and occupational therapy offered at 22 providers. Speech pathology was offered at 16 providers, followed by dietetics at 16 providers and podiatry at nine providers. The smallest disciplines on offer were optometry and audiology, both of which were offered at a total of six providers.

The number of providers offering an area of study who also belonged to the Regional University Network (RUN) are shown in Table 2. RUN consists of seven universities – CQUniversity, Southern Cross University, Federation University Australia, University of New England, University of Southern Queensland, University of the Sunshine Coast, and Charles Sturt University – with headquarters in regional Australia. As shown, psychology, exercise physiology, and social work are well represented as areas of study at regional universities, while dietetics, optometry, and audiology are poorly represented.

Table 2. Number of higher education providers offering allied healthcare study.

PROFRESSION	NUMBER PROVIDERS OFFERING FIELD OF STUDY	NUMBER PROVIDERS OFFERING FIELD OF STUDY AT UNDERGRADUATE LEVEL	NUMBER RUN MEMBERS OFFERING FIELD OF STUDY
Psychology	40	40	7
Exercise Physiology	30	30	7
Social Work	30	26	6
Occupational Therapy	22	20	4
Physiotherapy	21	15	2
Speech Pathology	16	11	3
Dietetics	16	7	1
Podiatry	9	8	3
Optometry	6	5	0
Audiology	6	NA	0

Thirty-four of the 46 providers (74%) offered undergraduate or combined undergraduate/postgraduate programs of study in these fields. At a postgraduate level, 42 of the 46 (91%) providers offered postgraduate programs in the ten allied health fields being examined. Nine of the 46 providers (20%) offered only postgraduate offerings.

Student applications for undergraduate study are generally managed by each state and territory's Tertiary Admission Centres (TACs). TACs process applications for admission to courses on behalf of higher education providers. Applicants can include Indigenous heritage as a special consideration factor within their application package. Applicants are usually required to complete a personal statement that explains their circumstances and how these may have affected their Year 11/12 results. The institution can choose to increase the applicant's ATAR score (known as 'bonus points', 'special adjustment' or 'equity adjustment') or allocate the student a place reserved for special consideration applicants (Good Universities Guide, 2020). Most higher education providers across Australia participate in this type of scheme.

In addition to special consideration adjustments, many providers have specific admissions policies for Indigenous applicants. A search of the 46 providers was undertaken to determine: 1) if the provider offered Indigenous-specific pathways in addition to those administered by TACs; and 2) if these pathways applied to allied health study.

Table 3 shows the number of providers offering the field of study across Australia per profession, together with the number of providers that were found to offer Indigenous-specific entry pathways into the field of study. No examples of Indigenous-specific entry pathways were identified for postgraduate program offerings. This has potential ramifications for professions which require postgraduate qualifications for members to practise clinically, such as audiology and psychology.

Table 3. Summary of alternative undergraduate entry pathways for Indigenous students offered by the 46 providers included in the study.

PROFRESSION	NUMBER PROVIDERS OFFERING INDIGENOUS ALTERNATIVE ENTRY	PERCENTAGE PROVIDERS OFFERING INDIGENOUS ALTERNATIVE ENTRY	TYPE OF PATHWAY OFFERED		
			NUMBER PROVIDERS WHO OFFER INTERVIEW WITH INDIGENOUS SUPPORT UNIT	NUMBER PROVIDERS WHO OFFER BRIDGING COURSE	NUMBER PROVIDERS WHO OFFER FOUNDATION COURSE
Exercise Physiology	22	73%	19	4	13
Social Work	18	69%	14	3	8
Physiotherapy	11	73%	8	2	6
Occupational Therapy	15	75%	12	2	7
Speech Pathology	8	72%	7	2	4
Dietetics	6	86%	5	0	2
Podiatry	6	75%	4	1	2
Optometry	5	100%	5	1	2

Of the 34 providers that offered undergraduate or combined undergraduate/postgraduate programs, 25 (74%) made mention on their websites of alternative entry pathways for Indigenous students wishing to apply for entry into allied health study. Of the nine providers that did reference Indigenous-specific alternative entry paths, eight were public universities

and one was a private higher education provider. Five of these providers were in Victoria, two in Queensland, one in the Northern Territory, and one in Western Australia. Due to the nature of the search strategy, it is possible that these providers do indeed provide alternative entry pathways but that these are not promoted on the institution's website.

Optometry had the highest percentage of alternative entry pathways for Indigenous students per program of study at 100%. This was followed by dietetics with 86%, occupational therapy with 75%, physiotherapy with 73%, podiatry with 75%, and speech pathology with 72%. Social work showed the largest gap between undergraduate/combined study programs and alternative entry pathways: 31% of providers did not describe any form of alternative entry pathway for Indigenous students on their website.

The most common alternative entry pathways for Indigenous students were found to be: (1) an interview held with the provider's Indigenous study unit; (2) a foundation/enabling program of 6–18 months' duration; and (3) a bridging or preparatory course of up to eight weeks' duration. To be eligible for any of the alternative Indigenous entry pathways, students were required to meet the following identification requirements in line with the currently accepted Australian Government definition of Indigenous identity (Australia Law Reform Commission, 2010): (1) be of Aboriginal or Torres Strait Islander descent; (2) identify as an Aboriginal or Torres Strait Islander; (3) be accepted as an Aboriginal or Torres Strait Islander in the community in which you live or have lived.

In most instances, across all the allied health fields offering alternative pathways for Indigenous students, the interview pathway was offered at approximately two times the rate of a foundation program. Where foundation or bridging programs existed, in most instances they were linked with the interview process – a foundation or bridging program was offered to students if they were not seen as 'academically ready' for direct entry into their chosen field of study.

3.2 Indigenous representation in vocational health qualifications

As discussed in Chapter 1, Indigenous students are present in higher numbers in VET when compared to higher education. For this reason, articulated pathways between VET qualifications and university have been presented as one potential means of increasing Indigenous representation in higher education.

This section presents descriptive data on the profile of Indigenous learners in the VET sector, with an emphasis on vocational qualifications in the vocational field of 'Health' and 'Human Welfare Studies and Services' at Certificate IV and above. Data in the study was sourced from the National Centre for Vocational Education Research's [NCVER] data collections and surveys (NCVER, 2020) during August 2020.

NCVER data will be presented on the following:

- Indigenous enrolments;
- Indigenous completions;
- Indigenous socio-demographic profile.

Indigenous enrolments

In 2018, there were a total of 2,625,753 program enrolments in VET study (see Table 4). Of these, 139,298 (5.3%) identified as Indigenous. For the fields of Health, and Human Welfare Studies and Services, the percentage of Indigenous representation was found to be 4.2% and 7.7% respectively.

Table 4. Percentage of Indigenous and non-Indigenous VET enrolments in 2018. (Data Source: NCVER VOCSTATS, 2018)

VET PROGRAM ENROLMENTS	% INDIGENOUS	% NON-INDIGENOUS
Total	5.3%	85.2%
Total at Certificate IV and above	20.1%	34%
Total in 'Health' field of education	4.2%	84.6%
Total in 'Health' field of education at Certificate IV and above	43.3%	46.7%
Total in 'Human Welfare Studies' field of education	7.7%	87.0%
Total in 'Human Welfare Studies' field of education at Certificate IV and above	36.5%	39.5%

Across all VET fields of study, 80% of Indigenous enrolments were for Certificate I–III qualifications, and 27,992 (20%) of Indigenous enrolments were at Certificate IV or higher. However, Indigenous representation at higher levels of qualification was found to be dependent on field of study. For the fields of Health and Human Welfare Studies and Services, Indigenous enrolments at higher qualification levels were on par with non-Indigenous enrolments. Just over 43% of Indigenous students enrolled in Health were for Certificate IV or above qualifications, compared to 47% of non-Indigenous students (see Table 4). Thirty-six percent of Indigenous students enrolled in Human Welfare Studies and Services were for Certificate IV or above qualifications, compared to 39% of non-Indigenous students.

Indigenous completions

VET program completion figures were significantly smaller for both Indigenous and non-Indigenous students. In 2018, there were a total of 887,496 VET completions, of which 35,434 (4%) were Indigenous (see Table 5). As seen for enrolments, Human Welfare Studies showed a similar representation to the larger VET cohort at 4.9%, with a lower Indigenous representation seen for the Health field of education at 2.7%.

Table 5. Percentage of Indigenous and non-Indigenous VET completions in 2018. (Data Source: NCVER VOCSTATS, 2018)

VET PROGRAM COMPLETIONS	% INDIGENOUS	% NON-INDIGENOUS
Total	4.0%	84.6%
Total at Certificate IV and above	18.8%	32.8%
Total in 'Health' field of education	2.7%	86.0%
Total in 'Health' field of education at Certificate IV and above	33.4%	35.7%
Total in 'Human Welfare Studies' field of education	4.9%	89.2
Total in 'Human Welfare Studies' field of education at Certificate IV and above	39.5%	33.2%

Across VET sector fields of study, approximately 19% of Indigenous program completions were at Certificate IV or Diploma level, compared to 33% of non-Indigenous students. However, for the Health and Human Welfare Studies and Services fields, Indigenous students showed higher rates of completion at Certificate IV or above. Within the Health field of education, just over 33% of Indigenous students completed qualifications at Certificate IV and above, compared to 36% of non-Indigenous students. Within the Human Welfare Studies and Services field of education, almost 40% of Indigenous students completed qualifications at Certificate IV and above, compared to 33% of non-Indigenous students.

Within the field of Health, a total of 2,049 Indigenous completions was listed in this search, 691 of these at Certificate IV and above. Table 6 shows the numbers of Indigenous completions within the sub-categories of the Health field. Public health had the most Indigenous completions at 41%, followed by 'Other Health' at 29.7%.

Table 6. Percentage of Indigenous and non-Indigenous VET completions in 2018 within the field of education of Health. (Data Source: NCVER VOCSTATS, 2018)

VET PROGRAM COMPLETIONS WITHIN HEALTH	% INDIGENOUS	% NON-INDIGENOUS
Total	2.7%	86.0%
Medical Studies	0%	0.3%
Nursing	9.1%	12.1%
Pharmacy	0.1%	1.24%
Dental Studies	3.2%	3.2%
Optical Science	0.2%	0.2%
Veterinary Studies	13.0%	11.4%
Public health	41.1%	17.6%
Radiography	0%	0%
Rehabilitation Therapies	0.6%	0.1%
Complementary Therapies	2.3%	6.7%
Other health	29.7%	47.1%

A second VOCSTATS search was carried out by '*Training package qualification*' in which 150 individual VET programs were categorised under the field of education of '*Health*'. Training package qualifications under '*Community Services*' were also included in this search as the field of education of 'Human Welfare Studies' sits under this broader umbrella term. One hundred and forty-seven individual VET programs were categorised under '*Community Services*' in 2018.

For *Health*, a total of 1,214 Indigenous completions were listed in this search, 493 of these at Certificate IV and above. Of these, Indigenous completions were found to be concentrated in just 5 individual programs of study. At Certificate IV and above, the highest number of completions were for the *Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care* with 164 (33.0%) completions and the *Diploma of Nursing* with 152 (30.8%) completions. The *Diploma of Practice Management*, the *Certificate IV in Allied Health Assistance* and the *Certificate IV in Dental Assisting* had 25 (5.1%), 24 (4.9%) and 24 (4.9%) completions, respectively. All other Certificate IV and above programs in *Health* had 12 or fewer Indigenous completions.

For *Community Services*, a total of 3,962 Indigenous completions were listed in this search with 40% (1,626) of these at Certificate IV and above. The *Certificate IV in Community Services* (15.8%) had the highest number of Indigenous completions, followed by the *Diploma of Early Childhood Education and Care* (13.5%), the *Diploma of Community Services* (13%), the *Certificate IV in Aging Support* (9.5%), and the *Certificate IV in Disability* (6.8%).

Indigenous socio-demographic profile

2018 socio-demographic information on Indigenous VET completions for the field of Health are shown in Table 7. There was a total of 75,388 completions in this field: 2,049 (2.7%) of these were Indigenous, 64,821 (86%) non-Indigenous and 8,512 (11.3%) unknown.

For the Health field of education, when compared to non-Indigenous completions within the same cohort, Indigenous completions were:

- More likely to be female
- More likely to be in the 14-19 age bracket when compared to non-Indigenous completers
- More likely to be living regionally or remotely
- More likely to be living in a socially disadvantaged area
- More likely to be unemployed
- Less likely to hold a previous Diploma or higher qualification
- More likely to have a previous Certificate I-III
- More likely to have obtained their qualification from a TAFE, and less likely to have obtained their qualification from a private provider

Table 7. 2018 Socio-demographic profile of Indigenous and non-Indigenous VET program completions for the field of education of Health. (Data Source: NCVER VOCSTATS, 2018).

VARIABLE	LEVEL	INDIGENOUS VET PROGRAM COMPLETIONS (HEALTH ONLY)		NON-INDIGENOUS VET PROGRAM COMPLETIONS (HEALTH ONLY) %
		N	%	
Total		2,049	2.7%	86%
Gender	Male	449	21.9%	27.2%
	Female	1,588	77.5%	72.3%
	Unknown	12	0.6%	0.5%
Age	14-19	538	26.3%	15.7%
	20-29	576	28.1%	27.6%
	30-39	375	18.3%	20.6%
	40-49	295	14.4%	18.7%
	50-59	225	11%	12.8%
	60 and over	40	2%	4.4%
	Unknown	3	0.1%	0.1%
Remoteness (ARIA+)	Major City	709	34.6%	67.0%
	Regional	974	47.5%	25.8%
	Remote	303	14.8%	1.8%
	Unknown	64	3.1%	2.1%
SEIFA (IRSD) Most disadvantaged	Quintile 1	639	31.2%	14.3%
	Quintile 2	531	25.9%	18.0%
	Quintile 3	449	21.9%	22.0%
	Quintile 4	238	11.6%	21.1%
Least disadvantaged	Quintile 5	125	6.1%	19.3%
	Unknown	64	3.1%	5.5%
Labour force status	Employed	1,216	59.4%	65.3%
	Unemployed	368	18.0%	11.0%

	Not in labour force	244	11.9%	7.6%
	Unknown	227	11.1%	16.1%
Previous highest education level	Diploma or higher	334	16.3%	32.3%
	Certificate IV	220	10.7%	7.2%
	Certificate I-III	466	22.7%	13.7%
	Year 12	329	16.1%	24.4%
	Year 10/11	552	26.9%	11.5%
	Year 9 or lower	88	4.3%	2.2%
	Unknown	55	2.7%	8.3%
Provider Type	TAFE	895	43.7%	29.1%
	University	68	3.3%	2.4%
	School	20	1.0%	0.4%
	Community Education provider	231	11.2%	10.3%
	Enterprise provider	43	2.1%	2.2%
	Private training provider	785	38.1%	55.6%

3.3 Indigenous representation in higher education allied healthcare qualifications

This section presents descriptive data on the profile of Indigenous students in the higher education sector, with an emphasis on students enrolled in the allied health professions included in the study. Data in the study was requested from the Department of Education, Skills and Employment [DESE] in April 2020. As discussed in Section 2.4 Research design, field of education data was generated for nine of the ten professions of interest (audiology, dietetics, psychology, social work, occupational therapy, optometry, speech pathology, podiatry, and physiotherapy). Exercise physiology was unable to be included in the analysis as the profession does not have a stand-alone field of education code.

Departmental data will be presented on the following:

- Indigenous enrolments over time
- Indigenous socio-demographic profile

Indigenous enrolments over time

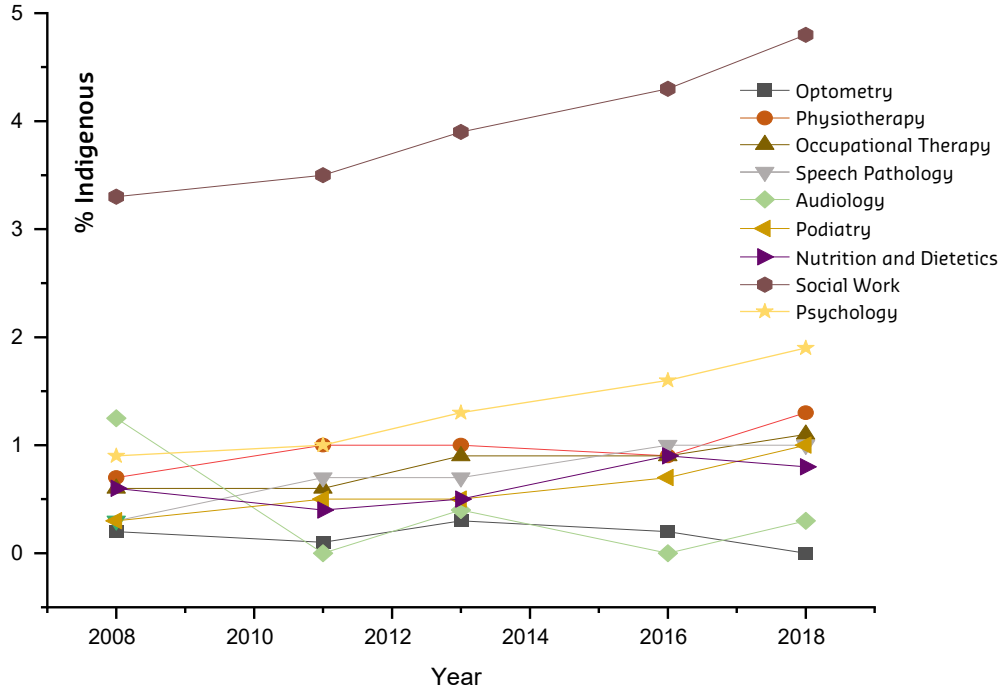
Indigenous enrolment share for nine of the ten allied health professions from 2008-2018 is shown in Figure 5. In 2013, total Indigenous enrolment share in higher education was at 1.7%, which increased to 2.2% by 2018 (NCSEHE, 2020). As shown in Figure 5, the overall trend for the nine allied health professions indicates increased Indigenous enrolment share over time, although representation of Indigenous learners was found to vary by profession.

Social work was seen to have the largest increase in enrolment share of Indigenous students: from 3.3% in 2008 to 4.8% in 2018. This was followed by psychology, which doubled in Indigenous representation over the decade: from 0.9% in 2008 to 1.9% by 2018. Podiatry, speech pathology, occupational therapy, nutrition and dietetics, and physiotherapy were all trending upwards in Indigenous enrolment share over time, albeit at more modest

rates, with an average increase in Indigenous representation of 0.5% over the decade. Optometry and audiology showed no change in Indigenous representation over time.

Figure 5. Percentage Indigenous student enrolment share in allied health programs 2008–2018 (Data sourced from Department of Education, Skills and Employment).

Indigenous socio-demographic profile



The following socio-demographic variables were examined for differences between Indigenous student and non-Indigenous student profiles using 2018 enrolment data: Age at enrolment, ATAR, Basis of admission, Disability, Gender, Mode of attendance, Socio-economic status (SES), Type of attendance, University grouping, and Regionality.

Because social work and psychology have larger numbers of Indigenous students, these fields were analysed separately so as not to skew results. The remaining seven professions (podiatry, speech pathology, occupational therapy, nutrition and dietetics, physiotherapy, optometry, and audiology) were grouped together in the analysis.

The following variables were found to show statistically significant differences between Indigenous students and their non-Indigenous peers: Age at enrolment, ATAR, Basis of admission, SES, Type of attendance, University grouping, and Regionality.

Gender was not found to differ significantly between the two groups. For both Indigenous and non-Indigenous students, the cohort was predominately female.

Disability status was not found to differ significantly between the two groups, except for the field of psychology where Indigenous students were slightly more likely to identify with a disability (15% Indigenous compared to 10% non-Indigenous).

The remaining variables are discussed in more detail below. For extended information, a supplemental table has been included in Appendix 3.

Age at enrolment

For social work χ^2 (6, N = 14,462) = 49.6, p < 0.001, and psychology χ^2 (6, N = 42,216) = 36.8, p < 0.001, there was a statistically significant difference between Indigenous students and non-Indigenous students for age at enrolment. Indigenous students were less likely to

be under 25 years of age and more likely to be over 31 years of age. For social work this was particularly pronounced: a quarter of Indigenous students were aged 40 years or older. For the remaining allied health professions, no statistically significant differences in age of enrolment were found between the two groups χ^2 (5, N =29,652) = 2.0, p = 0.856.

ATAR

Across professions, Indigenous students were found to be represented in higher numbers for ATAR scores below 70, and less well represented for ATAR scores above 90. This pattern was found to be statistically significant for psychology χ^2 (4, N = 42,216) = 18.4, p < 0.001, and other allied health fields χ^2 (4, N =29,652) = 19.9, p < 0.001. For the field of social work, ATAR scores were found to be equivalent between Indigenous and non-Indigenous students χ^2 (4, N = 14,462) = 4.7, p = 0.324.

Basis of admission

For all professions, Indigenous students were found to be less likely to be admitted based on secondary education and previous higher education study and more likely to be admitted based on a TAFE/VET award and mature-aged special entry provisions. In the field of social work 10% of Indigenous students were admitted via a VET/TAFE award compared to 6% of non-Indigenous students. For psychology, 8% of Indigenous students were admitted based on a VET/TAFE award compared to 3% of non-Indigenous students. For all other allied health professionals, 2% of Indigenous students were admitted based on a VET/TAFE award compared to 0.8% of non-Indigenous students. [Allied health χ^2 (4, N =29,652) = 13.6, p < 0.001, Social work χ^2 (4, N = 14,462) = 33.3, p < 0.001, Psychology χ^2 (4, N = 42,216) = 67.9, p < 0.001].

Mode of attendance

Indigenous students were more likely to attend externally and less likely to attend internally for the fields of social work χ^2 (2, N = 14,462) = 86.2, p < 0.001, and psychology χ^2 (2, N = 42,216) = 90.1, p < 0.001. When compared to their non-Indigenous peers, no differences in mode of attendance were found for the remaining allied health fields χ^2 (2, N =29,652) = 0.4, p = 0.83.

Socio-economic status (SES)

Across all professions, Indigenous students were more likely to be from a low SES area, and less likely to be from a high SES area. [Allied Health χ^2 (2, N =29,652) = 60.1, p < 0.001, Social Work χ^2 (2, N = 14,462) = 103.1, p < 0.001, Psychology χ^2 (2, N = 42,216) = 165.7, p < 0.001]

Type of attendance

For the fields of social work χ^2 (1, N = 14,462) = 44.3, p < 0.001, and psychology χ^2 (1, N = 42,216) = 146.1, p < 0.001, Indigenous students were found to be more likely to be enrolled part-time and less likely to be enrolled full-time. When compared to their non-Indigenous peers no differences in type of attendance were found for the remaining allied health fields χ^2 (1, N =29,652) = 0.9, p = 0.349.

University grouping

University grouping was found to be statistically significant across all professions. Indigenous students were found in lower representation at Group of 8 (Go8) and Australian Technology Network (ATN) universities and in higher representation at Regional University Network (RUN) members and Table B and non-aligned providers. For Innovative Research University (IRU) providers, Indigenous students were found in similar numbers to non-

Indigenous students for social work, and in higher numbers for psychology and other allied health fields. [Allied Health χ^2 (5, N =29,652) = 28.3, p < 0.001, Social Work χ^2 (4, N = 14,462) = 72.4, p < 0.001, Psychology χ^2 (5, N = 42,216) = 112.5, p < 0.001]

Regionality

Regional status was a statistically significant variable across all professions. Indigenous students were more likely to be based in outer regional and/or remote areas and less likely to be based in metropolitan and/or inner regional areas when compared to their non-Indigenous peers. [Allied Health χ^2 (3, N =29,652) = 114.1, p < 0.001, Social Work χ^2 (3, N = 14,462) = 332.8, p < 0.001, Psychology χ^2 (3, N = 42,216) = 260.6, p < 0.001]

3.4 Qualitative findings (online survey, interviews, and focus groups)

This section presents the findings from the online survey, interviews, and focus groups conducted with stakeholders and Indigenous students and graduates. Data was uploaded to NVivo and coded line by line. Quotes have been de-identified and categorised according to stakeholder type.

The details of participants who participated in either the survey, interview or focus group are shown in Table 8. A total of 82 participants from a variety of backgrounds contributed to the study. Sixteen participants identified as Aboriginal and/or Torres Strait Islander.

Table 8. Participants who participated in the study (n = 82).

PARTICIPANT TYPE	PARTICPATION METHOD	Number (n)
VET Training Provider Representatives	Zoom Interview	2
Higher Education Academic Course Representatives	Zoom Interview	4
Indigenous Peak Body Representatives	Zoom Interview	2
Indigenous Student Support Unit Representatives	Zoom Focus Group	5
Indigenous Student Support Unit Representatives	Zoom Interview	2
Higher Education Academic Enabling Unit Representative	Zoom Interview	1
Higher Education Academic Course Representatives	Online Survey	28
Indigenous Student Support Unit Representatives	Online Survey	11
Higher Education Student Admissions	Online Survey	1
Higher Education Student Support	Online Survey	2
VET Training Provider Representatives	Online Survey	10
Higher Education (Other)	Online Survey	7
Indigenous health students	Zoom Interview	2
Indigenous health graduates	Zoom Interview	5
Total		**82**

For the final coding, ten primary themes were identified for stakeholder participants (Figure 6), with 15 primary themes for Indigenous student and graduate participants (Figure 7). Twenty of these themes had sub-themes under the overarching primary themes. Given the depth of this data, only the most prominent themes are discussed below; further discussion is provided in the following chapter.

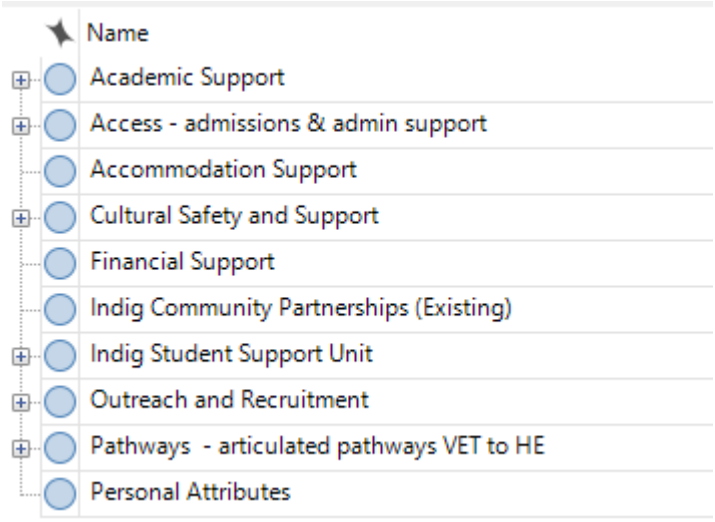


Figure 6. Final primary themes for the stakeholder participants.

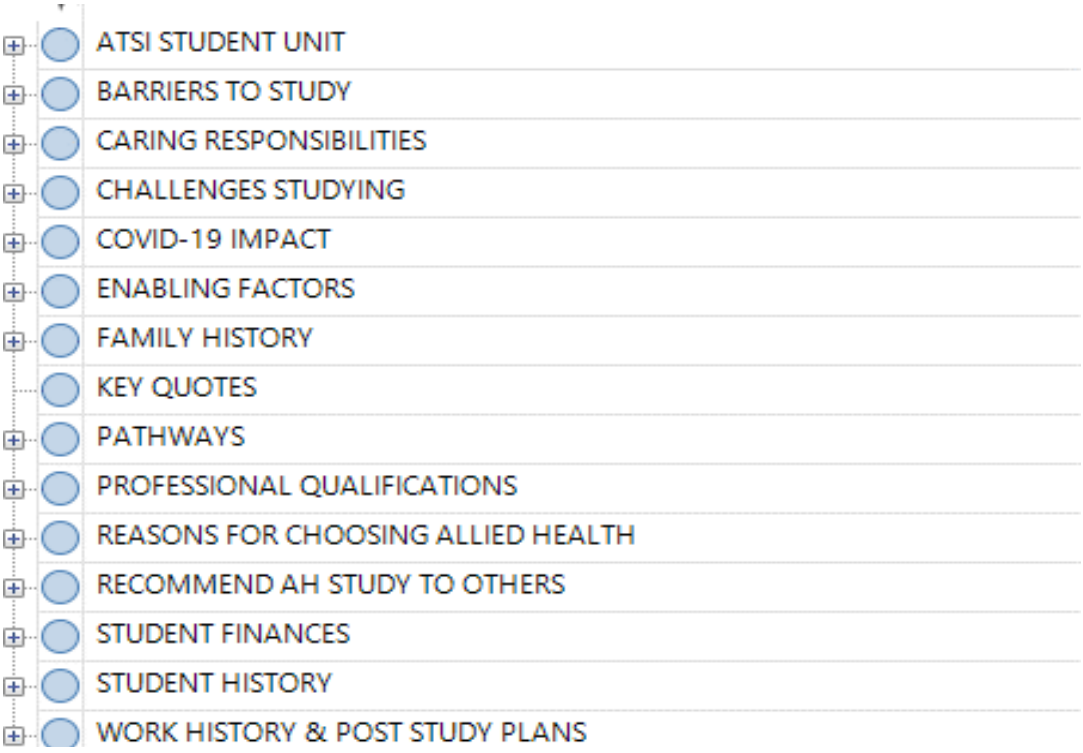


Figure 7. Final primary themes for the Indigenous students and graduate participants.

Cultural Safety

A culturally safe environment is defined as one in which Indigenous Australians feel safe in their identity, culture, and community (Australian Human Rights Commission [AHRC], 2010). For both stakeholders and students, the presence – or absence – of cultural safety emerged as the most dominant and key theme.

Among stakeholders, cultural safety encompassed the creation of: (1) welcoming spaces with physical imagery that reflected and celebrated Indigenous cultural identity; (2) positive integration of Indigenous knowledge into health curriculum; (3) availability of Indigenous mentors, role models and peer support; (4) employment of Indigenous staff; and (5) cultural safety training for non-Indigenous students and staff. As one stakeholder explained:

> *Aboriginal students want to belong to the course; they want to belong to the school. So, having that belonging right at the start and that's why it's important to have the schools to have Aboriginal images everywhere so that the students belong to the school…* (University Indigenous Student Support Unit representative, Zoom interview 3)

Another stakeholder further elaborated on this point, stating:

> *A lot of our students say there's nothing of themselves in the [school] or the course. So, they can't participate fully…* (University Indigenous Student Support Unit representative, Zoom interview 3)

The importance of integrating Indigenous content into the course curriculum was also noted:

> *It can be very disheartening for students to begin a course wishing to learn how to help Indigenous people and then find the course has minimal or incorrect content about this.* (University Indigenous Student Support Unit representative, online survey, participant 40)

Stakeholders highlighted the importance of Indigenous peer support and mentorship programs as something that was essential to fostering cultural safety and aiding the academic retention and success of Indigenous students:

> *We still don't have enough role modelling that university has these careers available. And a lot of our kids don't know what university studies are about.* (University Indigenous Student Support Unit representative, Zoom interview 3)

> *One piece of feedback I've gotten from some students I work with is the idea of a mentorship program. So, something that's either in high school or first year of uni, like an alumni or someone who has gone through the same journey to be able to have an informal relationship. So if they have a Zoom meeting once a week and just discuss what's going on and they can give some of the insights for joining the job market and what their experience is like in allied health.* *(*University Indigenous Student Support Unit representative, Zoom focus group 1, speaker 2)

Students also identified mentoring by both Indigenous and non-Indigenous staff as an important contribution to the feeling of safety and belonging:

> *My lecturer didn't even I know I was Indigenous until I think my first or second year … but he's been my biggest advocate. So, there's been some people that just get it and know … but there's people who don't and that's caused a lot of harm along the way.* (Indigenous psychology graduate)

> *I think having some sort of mentorship program where it's not kind of a bunch of professional white doctors or nurses guiding. Like if we can envision ourselves in*

> *that role, and we can see someone in that role, it means it seems more realistic for us, and it seems like something we can aim to do.* (Indigenous social work graduate)

Indigenous Student Support Units

Stakeholders and students alike emphasised that higher education Indigenous Student Support Units were important to help students by providing academic support as well as personal, emotional, and cultural support. One Indigenous social work graduate stated:

> *I knew I could go there and have a cuppa; it was a culturally safe place for me. I felt connected because it was my people.* (Indigenous social work graduate)

Stakeholders reported that Indigenous students who actively engaged with the Indigenous Student Support Units were more likely to continue with study, in comparison to those who did not:

> *If we can establish those links with them early, we've got a better chance of maintaining their stay with us and we get to understand them a little better, understand their habits of study.* (University Indigenous Student Support Unit representative, Zoom interview 2)

However, this support could not be provided in isolation from the rest of the student experience:

> *I have observed two things of equal importance – support for the university Indigenous centre so that students have other Indigenous students to relate to, and not being bullied or excluded by health science academics or the curriculum.* (University Indigenous Student Support Unit representative, online survey, participant 40)

Indigenous students and graduates affirmed these findings and noted that the Indigenous Student Support Units were essential in supporting them through their studies.

> *The number one reason I got through my studies was because of the [Indigenous Student Support Unit] and because of the support and the study space I got there. So, without it existing, I couldn't have got through my degree.* (Indigenous social work graduate)

However, staff within University Indigenous Student Support Units also brought up the complexities of Aboriginal identity. Students came to the Indigenous Student Support Unit with a variety of backgrounds with some only finding out about their heritage later in life. Staff felt that proof of Aboriginal identity was an institutional barrier in supporting Indigenous students who may feel like an 'impostor' or not 'Aboriginal enough'.

> *If your heart knows that you're an Aboriginal person and this is your family and your family knows that, that's all that matters. You shouldn't have to have a permit to be an Aboriginal person.* (University Indigenous Student Support Unit representative, Zoom focus group 1, speaker 4)

Participants also reported that direct, and indirect, racism was still a real threat for students. For this reason, Indigenous students may not feel comfortable disclosing their identity outside of the Indigenous Student Support Unit:

> *A lot of people think when you're Aboriginal and you've got a degree that you got it out of a cornflakes packet or you had all of these supports to get it and they say, "It's not even a real degree."* (Indigenous graduate psychologist)

Outreach

Stakeholders cited the necessity of engaging in a range of outreach activities in order to facilitate Indigenous students entering the allied health fields. Many stakeholders felt there should be more support for Indigenous students at a secondary schooling level, including stronger links and partnerships with Indigenous community organisations, mentorship programs and more active promotion by secondary schools of pathways to higher education for Indigenous students. As a member of the Indigenous Student Support Unit stated:

> *I'd like to see more opportunities to bring high school students and younger primary school students into the university and get them to what university is. We're still first in family to come to university and so therefore our young kids still don't know that university is available, is an option … a lot of our kids don't know what university studies is about. They think it's about high school, it's like high school. And a lot of our kids are turned off by that. They don't know that there is some flexibility.* (University Indigenous Student Support Unit representative, Zoom interview 3)

Student participants similarly cited the importance of outreach activities, particularly at secondary-school level. Several students mentioned the benefits of participating in face-to-face mentorship and outreach visits for themselves and immediate family members. Students felt these programs created a comfortable space for students to explore potential higher education study options:

> *My daughter was connected with one particular lady and she probably emailed [daughter] twice a year … "Hey, this is [name] from [university]. How are you going with year 9?" … She met with this same lady in year 10; it went all the way through to year 12 … And she actually got to hang out with the lady she'd been emailing over the years … so that meant that my daughter was very familiar with the [university] space … so she was actually looking for their courses.* (Indigenous social work graduate)

Stakeholders also cited the importance of marketing and advertising that specifically targeted Indigenous communities as a way to raise awareness of available career options:

> *Advertising on local Indigenous broadcasting stations. Using current student pictures for advertising, word of mouth and Facebook.* (VET training provider representative, Zoom interview 1)

> *Upfront information that Aboriginal and Torres Strait Islander students are welcomed and encouraged to apply. Student recruitment posters and media highlighting current students to attract prospective students. Recruitment video showcasing Aboriginal students in the allied health degrees to showcase to prospective students, [including] Year 12 students. Unapologetic message in the corporate media that the university is supporting and will always continue to support Aboriginal students in allied health and to boost the numbers of Aboriginal students in healthcare.* (Academic course coordinator, physiotherapy)

Stakeholders also noted that there was limited awareness within the community about allied health courses as a career path, and that active outreach and marketing could make a difference:

> *[The] majority of our students, they generally know about nursing, about medicine, social work and psychology, but that's where it stops.* (University Indigenous Student Support Unit representative, Zoom interview 3)

Pathways

VET provider stakeholders felt that Indigenous students did not necessarily begin VET study with the aim of transitioning to higher education. Rather, they mentioned that students were interested in the employment opportunities a VET qualification offered and were often supported by their employers in undertaking VET study. Other stakeholders mentioned that Indigenous students could be *"mentally scarred for life after their high school experience or lack confidence in their ability*" and that VET study offered more flexibility and a way of increasing their confidence. The case history provided below of one Indigenous social work graduate provides an individual narrative of the transition from VET to higher education.

Case study

Interview participant Cathy[1] is a qualified social worker. She grew up in a small regional community. Her father was stolen generation and both her parents worked in physical labouring jobs to provide for their children. She completed Year 12 and started university but left after her 2nd semester. She felt far from community and returned to her family.

Whilst raising a young family she completed several short qualifications through TAFE in community services. As Cathy tells it 'convenience' was the main reason for her choice of career direction. Community services was offered across the road and she did not have a driver's licence at the time. She describes enjoying her studies and the experience built up her confidence.

When her daughter chose to go to university sometime later, Cathy decided to join her, enrolling as a mature aged student into the 2nd year of a social work degree.

She was able to use her TAFE qualifications in community services to enter university and get advanced standing for her first year of study.

Her time at university wasn't smooth sailing. She had significant caring responsibilities. She was surviving on ABStudy and had no place to study at home. She had no internet and relied on the Indigenous support unit as a place to study and feel connected. However, she persisted and qualified with her social work degree after 4 years.

Students were therefore often unaware of the pathways available to them once they completed a VET qualification due to a lack of awareness. Stakeholders emphasised the need to increase awareness of the availability of transitions from VET to higher education:

> *Prior to completing their diploma, university wasn't even on the radar for them and I think the only reason it was on the radar for them afterwards is because I had gone to university and I was encouraging them to go to university.*
> (University Indigenous Student Support Unit representative, Zoom focus group 1, speaker 3)

However, some participants did mention this trend was slowly changing, particularly in dual-sector institutions.

> *That's starting to roll on a bit more … we managed to transition a student across from a diploma of youth work, and she then came across to do the undergraduate and completed the undergrad Bachelor of Youth Work. We've had some students transition across from nursing, but we've also transitioned them back the other way from first-year undergraduate and just struggling a little, so we've managed to organise a diploma going back the other way and then bringing them back into the [Bachelor of] Nursing at a second-year level.*
> (University Indigenous Student Support Unit representative, Zoom interview 2)

In addition to raising awareness about possible pathways and transition, stakeholders also cited the importance of making such information accessible and readily comprehensible.

> *We promote the pathway: you know, the Cert 4 leads to the Diploma, leads to the Bachelor's … we usually do it as infographic … we'll show how the pathway might actually look and we find that, sort of putting it in pictorial form, it actually goes really well.* (VET training provider representative, Zoom interview 1)

VET stakeholders stressed the importance of building student capacity to be able to continue with future study as part of facilitating successful transitions from VET courses to tertiary higher education:

> *We need VET providers who can appreciate lifelong learning as a journey and who can actually not just invest time at those Cert 4, even Cert 3 levels, getting people through the competence, but building confidence in their competence … [who] see their role as building that capacity to be a future student.* (VET training provider representative, Zoom interview 1)

Career influences, caring responsibilities, and personal enablers and barriers

A key influence on Indigenous participants' decision to select allied health as a career was wanting to 'make a difference' for their communities, and their desire to contribute to the betterment of their community was also tied to the struggle for social justice:

> *I was just very aware, like in the community, that there was a lack of Aboriginal people working in that [area] and I had a real interest, I guess in health and wellbeing.* (Indigenous graduate health worker)

Family influence, both positive and negative, was another important factor influencing student career and study choices:

> *I grew up in a very disrupted childhood and I saw a lot of issues, especially within the Indigenous space. I didn't feel as a child, and a lot of my peers as well, we didn't feel like we had a voice. And our parents didn't always make the best decisions for us … when I was a kid, I wanted someone to intervene and no-one did. So, I kind of fell into social work, thinking I wanted to be the person who noticed, I guess.* (Indigenous psychology graduate)

For Indigenous students and graduates, added caring responsibilities either meant they postponed study before returning as mature-age students, and/or required them to juggle study while also caring for children or siblings, partners, parents, and/or extended family members.

> *When I was 40, I thought, "It's my time now."* (Indigenous social work graduate)

> *I found myself pregnant … So, I was very politely asked by the school to leave … there was no invitation to come back to pick up my schooling after I'd had the baby or anything else … But I was very much motivated about doing something different and being able to have my kids see that choices you make don't have to define who or what you are. And it was something I wanted to do for myself.* (Indigenous graduate health worker)

Indigenous students and graduates discussed additional challenges, including learning difficulties, poor mental health, and/or family crisis, which resulted in delayed or interrupted study:

> *I've had a lot of mental health issues; I'm doing a lot better now, but it always got in the way of study, so it took me ten years to do my undergrad and my master's. So, I failed a lot; I kept going. I kept pushing some stuff and then I got there, but it did take a while.* (Indigenous social work graduate)

Both the stakeholders and students cited negative schooling experience, and the resulting lack of confidence:

> *It was people telling me I couldn't. Like, I had teachers in high school who told me that I shouldn't be doing TE subjects, which was the university pathway. And, I had a lot of resistance for me going to uni, because no-one really thought I could, and didn't have that expectation. That pushed me completely to keep going.* (Indigenous social work graduate)

Finally, participants discussed the role of financial and accommodation support, which they said was important in supporting Indigenous students through their studies.

COVID-19

As noted in the Introduction, the Fellowship was awarded prior to the emergence of the novel coronavirus and COVID-19. The emergence of the virus and the subsequent global pandemic was unforeseen. Nevertheless, it has played a role in shaping the outcomes of this Fellowship.

Stakeholders reported seeing some benefits to remote learning that were brought about by COVID-19. As one stakeholder explained:

> *What they enjoy, what they like is the opportunity to certainly be together with other people they know but, if they're in a classroom situation and they don't know anyone, that seems to be more intimidating than Zoom classes.* (VET training provider representative)

Another stakeholder noted that the necessity of initiating online activities during COVID-19 had resulted in greater Indigenous student engagement with the Indigenous Student Support Unit:

> *Because we were doing Zoom catchups and doing what we call Zoom lunchtime coffee catchups. And so students would come in with a coffee and sit down, and we'd talk to them over Zoom. And we'd have group interactions doing that. And there was still the email correspondence and phone call, the odd call through a phone conversation. We found that it was highly engaging for both campuses using the Zoom approach.* (University Indigenous Student Support Unit representative, Zoom interview 2)

Other stakeholders noted that COVID-19 had provided opportunities to reconnect with Indigenous students in remote locations:

> *Having multiple people in different locations on Zoom has encouraged them to re-engage much more strongly. I think there's been an opportunity for students who have a confidence with their digital skills, and that's provided a fantastic outlet for them, and another way of learning.* (Academic enabling program representative, Zoom interview 5)

However, Indigenous students found that the advent of COVID-19 had presented several challenges in relation to participation in courses, the completion of coursework and the ability to study. Students noted the difficulties of having to study in a space also occupied by others, including family members:

> *I was living at home again, with my parents. And I love them, but it can be challenging sometimes. Like when I'm in a Zoom meeting and Dad walks in.* (Indigenous first year medical student)

For some students, studying online had resulted in an increase in workload, as well as feelings of peer isolation:

> *Because I'm always the one that asks questions … it's made it hard for me, you know. It's hard when you don't have other students around, to be honest.* (Indigenous first year audiology student)

> *I felt like we had more work being online than we did being in person.* (Indigenous first year medical student)

One graduate noted that COVID-19 had exacerbated the isolation which already existed within Indigenous communities:

> *Isolation is not something that the community does well. And although Aboriginal and Torres Strait Islander people are massive social media users and stuff like that, upskilling around the use of digital technology and AI stuff … to be able to keep the community health services ticking over, is something that we really need to strengthen.* (Indigenous primary health work graduate)

The qualitative analysis carried out in the Fellowship provided a deep exploration of how Indigenous students and graduates could be further supported in accessing the allied health field. Chapter Four provides an integrated discussion of the findings and the context for the recommendations provided at the start of this report.

Chapter 4 Discussion

The quantitative and qualitative findings of the Fellowship are outlined in Chapter 3. This final chapter discusses these findings in relation to the research questions posed in the study:

- *What is the current policy landscape of Indigenous inclusion for entry into select allied health professions?*
- *What is the national profile of Indigenous students enrolled in select allied health higher education program?*
- *Which health-related VET courses at Certificate IV and above offer the most potential in acting as pathways into higher education allied health program?*
- *What are the institutional factors linked with success in attracting and retaining Indigenous students in select allied health study?*
- *How have Indigenous allied health students and graduates entered their chosen professions, and how was this experienced at an individual qualitative level?*

These questions will form the basis of the sections below.

4.1 The current policy landscape of Indigenous inclusion into allied health professions

As outlined in Chapter 1, the literature review of this project included an environmental scan of ten allied health professional accrediting bodies to examine the extent to which educational providers were required to include strategies to improve Indigenous inclusion into the profession. The search strategy found that nine of the ten professional accrediting bodies examined were signatories or co-signatories on Reconciliation Action Plans (RAPs), and three professions (speech pathology, physiotherapy, and psychology), as part of their accreditation standards, mentioned Indigenous equity strategies to enter the profession.

Reconciliation Australia identifies four types of RAPs; each is designed to suit an organisation at different stages on its reconciliation 'journey'. Of the nine professions that had RAPs, five were at the first 'Reflect' stage and two were at the second 'Innovate' stage. Four RAPs were outdated, suggesting the relevant organisation had not either the resources or the commitment to develop and implement a new RAP in a timely fashion. The professions which mentioned equity in their accreditation standards were not prescriptive in how programs should tailor their admissions structures, which creates the potential for a variety of ways in which standards could be interpreted.

Thus, the evidence suggests that professional bodies are still at the earliest stages of incorporating meaningful policies to increase the representation of Indigenous allied health practitioners. Furthermore, they were more likely to place accountabilities on higher education institutions to supply Indigenous graduates, than they were on their members to employ them. Overall, professional bodies were found to use discourses of recognition in the inclusion of Indigenous students with reference to the development of measurable accountabilities in the future.

The absence of measurable quotas has the potential to become especially problematic considering the federal government's new '*Job-ready Graduates package*' (Department of Education, Skills and Employment [DESE], 2020). In areas of high employment demand – including the allied health professions – the total study cost to students has decreased. While this is favourable news for students, higher education providers receive a smaller government contribution per student to deliver the course. If the cost of the course is unsustainable for providers, it follows that higher education providers are less likely to increase student numbers in 'expensive to run' courses.

This will result in increased student demand for a limited number of student places: a competitive environment not shown to favour students from disadvantaged groups (Norton, 2020). Although universities will be awarded funding for Indigenous student enrolments, unit success rates, and course completions under the package, these benchmarks will be driven at an institutional level rather than for individual programs.

If the professions are serious about increasing Indigenous representation in the field, then individual professional bodies need to be more prescriptive in holding higher education providers to account.

Recommendations

- Professional accrediting bodies to actively recruit Indigenous members to governance positions and establish Indigenous associations within professions.

4.2 The national profile of Indigenous students enrolled in select allied health higher education programs

Data from the Department of Education, Skills and Employment [DESE] on Indigenous enrolments for nine of the ten professions of interest (audiology, dietetics, psychology, social work, occupational therapy, optometry, speech pathology, podiatry, and physiotherapy) was examined over 2008–2018.

The overall trend found an increase in Indigenous enrolment share over the decade although representation of Indigenous learners was highly dependent on profession. Social work showed the highest gains in Indigenous enrolment share: from 266 students in 2008 to 729 students in 2018 – an increase of almost 200%. Other professions, such as optometry and audiology, showed less than five Indigenous student enrolments per year, a figure which remained stable over the decade.

The Fellowship found the following variables were significantly different between Indigenous students and their non-Indigenous peers: age at enrolment, ATAR, basis of admission, SES, type of attendance, university grouping, and regionality. These findings are consistent with other reports on Indigenous Australians in higher education (Pechenkina & Anderson, 2011). Indigenous students are more likely to be older and engaged in an external mode of study (Pechenkina & Anderson, 2011; Shalley et al., 2019). Indigenous students are also more likely to belong to multiple areas of disadvantage, including economic disadvantage and living in a regional or remote area (Pechenkina & Anderson, 2011; Shalley et al., 2019).

These factors serve to channel Indigenous students into certain professions. As reported by Shalley et al. (2019), Indigenous students were found in a narrower range of professions when compared to non-Indigenous students, with larger professions such as social work and psychology attracting more Indigenous students by virtue of their location and flexible study options. Social work and undergraduate psychology are among the few health professions which offer part-time and external study options; many other health professions provide only full-time and internal modes of study.

A member of an Indigenous Support Unit summarised these findings aptly:

> *The university asks me, "Why does everyone (Indigenous students) want to go into nursing, teaching and social work in the regions?" It's like, "Because it's all you offer."*

Some of the students we spoke with did move away from home for study and found it a positive choice; "*I thought it would be good to try and get to a new city and make something new for myself*." However, most interviewees found moving for study daunting and disconnected from family and Country: "*It was a long way from my community*…"

Staff also spoke of how many Indigenous students were the first in their family to attend university, which meant the smaller health professions were therefore less well known as a career choice than the larger professions.

Growing allied health course offerings in regional areas would be a recommended way of attracting more Indigenous students. The pandemic provided some opportunities for creativity in healthcare training delivery. In recognition of the impact of COVID-19 on clinical education, the Department of Education, Skills and Employment (2020b) released guidelines for a more flexible approach of what may count towards placement requirements, which recommend that "accreditation standards support flexible approaches … with a focus on learning outcomes". AHPRA also recognises that health students have become part of a surge workforce in response to the pandemic and that providers are to "maximise the recognition of relevant learning gained by registered students in paid employment as appropriate to individual professions" (DESE, 2020b).

There is an opportunity now for higher education providers to be more flexible in both the theoretical component of allied health degrees and the clinical placement requirements. Although face-to-face placements will always be needed, they do not necessarily have to provide the full placement experience. This flexibility would greatly assist in making allied health course offerings more accessible for Indigenous learners.

Considering Indigenous learners were more likely to have lower ATARs, the more competitive a program and the smaller the number of places available, the harder for students from equity backgrounds to access. Indigenous participants in the project held mixed views about altering admission requirements specifically for Indigenous learners, because they did not want to be perceived as "*receiving special treatment"*. Rather, Indigenous students and graduates expressed a narrative of achievement with participants' preferred option being a set number of places for Indigenous applicants who met the program's requirements.

> *It's not like people get special treatment or preferential treatment; it's like equal treatment. An example is that the medical program – and I like this, I like how they do this – it has spots for Aboriginal people but we still have to make the grade.* (Indigenous graduate psychologist)

Recommendations

- Higher education providers of allied health programs to expand offerings into regional areas wherever possible including the provision of online offerings.
- Higher education providers of allied health programs to provide external and part-time study options wherever possible.

4.3 Health-related VET courses at Certificate IV and above which offer the most potential in acting as pathways into higher education allied healthcare programs

This project examined quantitative data on Indigenous completions of VET qualifications, focusing on qualifications relevant to the health field. In 2018, 2.7% of completions in VET health qualifications identified as Indigenous. The socio-demographic profile of Indigenous learners in VET study was comparable to Indigenous learners in allied health in that learners were more likely to be female, more likely to be living in a socially disadvantaged area, and more likely to be living regionally or remotely. Indigenous learners in VET were also more likely to have obtained their qualification from a TAFE, rather than a private provider.

The percentage of Indigenous males within VET health programs was equivalent to the percentage of Indigenous males for university allied healthcare courses, whereas the male

to female ratio across other VET courses is considerably different, being equal. Indigenous males were therefore under-represented in both health-related VET courses and higher education courses.

McKinson (2007) lists several reasons why men eschew a career in healthcare professions, including a general lack of awareness, perceptions of costly training, poor salaries, poor working conditions, and the stereotype that these are 'female' occupations.

In addressing this disparity, Kilpatrick (2010) notes the need for community engagement to assist in the identification of demand and labour market priorities. Most higher education providers are formally engaged with their local communities, but it may be that the engagement process requires renewed attention to the issue of Indigenous male participation considering the current gender disparity. Higher education providers also need to work with government departments and individual schools to align the university course profile with school profiles, and to facilitate higher school enrolments in areas such as science and mathematics. Institutional incentives could also be considered to attract more males into fields where the gender imbalance is striking.

Consistent with reports in the Behrendt Review (2012), most Indigenous student enrolments in the VET sector were seen at lower-level certificate courses, such as Certificate I, II and III. However, Indigenous students who complete higher-level VET programs have been found to be more likely to make a successful transition from VET study into higher education (Smith et al., 2017). When we analysed 2018 data across *all* VET sector fields of study, approximately 20% of Indigenous program completions were at Certificate IV or Diploma level, compared to 33% of non-Indigenous students.

These results were found to differ by field of study. For the Health field, Indigenous students were far more likely to complete qualifications at Certificate IV or above; Indigenous enrolments at Certificate IV or above in health were at just over 43% and Indigenous completions in health were just over 33%. As shown in Table 5, Indigenous learners in health were comparable to their non-Indigenous peers in completion rates at Certificate IV qualification level and above.

Within the health and community services vocational qualifications investigated in the study, Indigenous completions were found to be concentrated in select programs of study, such as the Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care; the Diploma of Nursing; the Diploma of Practice Management; the Certificate IV in Allied Health Assistance; the Certificate IV in Dental Assisting; the Diploma of Community Services; the Certificate IV in Aging Support; and the Certificate IV in Disability.

The reasons for higher Indigenous enrolments in qualifications such as Aboriginal and/or Torres Strait Islander Primary Health Care are multifaceted; participants in the study described the following contributing factors:

- Role models: "…*what we do see is a lot of Aunties, Uncles or extended family members working as a Aboriginal Torres Strait Islander health worker and they're kind of seen as role models*." (National Aboriginal and Torres Strait Islander Health Worker Association)
- Wanting to make a difference: "…*they want to do their bit to support our community members"* (National Aboriginal and Torres Strait Islander Health Worker Association)
- Financial support from workplaces: "…*a lot is supported by ABSTUDY, so your travel and accommodation and meals generally are paid for. And a lot of places with their workforce, you know they pay them their wage while they're studying."* (National Aboriginal and Torres Strait Islander Health Worker Association)

- Reduced study fees in comparison to tertiary study: "*I'd say, there's probably a few things influencing, one is free TAFE versus paying*." (University Indigenous student support unit representative, Zoom interview 4)
- Social and cultural support: "…*What we do see when Aboriginal Torres Strait Islander people come together, they actually support each other as well, whilst they're away from home*." (National Aboriginal and Torres Strait Islander Health Worker Association)
- Childcare: "…*what a lot of really good RTOs do, they also arrange for childcare. So they can take the children with them, put them in childcare while they have their lectures for the day. And then pick them up of an afternoon*." (National Aboriginal and Torres Strait Islander Health Worker Association)

Participants described a perceived growing interest among VET-qualified Indigenous learners in furthering their studies:

> *There's an encouragement, I think, amongst First Nation people to really grow qualifications and grow that education."* (Academic course coordinator, dual sector organisation)

> *We have had students that have started with a base Cert IV because they've had to, and then they start to creep into conversations like, "If I did a diploma, would I get credits?" Or "What would a diploma get me?" One of my students said, "I am interested in going to university, would I get credits?"* (VET sector trainer, Community Services)

Many participants were also in favour of clearly defined articulated pathways between VET health study and tertiary qualifications in allied health; the Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care was the most mentioned example. One interviewee from a dual-sector organisation noted that Indigenous students who may not have completed Year 12 were expressly enrolling in the Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care as a way of going on to further health qualifications:

> *And a lot of those students come in with the goal, I suppose, their purpose is to get to nursing or a health-related – for some it's nursing, for some it's paramedicine is the other one that you see a lot remotely. And that's – so they've – for many of them they've come to the course with that goal in mind.* (Academic course coordinator, dual sector organisation)

Others felt that higher education provider flexibility in recognising learner qualifications was most important as multiple pathways between VET and higher education were simply not practical to implement from a higher education perspective:

> *It comes up a lot: people say, "Why haven't you mapped a pathway for this or that?" Actually because we couldn't – there's no way of all of the students that we see, or all the applicants that we see, there's no way we could map a pathway that would be clear to them about how to get into one of our courses. Because they're all different.* (Indigenous student support unit representative)

Quantitative data found that VET pathways for Indigenous learners did work as an additional mechanism for entry into higher education for select professions, although the numbers of Indigenous learners transitioning from VET to higher education were small. As shown in the case study, social work has a well-established articulation pathway between VET diploma-level programs in related subject areas and higher education social work degrees. These are supported by the Australian Association of Social Workers, which sets out clear guidance for higher education providers on RPL, credit transfer and articulation pathways as part of its accreditation documentation. As stated in Guideline 1.3:

> *For graduates of TEQSA-recognised higher education providers the AQF recommendations for credit for graduates with diplomas are the accepted guides: 37.5% credit for an advanced diploma when linked to a four-year bachelor degree, 25% credit for a diploma when linked to a four-year bachelor degree.* (Australian Association of Social Workers, 2012, p. 4).

However, the numbers of applicants using VET pathways are still small with only 10% of Indigenous enrolments into social work using previous VET qualifications as their basis for admission, compared to 6% of non-Indigenous enrolments. For other allied health degrees, only 2% of Indigenous enrolments used previous VET qualifications as their basis for admission – most likely as these pathways are not as widely known or used. As Smith et al. (2017, p. 41) note, "VET to HE pathways are often poorly promoted despite articulation pathways being in place".

Additional barriers facing students in transitioning from VET to higher education include inadequate or inaccurate information, and difficulties in getting recognition of prior learning and credit transfer (Harris et al., 2012). As one Indigenous social work graduate participant stated, "*I didn't know there was a pathway. I didn't know I'd get into second year for doing a diploma until I'd sort of applied*."

Participants also brought up access to support in navigating higher education language and culture as an important factor in supporting Indigenous students from vocational training into higher education.

Although the numbers of Indigenous learners transitioning between VET sector qualifications and higher education are small, these pathways show promise as an additional strategy for supporting Indigenous growth into the professions. Indigenous enrolments and completions in VET-health qualifications are strong in comparison to other fields. Once Indigenous learners are trained in health, providing pathways into other health professions creates opportunities for career transitions, progression, as well as workforce diversity.

Recommendations

- Higher education providers to pursue partnerships to extend pathways from health VET qualifications into higher education, including pursuing better credit transfer arrangements for VET qualifications which align with allied health curricula.
- Professional healthcare bodies to create guidelines for higher education providers on recognition of prior learning (RPL), credit transfer, and articulation pathways into the profession to support diverse educational backgrounds and mature-aged students.

4.4 The institutional factors linked with success in attracting and retaining Indigenous students in select allied health study

The Fellowship sought insights from higher education and VET stakeholders as part of the study. A total of 75 stakeholder participants underwent either an online survey, interview or focus group, and key findings from these are discussed in Section 3.3.

Major themes from the qualitative interviews were the importance of outreach activities into schools and communities; access pathways; Indigenous mentors and role models; health careers education and promotion; and creating a culturally safe learning environment, including improving the cultural competency of non-Indigenous staff.

Many participants acknowledged that outreach activities between higher education providers and secondary schools, as well as Indigenous mentoring programs, were essential in building relationships with prospective Indigenous students and fostering future career aspirations.

The Indigenous students and graduates we spoke with were passionate about making a difference within their communities and saw clear alignments between this goal and choosing a career in allied health. However, some professions were better known than others and therefore served to attract more Indigenous applicants:

> *Slowly it's [studying allied health] been increasing interest, and I think that's largely because a lot of people want to make change, and this is a field or an area where you can help your mob, you can make change. I think that's a key factor in a little bit of the trend more towards the social work degrees, nursing degrees.* (Indigenous Student Support Unit representative)

Building greater awareness among secondary students, careers advisors, and the wider community about the variety of allied health careers open to students is important. For example, the Department of Health's *Health Heroes* campaign website is dedicated to promoting health careers for Indigenous learners (Department of Health, 2020).

In the current study, a significant proportion of the Indigenous student population were female and mature-aged. They discussed the difficulties of completing their studies with added caring responsibilities, childcare, travel, and accommodation costs. According to a study by Ackehurst, Polvere and Windley (2017, p. 3) examining the opportunities for Indigenous participation in VET education, "[t]raditional gender roles and caring responsibilities can be significant barriers to education and training participation for young Indigenous women". However, these studies have found that Indigenous women will return to complete post-secondary study when there are changes in their caring responsibilities.

Indigenous students were also more likely to enrol part-time, if this option exists, and therefore will take longer to complete their studies. Study breaks and interruptions are not uncommon, however, as the case study showed, prior experience with higher education has a positive relationship with returning (Shalley et al., 2019). Considering that higher education providers are often funded per Indigenous completion, this Fellowship agrees with Shalley's (2019, p. 42) recommendation that "the more complex and demanding nature of Indigenous students' engagement with higher education" requires a "more sophisticated evaluation process, including targets and measures, for reporting participation and completions of Indigenous higher education students".

If allied health programs are to increase accessibility, higher education providers must accommodate Indigenous students who are entering their studies from a variety of educational backgrounds. That is, multiple entry and exit points are required.

VET providers' ability to deliver short courses as 'steppingstones' to higher level qualifications worked well for participants. VET providers also discussed how this flexibility extended to assessments:

> *Sometimes what you've got in here you can't put down on paper, but you can tell me, and I am okay with that, so it's those adjustments of assessment.* (VET training provider representative)

This approach built up learners' confidence, particularly if they had had a poor secondary schooling experience.

Acknowledgement of the Indigenous Student Support Units' work in balancing Indigenous students' personal, academic, and cultural needs was also mentioned frequently. Indigenous Student Support staff said they kept informed of each student's personal conditions, such as finance, accommodation, health and family issues, work and/or carer obligations. In addition to providing personal and cultural support, staff also linked students with appropriate academic support, usually through tutors.

Nakata and colleagues write that Indigenous academic support "requires staff to know what disciplines and subjects students are enrolled in, what their study load is, and how they are managing in each subject" (2017, p. 4). Discipline-specific tutors are therefore considered ideal; however they can be hard to recruit, and discipline-specificity needs to be balanced with the cultural identity of the tutor. As one participant stated:

> *The Aboriginal student centre employ all of the tutors, which is completely fine, but they don't have an intimate understanding of the curriculum. I think there needs to be a collaboration there. If I was running a health program, the health academics would be more aware, I would think, of who would be an excellent potential tutor in that area, and even then, that could be a collaboration between those two [academic staff and Indigenous student support staff]* (Academic staff member, Enabling programs)

Almost all participants in the study emphasised the importance of building relationships between Indigenous students and tutors in supporting academic retention and success.

> *In some regions it's been very successful where we've had consistency of tutors, and we've been able to have the same people involved over 18 months, two years, so the students get to know them, and build that relationship, and build the time.* (Academic staff member, Enabling programs)

Many participants expressed frustration with the reliance of higher education providers on sessional tutoring staff working on contracts that have a specified number of hours. The high turnover rate of sessional staff made relationship building and consistency of tutors difficult to establish.

> *If you want them to be there, to be a presence, to help students throughout their degree program, if the focus is on retention and success and completion rate, why are you giving people a 13-week contract?* (Academic staff member, Enabling programs)

Recommendations

- In addition to continued federal funding of the Indigenous Student Success Program (ISSP), the Indigenous Regional Low SES Attainment Fund should include objectives for Indigenous VET-to-higher education initiatives, including careers advice, transition support, and simplifying RPL processes.
- Higher education providers to create a nested approach to program design in which short courses contribute towards credit to a degree qualification.
- Coordinated national health careers campaign is needed to educate the community on the varied roles in healthcare, with particular emphasis on engagement/promotion with Indigenous men.
- Indigenous-specific entry pathways for postgraduate program offerings to be developed.

4.5 Indigenous allied health students and graduates' experiences of their chosen professions

The researchers asked Indigenous health students and graduates to describe their subjective understanding of what brought them to the health field, and what their experience of study and work had been thus far.

Predominant themes were found to be COVID-19; the importance of the Indigenous Student Support Units in providing academic, financial, social, emotional, and cultural support; the presence – or absence – of cultural safety; financial strain; added caring responsibilities; and personal challenges.

Participants raised COVID-19 in discussion, given its impact on daily life at the time of the study. Indigenous graduates reported that the pandemic had made them reflect on their chosen career path with one participant considering a career change, while two participants felt the pandemic had increased their motivation to contribute to community health.

Indigenous students who had experienced a shift from face-to-face teaching to online were focused on their need to rapidly adjust to studying virtually, and they expressed that greater motivation was required in structuring their day around online classes. Considering that a significant proportion of Indigenous students are based regionally or remotely, an additional challenge for students was accessing reliable internet. This is consistent with Delahunty's (2020, p. 3) work on regional students, which noted that the limitations of being regional included feeling "restricted by small campuses with limited resources and opportunities, and poor internet which is critical for those studying online or unable to attend campus".

In the rush to get course material online, Indigenous students in the study reported that synchronous and/or asynchronous lectures had become the norm for content delivery. There had been no time for health content to be adapted specifically for the online environment; rather it was a replication of face-to-face methods. Moving forward it is essential that "content and the way in which content is delivered, needs to be engaging, supportive and specific to online delivery" (Stone, 2017, p. 41). Indigenous students felt that course designers should additionally consider ways to make online content inclusive of Indigenous culture and knowledge. As one student stated:

> *It's not right that we are looking at Aboriginal communities and there are no First Nations authors, or no First Nations literature for the essay.* (Indigenous social work graduate)

The Aboriginal and Torres Strait Islander Health Curriculum Framework (Department of Health, 2014) also recommends that Aboriginal and Torres Strait Islander guest presenters are invited to engage students in yarning through online video-conferencing tools.

Indigenous participants additionally mentioned a lack of the social interaction that face-to-face learning had previously provided, as well as lost opportunities for incidental peer discussion. Given health careers are largely people-focused in nature, several participants were missing the practical 'hands-on' component of their study. Evidence in online education suggests "that it is the human interactions, particularly teacher-student and student-student, which occur within the virtual classroom setting, that are perhaps most important of all in improving retention and academic success for online students (Stone, 2017, p. 17). Providing Indigenous students with spaces to interact with their peers is an important part of ongoing engagement and participation in online environments (Parsell, 2014).

Cultural safety was a significant component of participants' discourse. This feeling of safety was also described as a sense of 'belonging' – spaces in which participants could freely express identity – as Vanessa stated:

> *I think a lot of us feel like we have to hide our identity, so we are more in line with them [white colleagues], and I don't know if that's a good thing or not, yeah.* (Indigenous social work graduate)

A culturally safe environment is defined as "one that acknowledges and respects all aspects of a person's life and does not lessen or ignore that person's identity, uniqueness or power as a human being" (Kurtz et al., 2018, p. 272). Educating medical and allied health students in culturally safe practice has gained traction in recent years in fields such as nursing, medicine, occupational and physical therapy, social work, optometry, and pharmacy (Kurtz et al., 2018). Following the release of the Aboriginal and Torres Strait Islander Health Curriculum Framework in 2014, many health programs are required to show evidence of cultural safety in the curriculum as part of accreditation requirements. Indeed, many of the

course coordinators who participated in the Fellowship reported being at the early stages of adapting curriculum to meet this need.

The bulk of the current literature on cultural safety focuses on educating non-Indigenous clinicians in working appropriately with Indigenous communities. However, there is far less emphasis on the needs of Indigenous health students themselves, particularly when they are out on clinical placement. It was disappointing to hear that many participants had experienced substantial racism when out on clinical placement.

> *As an Indigenous Social Work student I had zero support and had to navigate not only my first placement but microaggressions towards Indigenous Australians all by myself and I didn't feel like it was safe to talk about being Indigenous.* (Indigenous social work graduate)

The relationship between student and clinical supervisor is an important one, but also one which is fraught by the power imbalance between supervisor and supervisee. Bessarab (2012, p. 83) has argued that: "No matter how well meaning, as a white or non-Aboriginal supervisor, their 'cultural' knowledge will still be based on what they have learnt and experienced as a person who is not Aboriginal".

Ideally, Indigenous students should have access to a more senior Indigenous supervisor, or if not a direct supervisor, an Indigenous mentor with whom to debrief. However, the shortage of Indigenous graduates in many professions could make this impractical. For this reason, Gair et al. (2015) recommend, at a minimum, assessing the cultural suitability of field educators when they are being matched with an Indigenous student.

An additional recommendation is for programs to deliver tailored placement preparation for Indigenous students, which should be developed in partnership with the Indigenous Student Support Unit and/or with other Indigenous staff (Department of Health, 2014).

Overall, increasing accessibility to the allied health professions is "not just about making higher education possible, but rather, making university a place where Indigenous young people will want to pursue and attain their occupational aspirations" (Gore et al., 2017, p. 180).

Recommendations

- Incorporate Indigenous cultures and knowledges into online content, including Indigenous voices and perspectives wherever possible.
- Create multiple opportunities for Indigenous students to engage with their Indigenous and non-Indigenous peers, both online and in-person.
- For clinical placements, provide access to an Indigenous mentor wherever possible, and ensure non-Indigenous field educators have received cultural safety training when being matched with an Indigenous student.
- In partnership with the Indigenous Student Support Unit and other Indigenous staff, provide tailored clinical placement orientation for Indigenous students.
- Facilitate cultural safety training for all staff and students.
- Establish professional mentoring programs for Indigenous allied health students.

Conclusion

Of the allied health professions examined in the study, significant growth in Indigenous enrolment share was seen over the past decade for the larger professions of social work and psychology.

The remaining professions showed either minimal or no change in Indigenous enrolment share over time. As Indigenous students were far more likely to be based regionally than their non-Indigenous peers, it is likely that the larger professions were able to attract greater numbers of Indigenous students due to geographical location. Additional reasons restricting access to the remaining professions include inflexible study options, and science and/or mathematics prerequisites – particularly for optometry, audiology, and dietetics – which disadvantage Indigenous applicants. Considering Indigenous learners were more likely to have lower ATARs, competitive or capped student numbers would also limit accessibility for students from equity backgrounds.

Without targeted expansion of the smaller professions into regional areas and/or quality online options, it is unlikely that Indigenous enrolments will increase at the pace of other higher education offerings. Monitoring and evaluation of equity admissions policy at the program, rather than institutional, level is therefore highly recommended.

Indigenous students in both higher education and VET had several socio-demographic factors in common. Indigenous students were more likely to be female, from a low socio-economic area, and based in regional or remote areas. The completion rates of Indigenous learners in VET at Certificate IV and above for health-based study was strikingly high, especially when compared with the poorer retention rates of Indigenous students in higher education.

Of concern is that Indigenous students in the study reported experiences of racism, isolation, and cultural dislocation. The support provided by the Indigenous Student Study Units was found to be essential in providing these students with a sense of belonging; however, this needs to be extended and embedded into the rest of the student experience. For health students, the clinical placement component needs to be considered as part of a culturally safe curriculum experience.

Interview participants in the study felt Indigenous primary health care workers were interested in career transitions, but that information on how to go about this transition, and what options existed, was patchy at best. Many relied on word of mouth to navigate their education journey.

Transitioning between VET and higher education sectors is one of many opportunities to increase access into the allied health fields for Indigenous learners. Social work was one such example of a profession which has successfully navigated multiple paths into qualifying, and other professions could learn from this example.

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Appendix 1

Stakeholder survey questions

Professional Background (All)

1. Which term best describes your current role:

- University Course Coordination
- VET Program Delivery
- University Indigenous Student Support
- University Student Admissions
- VET Student Admissions
- VET Student Support Services
- Other: _____

2. Which state do you work in?

- Victoria
- New South Wales
- Northern Territory
- Queensland
- Western Australia
- Tasmania
- Australian Capital Territory
- University Course Coordinators:
- Which field best describes your current role:
- Audiology
- Dietetics
- Exercise Physiology
- Occupational Therapy
- Optometry
- Physiotherapy
- Podiatry
- Clinical Psychology
- Social work
- Speech pathology
- Other: Please specify: _____

University course coordinator questions

3. How many years of experience do you have in carrying out course coordination?

- Under 1 year
- 1–2 years
- 3–5 years
- Over 5 years

4. What is an accepted method of entry into your course/s (Tick all that apply)?

- Undergraduate degree
- TAFE qualification. Please specify _____
- High school completion or equivalent
- Recognition of Prior Learning
- Other: _____

5. Tell us **who** decides what the entry requirements are for your course/s?
6. Tell us **who** decides which students are offered a place in your course/s
7. Has your course developed or is in the process of developing articulation partnerships/links with Vocational Educational Training (VET) organisations? If yes, please tell us more here_____
8. Does your course/s have a set number of places for Aboriginal and Torres Strait Islander students? Yes No
9. Tell us about what recruitment strategies your course/s does to attract Aboriginal and Torres Strait Islander students?
10. Tell us about if your course has developed or is in the process of developing partnerships/links with Aboriginal and Torres Strait Islander communities/organisations?
11. What recruitment strategies for Aboriginal and Torres Strait Islander students would you like to see put in place in your course/s?
12. Tell us about what would need to happen to make this scenario possible?
13. In your opinion, what is the most important support you believe Aboriginal and Torres Strait Islander students need to be successful in allied health study?

VET program delivery questions

1. What Vocational Education Training (VET) qualification/s do you provide teaching delivery for?
2. How many years' experience have you had in your role?

- Under 1 year
- 1–2 years
- 3–5 years
- Over 5 years

3. Tell us about if your program/s has developed or is in the process of developing articulation partnerships/links with Universities? If yes, please specify_____
4. Tell us about what recruitment strategies your program/s offer to attract Aboriginal and Torres Strait Islander students?
5. Does your program/s have a set number of places for Aboriginal and Torres Strait Islander students? Yes No
6. Tell us about if your program/s has developed or is in the process of developing partnerships/links with Aboriginal and Torres Strait Islander communities/organisations?
7. What recruitment strategies for Aboriginal and Torres Strait Islander students would you like to see put in place in your program/s?
8. Tell us about what would need to happen to make this scenario possible?
9. In your opinion, what is the most important support you believe Aboriginal and Torres Strait Islander students need to enrol in public health study?

University Indigenous student support, University admissions staff and 'Other' questions

1. Would you recommend study in allied health to Aboriginal and Torres Strait Islander students? Please explain.
2. Would you say there is interest from Aboriginal and/or Torres Strait Islander students to study allied health? Please specify _____
3. What was your University's approach to developing a recruitment strategy for Aboriginal and/or Torres Strait Islander students within allied health courses?
4. Who are the main players in determining your University's approach to recruiting Aboriginal and/or Torres Strait Islander students within allied health courses?

5. What would you say are the main barriers in Aboriginal and Torres Strait Islander students being offered a place in allied health courses?
6. What additional recruitment strategies for Aboriginal and Torres Strait Islander students would you like to see put in place for allied health study?
7. What is the most important support you believe Aboriginal and Torres Strait Islander students need to enrol in allied health study?

VET student admissions and VET student support services questions

1. Would you recommend study in public health to Aboriginal and Torres Strait Islander students? Please explain.
2. Would you say there is interest from Aboriginal and/or Torres Strait Islander students to study public health programs?
3. What was your Institutions' approach to developing a recruitment strategy for Aboriginal and/or Torres Strait Islander students within public health programs?
4. Who are the main players in determining your Institutions' approach to recruiting Aboriginal and/or Torres Strait Islander students within public health programs?
5. Would you say there is interest from Aboriginal and/or Torres Strait Islander students to further their studies after they have completed their qualification?
6. Does your Institution offer opportunities and/or pathways for Aboriginal and/or Torres Strait Islander students to further their studies after they have completed their qualification?
7. What additional recruitment strategies for Aboriginal and Torres Strait Islander students would you like to see put in place for public health programs?
8. What is the most important support you believe Aboriginal and Torres Strait Islander students need to enrol in public health programs?

Thank you for participating in this survey. Your answers are very important, and we look forward to sharing the results with you.

Appendix 2

Indigenous allied health students and graduates survey questions

Background

1. What is the profession you are working in, or studying towards working in?

- Audiology
- Dietetics
- Exercise Physiology
- Occupational Therapy
- Optometry
- Orthoptics
- Pharmacy
- Physiotherapy
- Podiatry
- Prosthetics
- Clinical Psychology
- Radiography
- Social work
- Speech pathology
- Dental Technician
- Chinese Medicine
- Paramedics
- Osteopathy
- Counselling
- Arts Therapy
- Music Therapy
- Chiropractics
- Other: Please specify_____

Study Experience

2. Were you the first in your family to go to university?
3. How old were you when you began studies for your current profession?
4. How old were you when you completed studies for your current profession?
5. Did you study full-time for your current profession?

- Yes
- No – I studied part-time
- I switched between full-time and part-time study

6. Did you undertake paid or voluntary work whilst studying for your current profession?

- Yes
- No

7. If yes to Question 5, approximately how many hours a week did you work?
8. Did you have caring responsibilities whilst studying for your current profession? (Caring responsibilities includes care for children and/or adults who need help because of illness, frailty, disability, a mental health problem or an addiction and cannot cope without your support)

- Yes
- No

9. If yes to Question 7, approximately how many hours a week would you say you were engaged in caring responsibilities?
10. Was your program of study delivered on campus?

- Yes, teaching was mostly face-to-face
- No, teaching was mostly via distance/online
- Teaching was a combination of distance/online and face-to-face
- Other: please specify

11. What, if any, supports did you find most helpful when you studied for your current profession?

Reasons for profession choice

12. Why did you choose to work in your current profession?
13. Was there a person that influenced your choice? Tell us more about this.
14. Was there an experience that influenced your choice? Tell us more about this.
15. Would you have recommended your profession to others a year ago? Could you tell us why?
16. Would you recommend your profession to others today? Could you tell us why?

Thank you for participating in this survey. Your answers are important to us and we look forward to sharing the results with you.

Appendix 3

Socio-demographic profile of Indigenous and non-Indigenous enrolments for seven of the allied healthcare fields (podiatry, speech pathology, occupational therapy, nutrition and dietetics, physiotherapy, optometry, and audiology). (Data Source: Department of Education, Skills and Employment, 2018).

		Non-Indigenous student enrolments		Indigenous student enrolments				
Variable	**Level**	**n**	**%**	**n**	**%**	**Chi-square**	**df**	**p**
Overall		29654	100%	306	100%			
Age at enrolment	20 Years or under	12267	41.4%	135	44.4%	2.0	5	0.856
	21-25	10549	35.6%	105	34.3%			
	26-30	2888	9.8%	30	9.8%			
	31-40	2548	8.6%	22	7.2%			
	41-50	1116	3.8%	10	3.2%			
	51 years or over	286	0.9%	4	1.3%			
Total		29654	100%	306	100%			
ATAR score	59 and under	126	3.6%	2	5.0%			
	60-69	222	6.4%	7	17.5%	19.9	4	0.001
	70-79	520	15.0%	11	27.5%			
	80-89	927	26.8%	13	32.5%			
	90 to 100	1661	48.1%	7	17.5%			
Total		3456	100%	40	100%			
Basis of admission	Secondary education (Australian or overseas equivalent)	3765	12.7%	29	9.5%	13.6	4	0.009
	Higher education course (Australian or overseas equivalent; complete or incomplete)	4718	15.9%	35	11.4%			
	VET/TAFE award course other than a secondary education course (Australian or overseas equivalent; complete or incomplete)	248	0.8%	5	1.6%			
	Mature age special entry provisions	272	0.9%	6	2.0%			
	Any other basis	20647	69.6%	231	75.5%			
Total		29650	100%	306	100%			

Disability	Without disability	27900	94.1%	281	91.8%	2.4	1	0.122
	With disability	1752	5.9%	25	8.2%			
Total		29652	100%	306	100%			
Gender	Female	22585	76.2%	227	74.2%	0.6	1	0.458
	Male	7067	23.8%	79	25.8%			
Total		29652	100%	306	100%			
Mode of attendance	Internal	19548	65.9%	204	66.7%	0.4	2	0.830
	External	2416	8.1%	22	7.2%			
	Multi-modal	7686	25.9%	80	26.1%			
Total		29650	100%	306	100%			
SES	High	10305	34.8%	60	19.7%	60.1	2	<0.001
	Medium	15449	52.2%	165	54.1%			
	Low	3859	13.0%	80	26.2%			
Total		29613	100%	305	100%			
Type of attendance	Full-time	23935	80.7%	240	78.4%	0.9	1	0.349
	Part-time	5717	19.3%	66	21.6%			
Total		29652	100%	306	100%			
University Grouping	Group of 8	5645	19.0%	54	17.6%	28.3	5	<0.001
	Australian Technology Network	4081	13.8%	23	7.5%			
	Innovative Research Universities	7079	23.9%	79	25.8%			
	Regional Universities Network	1499	5.1%	30	9.8%			
	Non-Aligned	10403	35.1%	103	33.7%			
	Table B Providers	945	3.2%	17	5.6%			
Total		29652	100%	306	100%			
Regional	Metro	23921	80.9%	186	61.6%	114.1	3	<0.001
	Inner Regional	3814	12.9%	55	18.2%			
	Outer Regional	1633	5.5%	54	17.9%			
	Remote/Very	188	0.6%	7	2.3%			
Total		29556	100%	302	100%			

Socio-demographic profile of Indigenous and non-Indigenous enrolments for the field of social work. (Data Source: Department of Education, Skills and Employment, 2018).

		Non-Indigenous student enrolments		Indigenous student enrolments				
Variable	**Level**	**n**	**%**	**n**	**%**	**Chi-square**	**df**	**p**
Overall		14462	100%	729	100%			
Age at enrolment	20 Years or under	2809	19.4%	127	17.4%	49.8	6	<0.001
	21-25	3968	27.4%	147	20.2%			
	26-30	2104	14.5%	106	14.5%			
	31-40	2830	19.6%	157	21.5%			
	41-50	1954	13.5%	118	16.2%			
	51-60	704	4.9%	61	8.4%			
	61 years or over	93	0.6%	13	1.8%			
Total		14462	100%	729	100%			
ATAR score	59 and under	220	24.1%	9	29.0%	4.7	4	0.324
	60-69	141	15.4%	8	25.8%			
	70-79	231	25.3%	5	16.1%			
	80-89	233	25.5%	8	25.8%			
	90 to 100	88	9.6%	1	3.2%			
Total		913	100%	31	100%			
Basis of admission	Secondary education (Australian or overseas equivalent)	961	6.6%	30	4.1%	33.3	4	<0.001
	Higher education course (Australian or overseas equivalent; complete or incomplete)	2468	17.1%	100	13.7%			
	VET/TAFE award course other than a secondary education course (Australian or overseas equivalent; complete or incomplete)	875	6.1%	76	10.4%			
	Mature age special entry provisions	122	0.8%	8	1.1%			
	Any other basis	10036	69.4%	515	70.6%			
Total		14462	100%	729	100%			

Disability	Without disability	12589	87.0%	614	84.2%	4.6	1	0.032
	With disability	1873	13.0%	115	15.8%			
Total		14462	100%	729	100%			
Gender	Female	12334	85.3%	611	83.8%	1.1	1	0.299
	Male	2128	14.7%	118	16.2%			
Total		14462	100%	729	100%			
Mode of attendance	Internal	7197	49.8%	275	37.7%	86.2	2	<0.001
	External	3306	22.9%	274	37.6%			
	Multi-modal	3959	27.4%	180	24.7%			
Total		14462	100%	729	100%			
SES	High	3572	24.7%	82	11.3%	103.1	2	<0.001
	Medium	7736	53.6%	394	54.2%			
	Low	3133	21.7%	251	34.5%			
Total		14441	100%	727	100%			
Type of attendance	Full-time	9472	65.5%	389	53.4%	44.3	1	<0.001
	Part-time	4990	34.5%	340	46.6%			
Total		14462	100%	729	100%			
University Grouping	Group of 8	2131	14.7%	68	9.3%	72.4	4	<0.001
	Australian Technology Network	2021	14.0%	47	6.4%			
	Innovative Research Universities	4243	29.3%	211	28.9%			
	Regional Universities Network	1609	11.1%	101	13.9%			
	Non-Aligned and Table B Providers	4458	30.8%	302	41.4%			
Total		14462	100%	729	100%			
Regional	Metro	10717	74.2%	351	48.2%	332.8	3	<0.001
	Inner Regional	2381	16.5%	184	25.3%			
	Outer Regional	1180	8.2%	148	20.3%			
	Remote/Very	173	1.2%	45	6.2%			
Total		14451	100%	728	100%			

Socio-demographic profile of Indigenous and non-Indigenous enrolments for the field of psychology. (Data Source: Department of Education, Skills and Employment, 2018).

		Non-Indigenous student enrolments		Indigenous student enrolments				
Variable	**Level**	**n**	**%**	**n**	**%**	**Chi-square**	**df**	**p**
Overall		42216	100%	825	100%			
Age at enrolment	20 Years or under	14513	34.4%	240	29.1%	36.8	6	<0.001
	21-25	11057	26.2%	187	22.7%			
	26-30	5118	12.1%	96	11.6%			
	31-40	6329	15.0%	164	19.9%			
	41-50	3775	8.9%	104	12.6%			
	51-60	1202	2.8%	29	3.5%			
	61 years or over	222	0.5%	5	0.6%			
Total		42216	100%	825	100%			
ATAR score	59 and under	661	16.3%	17	33.3%	18.4	4	0.001
	60-69	967	20.6%	22	32.4%			
	70-79	1110	23.6%	13	19.1%			
	80-89	1110	23.6%	13	19.1%			
	90 to 100	856	18.2%	3	4.4%			
Total		4704	100%	68	100%			
Basis of admission	Secondary education (Australian or overseas equivalent)	4737	11.2%	61	7.4%	67.9	4	<0.001
	Higher education course (Australian or overseas equivalent; complete or incomplete)	7840	18.6%	139	16.8%			
	VET/TAFE award course other than a secondary education course (Australian or overseas equivalent; complete or incomplete)	1439	3.4%	67	8.1%			
	Mature age special entry provisions	329	0.8%	12	1.5%			
	Any other basis	27871	66.0%	546	66.2%			
Total		42216	100%	825	100%			
Disability	Without disability	37925	89.8%	698	84.6%	23.5	1	<0.001
	With disability	4291	10.2%	127	15.4%			
Total		42216	100%	825	100%			
Gender	Female	31816	75.4%	626	75.9%	0.1	1	0.765
	Male	10400	24.6%	199	24.1%			
Total		42216	100%	825	100%			

Mode of attendance	Internal	23343	55.3%	334	40.5%	90.1	2	<0.001
	External	11256	26.7%	334	40.5%			
	Multi-modal	7617	18.0%	157	19.0%			
Total		42216	100%	825	100%			
SES	High	14671	34.8%	141	17.1%	165.7	2	<0.001
	Medium	20922	49.6%	447	54.2%			
	Low	6561	15.6%	237	28.7%			
Total		42154	100%	825	100%			
Type of attendance	Full-time	26553	62.9%	461	55.9%	14604.1	1	<0.001
	Part-time	15663	37.1%	364	44.1%			
Total		42216	100%	825	100%			
University Grouping	Group of 8	7304	17.3%	69	8.4%	112.5	5	<0.001
	Australian Technology Network	3663	8.7%	37	4.5%			
	Innovative Research Universities	7152	16.9%	171	20.7%			
	Regional Universities Network	4351	10.3%	150	18.2%			
	Non-Aligned	19420	46.0%	387	46.9%			
	Table B Providers	326	0.8%	11	1.3%			
Total		42216	100%	825	100%			
Regional	Metro	34080	80.8%	516	62.5%	260.6	3	<0.001
	Inner Regional	5564	13.2%	173	21.0%			
	Outer Regional	2229	5.3%	101	12.2%			
	Remote/Very	322	0.8%	35	4.2%			
Total		42195	100%	825	100%			