

INTRODUCTION

Education is generally considered to be a key factor in improving the health and wellbeing of Indigenous Australians. Higher levels of educational attainment improve employment prospects, which in turn, affect income, standard of housing and access to health care (SEWRSBEC 2000). Education also provides the necessary skills to better access and utilise health and community services and information about welfare (Boughton 2000).

Participation in education by Indigenous Australians continues to slowly increase across all sectors (schools, universities, and vocational education and training (VET)). The number of Indigenous people who have attained a non-school qualification has also increased. Yet despite these improvements, the educational participation and attainment of Indigenous Australians remain below that of other Australians. This is due in part to the high proportion of Indigenous students who experience chronic health problems, such as middle ear infection and nutritional deficiencies, which negatively affect their school attendance and learning outcomes. Other factors that affect participation in education include lack of access to educational institutions, financial constraints and social, cultural and language barriers.

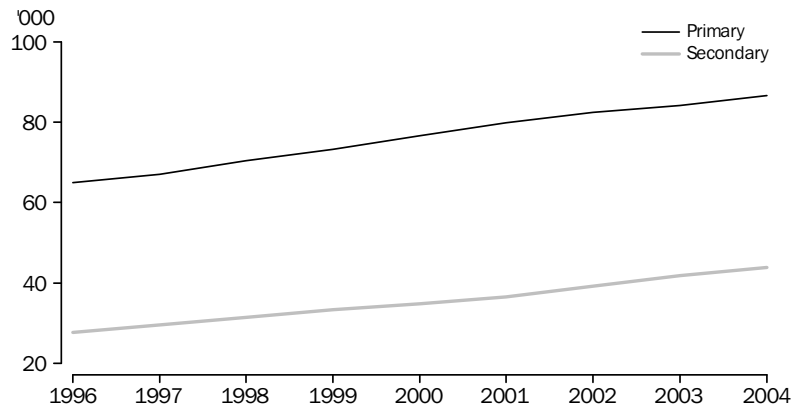
This chapter presents an overview of the educational participation and attainment of Aboriginal and Torres Strait Islander people, and outlines some of the ways in which education and health are interlinked within the Indigenous population. This chapter draws on a range of data sources, including the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS), the National Schools Statistics Collection, the Higher Education Statistics Collection, VET statistics and various academic research papers. Comparisons over time are included where possible.

SCHOOL

There was a steady increase in the number of full-time Indigenous students attending primary or secondary schools between 1996 and 2004 (graph 3.1). There were increases in every state and territory, with Australia-wide enrolments reaching 130,400 in 2004. The proportion of all full-time students who were of Indigenous origin also rose from 3% in 1996 to 4% in 2004. This reflects the increasingly younger age profile as a result of increased growth in the Indigenous population over this period; and the improved identification of the Indigenous status of students in administrative records.

SCHOOL *continued*

3.1 PRIMARY AND SECONDARY FULL-TIME SCHOOL ENROLMENTS, Indigenous students—1996–2004



Source: ABS 2004h and 2005b

School retention

A major focus of Indigenous education initiatives has been to encourage students to continue their education beyond the compulsory years of schooling in order to increase their future employment prospects and opportunities for non-school education.

The National Schools Statistics Collection showed that, in 2004, the apparent retention rate for Indigenous full-time students from Year 7/8 to Year 10 was 86% and to Year 12 was 40% (see the Glossary for more information on apparent retention rates).

Indigenous retention to Year 10 and beyond steadily increased between 1996 and 2004 (table 3.2). This trend was particularly evident at the Year 11 level, where the apparent retention rate from Year 7/8 rose from 47% in 1996 to 61% in 2004.

3.2 APPARENT SCHOOL RETENTION RATES, Indigenous full-time students—1996–2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004
	%	%	%	%	%	%	%	%	%
From year 7/8									
To year 9	96.5	96.4	95.0	93.9	95.5	96.5	97.8	96.8	96.5
To year 10	75.8	80.6	83.3	82.0	83.0	85.7	86.4	87.2	86.4
To year 11	47.2	49.6	52.3	56.0	53.6	56.1	58.9	61.4	61.4
To year 12	29.2	30.9	32.1	34.7	36.4	35.7	38.0	39.1	39.5

Source: ABS 2004h and 2005b

While Indigenous retention rates remain considerably lower than those for non-Indigenous school students, the gaps between the two groups are slowly closing (table 3.3). In Year 11, the gap between Indigenous and non-Indigenous students closed by nine percentage points between 1996 and 2004. While the Year 12 gap closed by six percentage points over this time period, Indigenous students were still around half as likely as non-Indigenous students to progress to the final year of schooling in 2004.

School retention
continued

3.3 APPARENT SCHOOL RETENTION RATES, Full-time students—1996, 2004

	1996	2004
	%	%
FROM YEAR 7/8		
To Year 9		
Indigenous	96.5	96.5
Non-Indigenous	99.6	99.9
Difference (percentage points)	-3.1	-3.4
To Year 10		
Indigenous	75.8	86.4
Non-Indigenous	97.3	98.5
Difference (percentage points)	-21.5	-12.1
To Year 11		
Indigenous	47.2	61.4
Non-Indigenous	84.3	89.5
Difference (percentage points)	-37.1	-28.1
To Year 12		
Indigenous	29.2	39.5
Non-Indigenous	72.4	76.8
Difference (percentage points)	-43.2	-37.3

Source: ABS 2004h and 2005b

Literacy and numeracy

In 1997, all Australian states and territories agreed to implement standardised benchmark testing in order to provide nationally comparable data on the literacy and numeracy of Australian children. As the benchmarks represent a minimum level of competence for literacy and numeracy at various grade levels, non-achievement of the benchmark indicates that the student will have difficulty progressing satisfactorily at school (MCEETYA 2005). It is important to note that students from low socioeconomic backgrounds and those who speak English as a second language are likely to be at a disadvantage during these standardised assessments (DEST 2003).

In 2002, more than three-quarters of Indigenous Year 3 students who took part in the testing achieved the reading benchmark (77%), the writing benchmark (77%) and the numeracy benchmark (78%). In Year 5, these rates were 68%, 76% and 66% respectively.

In 2002, fewer Indigenous students achieved the Year 3 and Year 5 benchmarks in reading, writing and numeracy compared with all students (table 3.4). The largest differences between Indigenous students and all students occurred at the Year 5 level in numeracy and reading.

3.4 YEAR 3 AND YEAR 5 STUDENTS, Proportion achieving benchmarks—2002

	YEAR 3		YEAR 5	
	Indigenous	All students	Indigenous	All students
	%	%	%	%
Reading	76.7	92.3	68.0	89.3
Writing	77.1	93.6	76.4	93.6
Numeracy	77.6	92.8	65.6	90.0

Source: MCEETYA, 2005

PARTICIPATION IN
NON-SCHOOL STUDY
Vocational education and training

The National Centre for Vocational Education Research (NCVER) reports that in 2003, approximately 58,000 Indigenous students were enrolled in VET courses, representing about 3% of the total student population. Indigenous males slightly outnumbered Indigenous females in 2003 (53% and 47% respectively). Over one-quarter (27%) of Indigenous VET students had a postal address in a remote region, compared with 3% of non-Indigenous VET students.

Indigenous VET enrolments increased between 1997 and 2002, before declining slightly in 2003 (table 3.5). The proportion of Indigenous students within the total VET population also increased over this time period.

3.5 VOCATIONAL EDUCATION AND TRAINING ENROLMENTS,
Indigenous and all students—1997–2003

		1997	1998	1999	2000	2001	2002	2003
Indigenous	'000	38.5	44.1	50.3	50.7	56.1	59.7	58.1
Non-Indigenous	'000	1 093.2	1 145.6	1 281.3	1 296.5	1 323.7	1 284.3	1 326.7
Unknown	'000	317.4	320.2	283.0	360.7	299.3	338.9	333.0
Total	'000	1 449.1	1 509.8	1 614.6	1 707.9	1 679.1	1 682.9	1 717.8
Indigenous proportion of all students	%	2.7	2.9	3.1	3.0	3.3	3.5	3.4

Source: National Centre for Vocational Education Research. Data available on request.

Success in VET is ultimately dependent upon successful completion of modules. In 2003, the rate of VET module completions for Indigenous students was 65%, compared with 78% of the total VET student population.

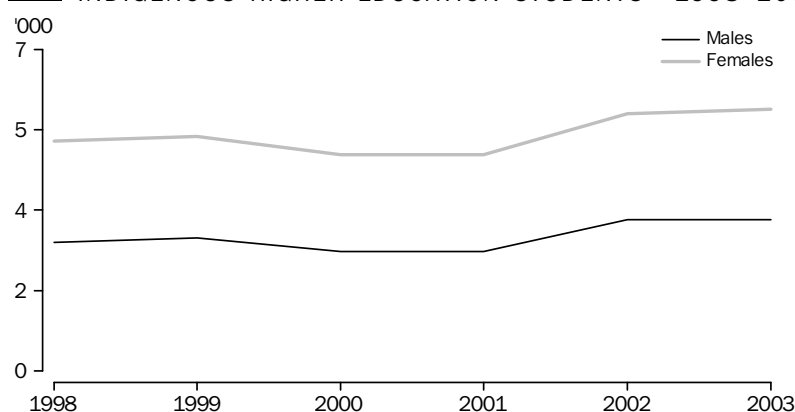
Higher education

Unlike the VET sector, Indigenous students are under-represented in the higher education sector. Data from the Higher Education Statistics Collection show that Indigenous Australians comprised 1% of the total higher education population in 2003, with 9,000 students. This was the highest number of Indigenous higher education enrolments recorded between 1997 and 2003. However, the proportion of Indigenous students within the higher education population remained largely unchanged over this time period (at around 1%).

There was a notable gender imbalance among Indigenous higher education students in 2003, with females accounting for approximately two-thirds (63%) of all Indigenous students. As shown in graph 3.6, the gap between male and female enrolments has remained relatively unchanged since 1998.

Higher education
continued

3.6 INDIGENOUS HIGHER EDUCATION STUDENTS—1998–2003



Source: DEST, Higher Education Statistics Collection

NON-SCHOOL QUALIFICATIONS

Results from the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) and the 2002 NATSISS show that the proportion of Indigenous people aged 25–64 years who had a non-school qualification increased from 20% in 1994 to 32% in 2002. For those who reported their level of qualification, there was an increase in the proportion who had completed a Certificate or Diploma (13% in 1994 compared with 24% in 2002) and a Bachelor degree or above (1% in 1994 compared with 5% in 2002).

There was little difference in the proportion of males and females who had a non-school qualification in 2002 (33% for males and 31% for females). Reflecting the location of tertiary institutions and the availability of jobs that utilise tertiary qualifications, the likelihood of having a non-school qualification decreased with increasing geographic remoteness. Overall, 36% of Indigenous people aged 25–64 years in non-remote areas had a non-school qualification compared with 23% of people in remote areas.

Of those who had a non-school qualification in 2002, 70% had obtained a Certificate (of which 34% had a Certificate level III/IV and 31% had a Certificate level I/II), 11% an Advanced Diploma or Diploma and 14% a Bachelor degree or above. The majority of Indigenous people with a Diploma or above were female. Indigenous women were twice as likely as men to have an Advanced Diploma or Diploma and one and a half times as likely to have a Bachelor degree or above.

Management and Commerce was the most common main field of study among those who had a non-school qualification in 2002 (20%), followed by Engineering and Related Technologies (18%), Society and Culture (13%), and Health (10%). Indigenous men and women varied in their choice of field. Men were more likely than women to have a qualification in the fields of Engineering and Related Technologies, and Architecture and Building, whereas women were more likely than men to have a qualification in the fields of Management and Commerce, Health, and Education.

Although there have been significant improvements in the educational participation and attainment of Indigenous Australians in recent years, their levels of attainment remain below those of non-Indigenous Australians. Among those aged 25–64 years, non-Indigenous people were nearly twice as likely as Indigenous people to have a non-school qualification in 2002 (57% compared with 32% respectively). Non-Indigenous

NON-SCHOOL
QUALIFICATIONS
continued

people were about four and a half times as likely to have a Bachelor degree or above and approximately twice as likely to have a Certificate level III/IV or Diploma (Chapter 2).

THE LINKS BETWEEN
EDUCATION AND HEALTH

International research has clearly established that higher levels of educational attainment are associated with better health outcomes. Strong positive correlations have been found between parental education, particularly that of the mother, and child health (Ewald & Boughton 2002). For example, studies on health transition in developing countries have shown that with the addition of one extra year of parental schooling, the infant mortality rate drops between 7% and 10%. There is also evidence of a clear relationship between an adult's level of education and their risk of heart disease, stroke and diet-related illnesses (MCEETYA 2001).

There has been little investigation, however, into how educational attainment affects health in the Indigenous population (Boughton 2000; Lowell, Maypilama & Biritjalawuy 2003). The few statistically based studies that have been undertaken in Australia do not point to a straightforward association between schooling and Indigenous health (Gray & Boughton 2001).

The ways in which health affects Indigenous educational attainment, however, have received more attention. A child's health has a powerful impact on whether or not they attend school and on their ability to learn and participate in school activities (MCEETYA 2001). The National Indigenous English Literacy and Numeracy Strategy (NIELNS) recognises the importance of improving the health of Indigenous children in order to enable them to increase their educational participation and attainment and consequently, their opportunities for a prosperous and healthy lifestyle (DEST 2000). The following discussion focuses on the two health conditions commonly identified as being the most detrimental to Indigenous educational outcomes: hearing loss and poor nutrition (SEWRSBEC 2000).

Hearing loss

Aboriginal and Torres Strait Islander school students are much more likely than their non-Indigenous peers to experience ear disease and hearing problems. There is a high rate of otitis media (middle ear infection) among Indigenous children, particularly in remote areas (DEST 2000). The prevalence of otitis media has been found to range from 40% to 70% in Indigenous communities compared with only 5% in more advantaged populations around the world (McRae et al. 2000). In Western Australia, the rates of otitis media among Aboriginal children aged 5–9 months has been found to be as high as 72% (Zubrick et al. 2004).

Chronic suppurative otitis media (CSOM) or 'runny ears' is the chronic condition that results from recurrent episodes of otitis media. It is typically characterised by a ruptured eardrum and discharge from the middle ear, which causes fluctuating and sometimes permanent hearing loss, as well as other complications associated with infection (NACCHO 2003a). The World Health Organization (2003) recognises that a prevalence of CSOM greater than 4% in a given population is indicative of a major public health problem. In Australia, CSOM can affect up to 40% or more of Indigenous children living in remote areas (NACCHO 2003a). For more information on ear and hearing problems in the Indigenous population, refer to chapters 5 and 7 in this report.

Hearing loss continued

Hearing loss as a result of CSOM has been associated with poor school achievement for Indigenous students (McRae et al. 2000). Indigenous children who are unable to hear correctly in the classroom are placed at a significant disadvantage, particularly in reading and language acquisition. These problems are magnified for those students learning English as a second language (Collins 1999; McRae et al. 2000). However, there remains a lack of solid quantitative evidence to show the effects of this condition on Indigenous educational outcomes (Mellor & Corrigan 2004).

There is evidence to suggest that Indigenous children with CSOM attend school less frequently than other children. The National Aboriginal Community Controlled Health Organisation's (NACCHO) Ear Trial and School Attendance Project found that during the trial period, children with CSOM attended school only 69% of the days available compared with 88% of other children in the same schools (NACCHO 2003b).

Furthermore, a study in the Northern Territory showed that Indigenous children who had low attendance rates were more likely than those with high attendance rates to have ear disease and associated hearing loss (Collins 1999).

Common school-based strategies to help prevent and combat the effects of ear disease include regular health screenings and ear examinations in schools, as well as installing amplification systems in classrooms to create an enhanced listening environment (Collins 1999). Access to salt water or chlorinated swimming pools (due to the anti-bacterial properties of salt water and chlorine) also helps reduce the number of ear infections among Indigenous children (Lehmann 2003).

Poor nutrition

Poor nutrition is another significant health issue affecting many Indigenous school students. Children who lack regular meals or have inadequate access to fresh, nutritious food tend to be tired, underweight and prone to other illnesses (SEWRSBEC 2000). Reports by the Northern Territory Health Services show that 13% to 22% of Indigenous children aged five years or younger in non-urban areas of the Northern Territory are clinically underweight (Collins 1999). Moreover, school screening in the Northern Territory in 1993 revealed that 39% of Indigenous children living in remote communities were anaemic and 22% were malnourished (Paterson, Ruben & Nossar 1998).

Poor nutrition severely limits a child's capacity to concentrate and learn at school. Children with poor diets are often lethargic or disruptive in the classroom and are more likely to be absent from school (SEWRSBEC 2000). In recognition of this issue, NIELNS emphasises the value of school-based nutrition programs in improving school performance and attendance. As well as distributing healthy meals to students at school, these programs provide an opportunity to convey health and nutrition information to the students and their families (see box 3.7). For more information on Indigenous nutrition, refer to Chapters 6 and 8 in this report.

*Poor nutrition continued***3.7** THE NATIONAL CHILD NUTRITION PROGRAM

The National Child Nutrition Program was a budget funded community grants program aimed at improving the nutrition and long-term eating patterns of children aged 0–12 years and pregnant women in high need environments. The objectives of the National Child Nutrition Program were to improve: nutrition-related knowledge and skills of children and their parents; the capacity of communities to promote better nutritional health; and access to and availability of nutritious foods.

A total of 109 projects across Australia were funded under the Program during 1999–2005. A high priority was given to projects in rural and remote communities, Aboriginal and Torres Strait Islander communities and communities with poor socioeconomic circumstances. Around 30% of total funding was provided to projects specifically targeting Aboriginal and Torres Strait Islander communities.

Of the two rounds offered as part of the Program, the second round of funding had a specific focus on high need Indigenous communities and included 22 community-based projects across Australia. The Indigenous-specific projects also included an education focus in support of the National Indigenous English Literacy and Numeracy Strategy. This strategy identifies poor nutrition as a primary cause of a child's reduced capacity to concentrate and learn in the classroom setting.

An evaluation of a number of Indigenous nutrition projects funded under the National Child Nutrition Program in Western Australia shows that projects in Aboriginal communities achieved significant impacts on nutrition awareness and attitudes, access to nutritious foods at school, school attendance and attention in class, and Aboriginal development. Successful school-based strategies included: providing healthy breakfasts and/or lunches for free or at minimal cost; the inclusion of education on nutrition within the school curriculum; and parental and community involvement throughout all stages of the project.

Source: Australian Government Department of Health and Ageing.

Health and education correlations from the NATSISS

Results from the 2002 NATSISS show that education was positively correlated with self-assessed health status. Table 3.8 shows that Indigenous persons aged 18–34 years who had completed Year 12 were more likely than those who had left school at Year 9 or below to rate their health as excellent or very good (63% compared with 45%). They were also less likely to rate their health as fair or poor (9% compared with 16%). The causal pathways that underlie this interaction are complex and difficult to measure, therefore it is not known whether higher levels of educational attainment lead to better health, or better health leads to higher educational attainment.

There was also an association between highest level of schooling and whether a person had a disability or long-term health condition. About one-third (35%) of people aged 18–34 years who had left school at Year 9 or below had a disability in 2002, compared with 18% of those who had completed Year 12. Among the former group, the most common type of disability reported was a physical disability, followed by a sight, hearing or speech disability. However, because the NATSISS did not collect information about the age of disability onset, it is not known whether the person's disability was present while they were at school or whether it occurred later in life.

Health and education correlations from the NATSISS continued

Finally, the likelihood of engaging in health risk behaviours decreased with higher levels of schooling. While this was particularly evident for smoking, there was only a marginal decline in the proportion of people aged 18–34 years who consumed alcohol at risky or high risk levels with each additional year of school completed (table 3.8).

A similar pattern of association between higher educational attainment and improved health outcomes can be observed for Indigenous people aged 35 years or over. Age is also a contributing factor in this case, as the relatively small proportion of people aged 35 years or over who have completed school to Year 12 (11%) were younger (median age 41 years) than those who had not progressed to this level of schooling (median age 47 years).

3.8 HEALTH CHARACTERISTICS OF INDIGENOUS PERSONS, by highest year of school completed (a)—2002

		18–34 YEARS			35 YEARS OR OVER		
		Year 9 or below(b)	Year 10/11	Year 12	Year 9 or below(b)	Year 10/11	Year 12
Self-assessed health status(c)							
Excellent/very good	%	44.5	51.1	62.7	23.5	41.4	42.4
Fair/poor	%	15.8	13.9	9.1	45.4	26.0	25.8
Has a disability or long-term health condition	%	34.6	26.4	18.2	59.0	39.2	32.5
Risk/behaviour characteristics							
Current daily smoker	%	69.8	55.7	38.5	48.3	48.5	41.9
Risky/high risk alcohol consumption in last 12 months	%	17.5	15.5	13.9	17.7	17.5	14.6
Indigenous persons	no.	30 700	58 600	32 400	71 400	43 200	13 700

(a) Excludes persons still at secondary school.

(b) Includes persons who never attended school.

(c) 'Good' category not shown.

Source: ABS, 2002 NATSISS

3.9 THE LINKS BETWEEN EDUCATION AND HEALTH IN GALIWINKU

Many Aboriginal and Torres Strait Islander people have a holistic concept of health and wellbeing, which is based on a sense of balance among people, land and spirit (MCEETYA, 2001). Health in this context extends beyond physical illness and encompasses spiritual, cultural, emotional and social aspects as well.

A study by Lowell and colleagues (2003) explored the links between education and health within an Indigenous context. Set in Galiwinku, a remote Island community of about 1,400 Yolgnu (Indigenous) people, the project provided the community with an opportunity to express their views on the connections between education and health.

Participants stressed the importance of Yolgnu knowledge, systems and practices in influencing health and wellbeing. The increase in health problems within the community was overwhelmingly believed to be the result of a loss of this knowledge and changes in lifestyle as a result of Western influence. Yolgnu health-related education both at home and at school, as well as strengthening Yolgnu knowledge and practices within the community were widely regarded as the key to achieving better health outcomes. Consequently, the researchers emphasised the need for a greater level of Indigenous input and control over health and education programs in order to increase their relevance and benefit to the community.

Source: Lowell, Maypilama & Biritjalawuy 2003.

SUMMARY

There have been significant improvements in the educational participation and attainment of Indigenous Australians in recent years. Between 1996 and 2004, there were steady increases in Indigenous primary and secondary school enrolments and in Indigenous apparent retention rates. Indigenous participation in vocational education and training also increased, with Indigenous students comprising 3% of the total VET student population in 2003. Indigenous students continue to be under-represented in the higher education sector, accounting for only 1% of the total higher education population in 2003.

The 1994 NATSIS and the 2002 NATSISS showed that the proportion of Indigenous people aged 25–64 years who had a non-school qualification increased from 20% in 1994 to 32% in 2002. However, Indigenous people were about half as likely as non-Indigenous people to have a non-school qualification in 2002 (32% compared with 57%).

While international research has clearly established that higher levels of educational attainment are associated with better health outcomes, there has been little investigation into whether this relationship applies to Indigenous Australians. The ways in which health impacts on educational attainment, however, is better understood. Hearing loss as the result of chronic ear infection, and poor nutrition are the two health issues that are commonly identified as being the most detrimental to Indigenous educational outcomes. Research has shown that both of these conditions are associated with poor school attendance and achievement.