The literature reports that health and wellbeing are the product of social influences [1]. The social factors shown to impact on health are many and range from macro-level influences (e.g., history) to individual influences (e.g., psychological disposition). Given the diversity of social factors affecting health, this summary will focus on education, employment, and income in the Indigenous Australian population. Each social indicator will be discussed using current data to indicate how Indigenous people fare in comparison with non-Indigenous people. Essentially this summary will summarise the significant disadvantages Indigenous people experience in the areas of education, employment, and income, in which context their generally poorer health status should be viewed.

Education

An important precursor to succeeding academically and gaining desirable employment is sound literacy and numeracy skills [2, 3]. National data highlighting students’ performance in these areas show the literacy and numeracy abilities of Indigenous students to be well below those of non-Indigenous students [4, 5, 6]. The disparities are evident from the first year of schooling and remain apparent throughout the schooling years. For example, data from 2008 indicate that 94% of Australian students in year three and 93% in year five were achieving the national benchmark for reading, compared with 68% and 63% respectively of Indigenous
students [6]. Reading standards are much worse for Indigenous students residing in very remote communities with only 30% and 22% of year three and year five students respectively reaching the national reading benchmark.

Similar figures have been reported for grammar and punctuation with 93% of all year three students and 94% of year five students achieving the grammar and punctuation benchmark [6]. For Indigenous students, the percentage of students reaching the benchmark for grammar and punctuation is considerably lower with only 65% of year three students and 64% of year five students achieving the national standard. In accordance with reading ability, Indigenous students in very remote locations are the lowest performing students with only 24% of year three students and 20% of year five students achieving the national benchmark for grammar and punctuation.

Numeracy is another area where Indigenous students are said to perform more poorly when compared with non-Indigenous students [6]. National test results reveal 79% of Indigenous students in year three and 96% of non-Indigenous students were achieving the benchmark for numeracy in 2008. The disparity continues to increase for students in year five with 69% of Indigenous students and 94% of non-Indigenous achieving the national benchmark standard for numeracy. Indigenous students in very remote communities continue to fare worse when compared with Indigenous students in other geographical locations. For example, 33% of year five Indigenous students in very remote locations are achieving the numeracy benchmark compared with 78% of metropolitan Indigenous students.

Contributing to the less developed literacy and numeracy skills of Indigenous students is their lower attendance at school. National data reporting on student attendance show the rate for year three Indigenous students attending government schools range from 73% to 94% compared with 93% to 95% for non-Indigenous students [6]. A similar pattern of attendance is evident among year five students, with attendance rates at government schools ranging from 75% to 93% for Indigenous students and 93% to 95% for non-Indigenous students. As students advance through school attendance rates show a general decline, particularly among Indigenous students. Figures reporting on this trend show the attendance rate for year 10 Indigenous students attending government schools range between 64% and 83% compared with 88% and 91% for non-Indigenous students. The lower attendance rate of Indigenous students in school is concerning as it has been remarked that irregular school attendance can limit a child’s potential to succeed following their schooling years [7].

Given the lower level of literacy and numeracy abilities and the lower school attendance of Indigenous students, a low student retention rate is to be expected. Data from 2008 show the apparent retention rate for full-time Indigenous students decreases markedly over the secondary schooling years [8]. For example, from year 7/8 to year 10, the apparent retention rate for Indigenous students is 89% compared with 46% from year 7/8 to year 12. The retention rate for non-Indigenous students shows a marginal decrease, with 100% remaining in school from year 7/8 to year 10 compared with 76% remaining from year 7/8 to year 12. It is encouraging to note that the apparent retention rate for Indigenous students from year 7/8 to year 12 has increased from 2007 where 43% of Indigenous students were reported to continue from year 7/8 to year 12. Conversely the apparent retention rate for non-Indigenous students has remained constant. Related to retention rates is the highest year of school achievement, which is greater for non-Indigenous students than it is for Indigenous students [9]. The 2006 Australian census shows that a greater percentage of non-Indigenous people complete year 12 than any other year level (~47%). In the Indigenous population year 10 is the most commonly reported highest level of school completion with 32% of those surveyed in this category.

These statistics highlight the educational disadvantage faced by Indigenous Australians. Factors contributing to this disadvantage are extensive with three main areas cited in the literature: school, family, and student. In terms of school-related factors, issues such as: lack of relevance of school curriculum to Indigenous culture; lack of understanding of Indigenous culture and ways of learning; inappropriate assessment frameworks; poor teacher quality; high teacher turnover; and racism and prejudice towards Indigenous students all influence the educational outcomes of Indigenous students [3, 10, 11]. Family-related factors that can impede Indigenous students’ educational achievement include: home environments with low literacy; different values placed on learning; family violence; and socioeconomic factors [7, 10]. Student-related factors identified as influencing academic attainment in Indigenous students include health and wellbeing. For example: low birth weight; speech difficulties; high risk of clinical emotional or behavioural difficulties; substance use; and adolescent pregnancy all contribute to the educational disadvantage of Indigenous students [10, 12, 13]. Other factors that can affect academic performance include: community perceptions that reflect a poor link between education and employment; limited employment opportunities; and geographical isolation [3, 10].

The barriers to academic attainment for Indigenous students are many and diverse. Consequently much research has focused on how to overcome such barriers to improve educational outcomes for Indigenous students [see 2, 3, 7]. A number of suggestions have been put forth, some with demonstrated success. Examples include: developing curriculum that is culturally inclusive;
has been introduced stipulating equal work entitlements for cheap sources of labour. In recent years, policy and legislation Indigenous people were viewed by the European settlers as merely force as means of survival [18]. Initially subjected to exploitation, Australians were compelled to actively participate in the labour As part of their adaptation to colonisation many Indigenous and non-Indigenous students. 

It is noteworthy that the barriers cited in the current literature as impeding the academic success of Indigenous students are much the same as those identified in the 1960s [15]. Similarly, many of the contemporary strategies recommended for overcoming these barriers are comparable to those reported in the literature 30 years ago [3]. This is an unanticipated revelation given the abundance of research undertaken in the area, the numerous strategies and programs that have been developed, and the increased funding being directed at improving education for Indigenous students. It is possible that these barriers and recommendations continue to surface because the recommendations fail to be appropriately implemented thus making evaluation difficult. Another explanatory factor is the possibility that the recommendations neglect to address the underlying causes of poor educational outcomes for Indigenous people. Further complicating the issue is the lack of ongoing funding afforded to innovative programs which means any improvements in educational outcomes resulting from such programs cannot be sustained [16]. Current research highlights the importance of working collaboratively with Indigenous communities to develop practical and relevant strategies to improve the educational status of Indigenous people [15]. In the instance where researchers have already sought advice from Indigenous people in the development of strategies (see, for example, [10, 17] it has been recommended that such strategies be properly implemented and evaluated [15]. By engaging in this approach, the duplication of information can be ceased, resources can be salvaged, and genuine progress can be made in reducing the disparity in educational outcomes between Indigenous and non-Indigenous students.

Employment

As part of their adaptation to colonisation many Indigenous Australians were compelled to actively participate in the labour force as means of survival [18]. Initially subjected to exploitation, Indigenous people were viewed by the European settlers as merely cheap sources of labour. In recent years, policy and legislation has been introduced stipulating equal work entitlements for Indigenous and non-Indigenous people, but Indigenous people still experience considerable disadvantages in the Australian workforce.

According to the 2006 Australian census of population and housing, 46% of the Indigenous population aged 15 years and older were employed, 8.5% unemployed, and 46% not in the labour force [9]. Almost 62% of non-Indigenous people were employed, 3.3% unemployed, and 35% not currently in the labour force. These figures reflect a marginal improvement for Indigenous persons, the 2001 census found that 42% of the Indigenous population were employed, 10.4% unemployed, and 48% not in the labour force [19].

The current pattern in employment for Indigenous people is: 36% of Indigenous people in the labour force are in major cities; 25% of those employed are between the ages of 25 and 34 years; 36% of employed Indigenous people work 40 hours or more a week; 94% are employees; 60% are employed in low skill level occupations; and 24% are labourers [9]. The employment pattern for non-Indigenous workers show 70% have employment in major cities; the majority of workers are between the ages of 35 and 44 years (24%); of those employed, 49% work 40 hours or more a week; 82% are employees; 44% are in low skill level occupations; and 20% are professionals.

Collectively the employment data illustrate obvious disparities in labour force and occupational status between Indigenous and non-Indigenous people. Indigenous people have a lower rate of employment and are far more likely than non-Indigenous people to occupy low skilled positions [9].

Addressing these inequalities in employment has been a governmental focus for decades and a strategy that has shown promise in increasing the number of employed Indigenous people is the Community Development Employment Project (CDEP) scheme. The CDEP scheme was introduced in May 1977 primarily as a means for reducing costs associated with paying unemployment benefits to Indigenous people in remote communities while simultaneously circumventing the possible development of social problems [20, 21, 22]. It was trialled in several remote Northern Territory communities and soon expanded to other remote communities and eventually major urban communities [20, 21, 23]. The CDEP scheme operates by providing Indigenous people with the opportunity to forgo government income support payments in favour of income from employment [20, 21, 23, 24]. Commonwealth funding is paid to community organisations at a rate similar to income support payments. This funding is then used by the organisations to pay wages to Indigenous people who undertake community-managed activities. Ultimately the scheme endeavours to place Indigenous people in unsubsidised
employment and develop viable business enterprises. The scheme is viewed as a cost-effective means for reducing Indigenous unemployment and improving the wellbeing of Indigenous people and their communities [20, 21, 24].

According to the 2006 Australian census, 14,200 Indigenous people were involved in the CDEP scheme [9]. In line with its origin, the majority of CDEP participants were in very remote areas (76%), residing mainly in the Northern Territory (37%) and Queensland (32%), and working part-time hours (75%). With CDEP considered a form of employment, it substantially reduces the unemployment rate for Indigenous people from 25% (if the scheme was not regarded as a form of employment) to the level of 16% reported in the census.

Notable developments to occur in Indigenous employment since the inception of the CDEP scheme include the introduction of the Indigenous Employment Policy in 1999 and the launch of Indigenous Employment Centres [21, 22]. The impetus for the Indigenous Employment Policy was to increase the number of Indigenous people in private sector positions while the transformation of selected CDEPs into Indigenous Employment Centres sought to increase the number of CDEP participants in mainstream employment. Notwithstanding these developments, much criticism was directed at the scheme, particularly that it created a sub-standard second labour market in which individuals remained in low paying, part-time employment, rarely progressing to employment in the mainstream labour market [21, 25]. This criticism led the Australian Government to decide in July 2007 to terminate the scheme in capital cities and regional areas [26, 27]. In addition, action was taken to phase out CDEP in the Northern Territory in support of the Northern Territory Emergency Response.

A change of government in late 2007 saw the CDEP program reinstated and reformed [28, 29]. The reformed CDEP program came into effect mid 2009 and included a number of important changes such as: the termination of CDEP in non-remote locations with well established economies; the implementation of Community Support Programs into non-remote communities that are without CDEP to support Indigenous peoples in these locations; and changing the focus of the CDEP program in remote locations to place greater emphasis on skill development thus encouraging participants to pursue employment outside of CDEP.

The research highlights several factors contributing to the lower rate of engagement of Indigenous people in mainstream employment [30, 31, 32, 33, 34]. Education and health have been reported as having a great impact on one's ability to find and maintain employment [33, 34]. Low educational attainment reduces one's employment prospects as does poor health. Contact with the criminal justice system also impacts on one's employability by significantly reducing the likelihood of an individual finding employment, particularly for males. Other factors, such as overcrowded housing and limited employment opportunities in remote areas, also place constraints on finding and maintaining employment [30, 31, 32]. Given that each of these factors are more common in the Indigenous population than in the non-Indigenous population contributes to their reduced participation in the labour force.

The implications of unemployment extend beyond the obvious financial concerns. Research attests to the potentially negative effect unemployment can have on health and wellbeing [for example [35, 36, 37]. Individuals who are unemployed are more susceptible to poor mental health, with anxiety, affective disorders, and substance use problems more prevalent among the unemployed than those engaged in full-time employment [35, 37]. Other psychological outcomes of unemployment include: loss of identity, poor self-esteem, stigma, and increased likelihood of social isolation [36]. The impact of unemployment also affects the offspring of the unemployed. Children whose parents are unemployed are more inclined to experience serious chronic illnesses, visit the doctor more frequently, and have more outpatient visits than children with employed parents [36]. On the other hand, there is an increased probability of the child of an employed parent attending school and progressing past the compulsory school attendance age. Post-secondary education and employment are also more likely for children whose parents are employed [38].

The ramifications of unemployment are many, not just for the individual but also their family. The problems generated by unemployment are noticeably more prevalent in the Indigenous population given their lesser participation in the Australian workforce, which only serves to amplify the disadvantage they already experience when compared with the non-Indigenous population. Based on projections to 2011, the disparity between Indigenous and non-Indigenous people is expected to increase [39]. It is predicted that population growth will exceed the rate of employment, thus decreasing the Indigenous employment rate by approximately 5%.

To avoid a possible further decline in the participation of Indigenous people in the workforce, a modification of conventional understandings of employment has been proposed [1]. This would acknowledge that different cultures may have different conceptions of the term employment. Thus, seeking to increase the number of Indigenous people in mainstream employment may not be the most effective means for improving their health. An alternative concept is ‘workfulness’, which refers to employment in the mainstream labour market as well as engagement in tasks that contribute to community and/or cultural development. By viewing
both these as forms of work affords the opportunity to explore which method produces greater health benefits for Indigenous people. In addition, it is recommended that a focus on generating greater demand for Indigenous workers should complement efforts to improve their skills and abilities.

**Income**

Educational attainment together with degree of workforce participation can significantly influence one's level of income. It is therefore anticipated that the dominant experience of Indigenous Australians is that of economic hardship given their generally lower level of educational attainment and reduced participation in the mainstream workforce.

Figures from the 2006 census highlight the extent of the financial adversity encountered by Indigenous people [9]. The equivalised mean gross income per week for Indigenous households in 2006 was $460 and for non-Indigenous households $740. This income figure is a slight improvement from 2001 when the equivalised mean gross income was $422 per week for Indigenous households and $679 for non-Indigenous households. Together these figures illustrate that although the income in Indigenous households has increased (by approximately 9%) the degree of disparity between Indigenous and non-Indigenous household income has remained unchanged.

These figures need to be related to the composition of Indigenous and non-Indigenous households. The most common Indigenous household composition is a couple family with dependent children (28%) followed by a one parent family with dependent children (23%) [9]. For non-Indigenous households, the most common composition is a couple family with no children (27%) followed by a lone person household (26%). These compositional differences, together with the facts that Indigenous households are generally larger than non-Indigenous households and their weekly household income is 62% that of non-Indigenous households, highlight the economic hardships experienced by many Indigenous people.

In terms of individual gross weekly income, the majority of Indigenous people (28%) earned between $150 and $249 in 2006 [9]. The median gross weekly individual income for Indigenous people was $278. The most common individual gross weekly income brackets for non-Indigenous people were $150 and $249 (15%) and $400 and $599 (15%), and the median gross weekly individual income was $473. For both Indigenous and non-Indigenous people, the highest earning age group was 25 to 44 years. Indigenous people in this age cohort earned an average individual gross weekly income of $374, compared with $684 for non-Indigenous people. For both the Indigenous and non-Indigenous populations, professionals were the highest median gross weekly income earners and labourers were the lowest. In both instances, the reported earnings of the Indigenous population were considerably lower than those of the non-Indigenous population.

The lower income of Indigenous people impacts on access to quality food, housing, and health care - each of which make important contributions to overall health and well-being [40]. Generally, ill health is more prevalent among lower income earners [41]. It is interesting to note, however, that this relationship has been questioned for the Indigenous population: there is little association between income and health status for Indigenous people, with Indigenous high income earners reporting their health to be much the same as that of other Indigenous people [42]. A failure to associate low income with poor health in the Indigenous population may be due to the fact that Indigenous people are more inclined to have health experiences in childhood that continue to exert influence on their health in adulthood (for example, low birth weight and childhood diseases). Another possible explanatory factor is that the issue is far too complex to assume a linear relationship [1].

**Conclusion**

This summary has illustrated the significant disadvantages of Indigenous Australians in the areas of education, employment, and income. When compared with non-Indigenous people, Indigenous people experience lower levels of educational attainment, higher unemployment, and less income.

In attending to the disparities between Indigenous and non-Indigenous people in education, employment, and income, several strategies have been proposed. It is important to acknowledge, however, that to effect positive change in any one area, the problems prevalent in all three areas must be addressed due to the interrelationship existing between the social indicators. One can then expect the eventual outcome of this approach to be improved health for Indigenous people.
References


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The Australian Indigenous HealthInfoNet is an innovative Internet resource that contributes to ‘closing the gap’ in health between Indigenous and other Australians by informing practice and policy in Indigenous health.

Two concepts underpin the HealthInfoNet’s work. The first is evidence-informed decision-making, whereby practitioners and policy-makers have access to the best available research and other information. This concept is linked with that of translational research (TR), which involves making research and other information available in a form that has immediate, practical utility. Implementation of these two concepts involves synthesis, exchange and ethical application of knowledge through ongoing interaction with key stakeholders.

The HealthInfoNet’s work in TR at a population-health level, in which it is at the forefront internationally, addresses the knowledge needs of a wide range of potential users, including policy-makers, health service providers, program managers, clinicians, Indigenous health workers, and other health professionals. The HealthInfoNet also provides easy-to-read and summarised material for students and the general community.

The HealthInfoNet encourages and supports information-sharing among practitioners, policy-makers and others working to improve Indigenous health – its free on line yarning places enable people across the country to share information, knowledge and experience. The HealthInfoNet is funded mainly by the Australian Department of Health and Ageing. Its award-winning web resource (www.healthinfonet.ecu.edu.au) is free and available to everyone.