

Improving Indigenous health through education

Better education may close the life expectancy gap by up to 12 years

In an inquiry into Indigenous health in 1979, the House Standing Committee on Aboriginal Affairs noted: “When innumerable reports on the poor state of Aboriginal health are released there are expressions of shock or surprise and outraged cries for immediate action. However, the reports appear to have no real impact and the appalling state of Aboriginal health is soon forgotten until another report is released”.¹

In 2007, the online publication Crikey (<https://www.crikey.com.au>) estimated that over 20 such reports had been issued since the above comment was made.² While clinicians focus on medical advances to benefit health care, real improvement in Indigenous health will come through attention to factors such as education, gender, power, racism and employment conditions.³ These daily living factors constitute the social determinants of health, which are responsible for major health inequities between population groups.⁴ It follows that, for different Indigenous population groups, social determinants, rather than biological characteristics, explain the large variances in health status and life expectancy at birth.⁵ While these relationships are well recognised, the inertia so repetitively documented describes an inability to operationalise an effective approach. This article describes education attainment as a potent, practical and achievable road to change, which has largely been overlooked as a force for health improvement.⁶ We define education attainment as “the formal skills acquired through the western system of compulsory school-based instruction, measured in terms of English literacy and numeracy outcomes, at levels adequate for adept navigation within wider literate and numerate social contexts”.⁷

Literature support for the association between education and health is strong; however, it has not yet convincingly shown causation. Baker and colleagues⁸ conducted a meta-analysis of the education effect on adult mortality. They found that people with no education or lower secondary schooling have a 46% higher probability of dying prematurely than people who have achieved a high school or higher education level. They conclude, from their analysis of studies representing about 20 million people across the globe, that there is an independent, consistent and substantial effect of education on adult mortality. This brings perspective to one of the few studies in Australia exploring a correlation. Korda and colleagues,⁹ at the Australian National University, linked hospital and death data of an Australian cohort involving 267 153 men and women aged ≥ 45 years, and found a hazard ratio of 1.62 (95% CI, 1.49–1.77) for primary major cardiovascular disease events in people with no educational qualifications versus people with a university degree.⁹ Informed by their extensive analysis, Baker et al⁸ suggest that the causal mechanism behind the association between education and mortality is that



formal schooling adds significant value to the innate ability to develop higher-order cognitive skills, which are crucial for making healthy choices.

In their literature overview of the implications for Indigenous children of the links between education and health, Johnston and colleagues⁷ acknowledged that clinicians are aware of the impact of Indigenous health on education and their role in tackling the range of impediments to learning, such as the higher prevalence of ear disease and impaired hearing, nutritional deficiencies, and the in utero effects of alcohol and other toxic substances. They emphasised that clinicians are often the only practitioners in regular contact with families during the important formative pre-school years, during which time they can assess, support and encourage healthy child development in readiness for school. The need for enhancing this role is shown by the fact that the Australian Early Development Census (AEDC) indicates that children of Indigenous parents are twice as likely to be developmentally vulnerable than children of non-Indigenous parents. The AEDC can predict school performance,¹⁰ which in turn is linked to health, underlining the importance of interventions during this phase of the lifespan.

Johnston and colleagues⁷ revealed a deficit in research on education and health specific to Indigenous Australia, and make several suggestions to approach the problem. They cite the Australian Aboriginal and Torres Strait Islander Health Survey,¹¹ which revealed that 18–35-year-old Indigenous people with higher levels of schooling were more likely to report better self-rated health and lower levels of psychological distress, with better lifestyle choices than their peers with less schooling. Similar to Baker et al,⁸ they noted that education assisted with the acquisition of health literacy. They also referred to several studies showing that parents, in particular mothers, who receive a basic education benefit not only themselves, but also the health of their children, families and communities.⁷

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doi: 10.5694/mja17.00319

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Online first 26/06/17

The trend in educational attainment for Indigenous students is in the right direction, according to the *Closing the Gap Prime Minister's report 2017*.¹² In Australia, the proportion of Indigenous 20–24-year-olds who had achieved Grade 12 or equivalent increased from 45.4% in 2008 to 61.5% in 2014–15. The greatest increases occurred in outer regional areas (from 43.2% to 66.3%) and very remote areas (from 24.1% to 41.7%). But school attendance rates do not tell the whole story, with important regional variances underlined by Northern Territory data, where the proportion of Indigenous children reaching the Grade 3 minimum reading standard in 2013 was 47% compared with the national figure of about 90%.¹³

From 2005 to 2015 there was a 93% increase in the number of Indigenous students in higher education award courses, compared with 47% growth for domestic students.¹² However, enrolment, retention and completion rates are significantly lower than those of non-Indigenous students, with Indigenous students making up only 1% of university enrolments in 2013, below the 3% general population rate.¹⁴ Therefore, Indigenous participation in higher education remains significantly below population parity, despite attempts to correct the inequity.¹⁴

The available literature makes a strong case for the association between educational attainment and health outcomes in global, Australian and Indigenous settings. However, it is yet to be established that this association is causative. Nevertheless, the estimation that life expectancy may be increased by 10 years by improving educational attainment¹⁵ is compelling when compared with the Indigenous life expectancy gap, which is, at birth, 10.6 years lower for Indigenous Australians males than for non-Indigenous males, and 9.5 years lower for Indigenous females than for non-Indigenous females.¹² Recent data published in this issue of the *MJA* show that in specific populations, such as in the NT, Indigenous people endure larger gaps of 16.5 and 16.1 years respectively;¹⁶ these data relate well to the specific NT educational gaps mentioned above.

In a previous *MJA* article, Marmot¹⁷ stated the key social determinant domains to improve health (Box). He proposed that better education may in itself bring about advances in multiple areas. In addition, a more recent analysis by Spittel and colleagues¹⁸ summarised evidence not only for the effect of education on life expectancy, but also its magnitude. They contrasted the difference in life expectancy of 10–12 years between people with less than a high school education and people with an advanced degree with the difference in life expectancy of about 6 months between people with elevated low-density lipoprotein cholesterol levels versus normal cholesterol

levels, and of only about 1 month between people having yearly mammography screening versus not screening.

An alternative measurement of the impact of social determinants on health, and education in particular, was recently described in *The Lancet*,¹⁹ showing that socio-economic status, indexed by occupational position, has a mortality hazard ratio of 1.42 for men and 1.34 for women compared with a range from 1.04 to 2.17 for the seven principal mortality risk factors identified by the World Health Organization in their 2013–2020 global action plan,²⁰ namely the harmful use of alcohol, insufficient physical activity, current tobacco use, raised blood pressure, intake of salt or sodium, diabetes and obesity (referred to as the 25 × 25 risk factors). The study authors noted the tight relationship between education, income and occupational position and socio-economic status. Of these, education is the most malleable to intervention.¹⁹

Educational intervention to improve Indigenous health and mortality discrepancies requires multiple approaches. Recent data from the Programme for International Student Assessment (PISA) — an international comparative study of student achievement directed by the Organisation for Economic Co-operation and Development (OECD) — show that disadvantaged schools in Australia experience more teacher shortages, higher student–teacher ratios and more shortages or inadequacy of material educational resources than advantaged schools. Australia was the worst performing of all OECD countries for teacher shortages and educational staff-allocation inequity, and among the worst performing schools for all the other mentioned metrics.²¹ While dealing with education disadvantage is complex, health has made a significant impact in providing staff and resources to disadvantaged communities through training program allocations and consultant support, although there is still more to be done. It seems inconceivable that the education sector, with support, cannot make significant inroads to address the PISA-identified inequities. A starting point on the road to improved educational performance is surely an Indigenous attention to the PISA findings and, while outside the immediate expertise of clinicians, the need to address broad education as a critical component of improving health should require ongoing clinical support for interventions.

Conclusion

Although there remain gaps in research regarding the influence of education on the health of Indigenous people, the estimation that life expectancy may be increased by up to 12 years by improving educational attainment in the general population is indeed too compelling to ignore. Pragmatic solutions to Closing the Gap must include a focus on education at multiple levels, including Indigenous academic achievement, with specific educational approaches to implementation in local areas.

Acknowledgements: We thank the contributions, advice and cultural oversight provided by Dennis McDermott and Tom Calma.

Competing interests: M Bret Hart is the current chair of the Social Determinants of Health Alliance (SDOHA). Michael Moore and Martin Laverty were the previous chairs of SDOHA.

Provenance: Commissioned; externally peer reviewed. ■

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References are available online at www.mja.com.au.

Principal social determinant domains to improve health

- Early child development
- Education and skills development
- Employment and working conditions
- Minimum income for healthy living
- Sustainable communities
- Social determinants approach to prevention ◆

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