Social and Cultural Determinants of the Self-assessed Health of Indigenous Australians

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Abstract

This paper investigates the social and cultural factors associated with the self-assessed health of Indigenous Australians, using data from the 2008 National Aboriginal and Torres Strait Islander Social Survey. The results suggest factors associated with Indigenous self-assessed health differ by geographic remoteness. While there was some evidence to suggest a 'social gradient' of health for Indigenous persons living in non-remote (urban) areas, there was no evidence of a gradient of health in remote (rural) areas. Additional cultural factors such as community isolation, discrimination and being removed from one's family as a child were also found to be related to poor self-reported health. The implications of this analysis include the importance of maintaining a 'holistic' view of Indigenous health and formulating Indigenous health policy at a local or regional level.

1 Introduction

It is well established that Aboriginal and Torres Strait Islander ('Indigenous') people in Australia experience poorer health outcomes than non-Indigenous Australians. Among other things, they suffer child mortality rates that are 60% higher, and have a life expectancy that is around 15 years less, than their non-Indigenous counterparts (ABS 2011a). Through the Closing the Gap (CTG) targets, the Council of Australian Governments aims to halve

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these differences by 2018. However, the latest CTG report suggests there is still a long way to go before this is achieved (FaHCSIA 2012a).

It is important to consider Indigenous health in the appropriate social context. Indigenous Australians also suffer from poor outcomes in employment and education. Given the social gradient of health – that is, the observation that health tends to improve with greater levels of income, education and employment – it could be expected that these disadvantages are likely to have serious ramifications for their health.

Previous research suggests that the Indigenous concept of health goes beyond physical and mental wellbeing. Spiritual and cultural connectedness, as well as aspects such as connection to the land and community involvement are part of an all-encompassing view of a healthy lifestyle.

To what extent does the social gradient of health exist for Indigenous Australians and how do culturally-specific factors relate to their health? This paper draws on previous research to further explore these questions, using data on self-assessed health from the 2008 National Aboriginal and Torres Strait Islander Social Survey.

The remainder of the paper is structured as follows. Section 2 presents a review of existing literature regarding social and cultural determinants of Indigenous health. Section 3 outlines the data and methods used for analysis. Section 4 presents the results, which are then discussed in Section 5.

2 Background

A large volume of research exists about the health outcomes of Indigenous Australians. Research consistently highlights biological, social, economic, cultural and historical factors that affect these outcomes. This paper will focus on the social, economic and cultural factors in particular.

The efficacy of self-assessed health as a measure is first discussed. The factors associated with Indigenous health that have been identified previously are then reviewed. This will help to inform the model and discussion presented in later sections.

2.1 Self-assessed health as a measure of health status

There are many ways to measure health. Important indicators may include weight, diet, smoking habits and medical history. However, perhaps the most direct way is simply to ask 'how would you rate your overall health?' The answer is then recorded on a scale from 'poor' to 'excellent'.

It is generally acknowledged that self-assessed health is an informative measure of overall health status (Jylha 2009). Firstly, it is an effective way to capture the many components of health – physical, mental, social and cultural – in one measure. Secondly, it gives an important insight into how an individual perceives their health compared to more objective measures. In addition, it has been found that self-assessed is a good predictor of mortality and morbidity (McCallum, Shadbolt et al. 1994).

However, it should be noted that self-assessed health has limitations. An individual's assessment of their overall health is a cognitive process and so is inherently subjective and contextual (Jylha 2009). This may mean that self-assessed health statuses are not directly comparable between different population groups.

2.2 Determinants of self-assessed health

2.2.1 Socio-economic status

There is a commonly observed association between health outcomes and socio-economic status (SES). Previous research finds that people of a relatively low SES are more likely to have poorer health outcomes than people in high SES groups. This relationship occurs across many aspects of SES, including income, education and labour force status. The so-called 'social gradient' of health is ever-present in health studies across many different countries (Marmot 2005).

SES can affect health through a variety of different mechanisms (Marmot and Wilkinson 2006). People with a low income may not be able to afford, or may have restricted access to, health services. Relatively poorly-educated people may not be sufficiently equipped with information on health services or know how nutrition relates to health. In addition, unemployment may cause poor health through the associated stress or social exclusion.

Although the social gradient of health seems a fairly ubiquitous phenomenon, its existence is not well established for Indigenous Australians. In a meta-analysis of Indigenous heath-related literature, Carrington, Shepherd et al. (2012) found the association between health and SES for Indigenous people was not consistent. The presence of a social gradient often depends on the type of health measure and analysis being used.

2.2.2 Social and cultural factors

It could be expected that poor Indigenous health outcomes are, for the most part, a consequence of their low SES compared to non-Indigenous people.

However, the uncertainty surrounding the social gradient of health suggests there are other factors at play. Indeed, Booth and Carroll (2005) found that, while around one third of the health gap between Indigenous and non-Indigenous Australians can be explained by differences in SES, there is still a large unexplained component. The disparity is likely to be due, in part, to cultural and social factors that are unique to Indigenous people.

Importantly, the concept of health for Indigenous Australians is often quite different to non-Indigenous Australians. Their holistic view of health goes beyond individual physical and mental well-being to include aspects of spirituality, cultural identity, connection to land and well-being of the community as a whole (Carrington, Shepherd et al. 2012). These cultural factors are not necessarily dependent on standard socio-economic measures of well-being. Indeed, Taylor (2008) notes that mainstream measures of success are sometimes in direct conflict with Indigenous perceptions of well-being, as they may hinder the ability to maintain cultural practices. In fact, social status in some Indigenous communities is more a function of knowledge rather than material resources (Prout 2012). Thus, a more comprehensive framework of Indigenous well-being may include the concept of cultural health, as measured by indicators such as language use and participation in cultural activities (AIHW 2009; Prout 2012).

Throughout Australia's history, Indigenous people have suffered from dispossession of their land and children, social exclusion and a disregard for their identity and culture (Hunter 1993). These historical factors are likely to have had serious ramifications for their health (Saggers and Gray 1991). In addition, many Indigenous people have been subject to discrimination when applying for work, in the criminal justice system and when seeking health services (ABS 2011b). It is well established that experiences of systemic discrimination are linked to poor mental and physical health outcomes (Paradies 2006).

The effect of the social, economic and cultural factors discussed could be different for those living in remote versus non-remote areas. Remote areas have a different cultural make-up, labour market and a relative lack of health infrastructure (Gray, Hunter et al. 2004; Gray, Hunter et al. 2012). In addition, Indigenous people in remote areas are more likely to be involved in cultural activities on a daily basis (ABS 2010a). However, little research exists in considering the factors associated with health for remote and non-remote areas separately.

In summary, there is some evidence to suggest that Indigenous self-assessed health may vary with socio-economic indicators. However, the relationship between health and SES is not clear. Importantly, the literature suggests that other non-SES variables may also be associated with Indige-

nous health. In particular, connection to Indigenous culture and experience of social stressors such as exclusion and discrimination should be taken into account. There is also scope to consider social and cultural factors of health for remote and non-remote areas separately.

3 Data and Methods

The previous section highlighted factors that may be associated with Indigenous health. The remainder of the paper will explore these associations using data from a recent social survey of Indigenous Australians.

3.1 Data

The National Aboriginal and Torres Strait Islander Social Survey (NATSISS) is conducted by the Australian Bureau of Statistics (ABS). The survey, which has so far been conducted in 2002 and 2008, provides information about Indigenous Australians for a wide range of domains, including health; education; culture; and labour force participation (ABS 2010b). This paper uses data from the 2008 survey.

The 2008 NATSISS contains a sample of 13,307 Indigenous Australians. It is nationally representative and covers a wide range of both remote and non-remote areas of Australia. A subset of 7,823 respondents who were of working age (i.e. 15 years or over) will be considered.

3.1.1 Variables of interest

The health variable of interest is the self-assessed health status. Respondents were asked to rate their current overall health as poor, fair, good, very good or excellent.

NATSISS contains information on labour force status, income and education. For those persons employed, information is also given on whether or not employment is through the Community Development Employment Projects (CDEP) program. This program helps indigenous job seekers to gain skills and training needed to find sustainable employment (FaHCSIA 2012b). It is inherently different to non-CDEP employment and thus should be considered separately.

NATSISS also contains data on culture, language, community and social stressors. Key information includes:

- main language spoken at home (English or non-English);
- participation in cultural activities and in the community;
- recognition of homelands;
- whether taken away from natural family; and
- experiences of discrimination.

The descriptive statistics of the variables of interest are summarised in the Appendix.

3.2 Methods

For confidentiality reasons, NATSISS data can only be accessed through the ABS Remote Access Data Laboratory (RADL). All calculations were performed through the RADL.

3.2.1 Bivariate analysis

The social gradient of health is firstly investigated through a bivariate analysis of self-assessed health and socio-economic indicators of income and education. Bivariate analysis will be presented separately for remote and non-remote areas.

Analysis will consider the mean health outcomes which are weighted by person weights provided by the ABS (ABS 2010c). These weights adjust for the under- or over-representation of certain sub-groups of the Indigenous population in the NATSISS.

3.2.2 Multivariate analysis

Multivariate analysis allows for the association between health and other factors to be assessed while controlling for variables such as age and gender. It also presents an opportunity to investigate the association of health and factors of cultural health and social stress.

Multiple logistic regression is used to determine the relationship between health and other factors. The dependent variable is a binary value indicating whether or not the respondent reports their health to be in the lowest two categories (i.e. equal to 1 if poor or fair self-assessed health and equal to 0 otherwise). This analysis follows the methodology used in previous research (see, for example, Cunningham, Sibthorpe et al. 1994).

It should be noted that the cross-sectional nature of the NATSISS data means that the causality of relationships between health and other factors can not be determined. Emphasis is thus placed on detecting significant associations between factors, rather than the direction of the association.

4 Results

4.1 Investigating the social gradient

Figure 1 shows the proportion of Indigenous people reporting good and poor health in each income quintile in remote (Figure 1a) and non-remote (Figure 1b) areas.[1] If an income gradient of health existed, one would expect that the proportion of people reporting good health to increase with income. Conversely, the proportion of people reporting poor health would decrease.

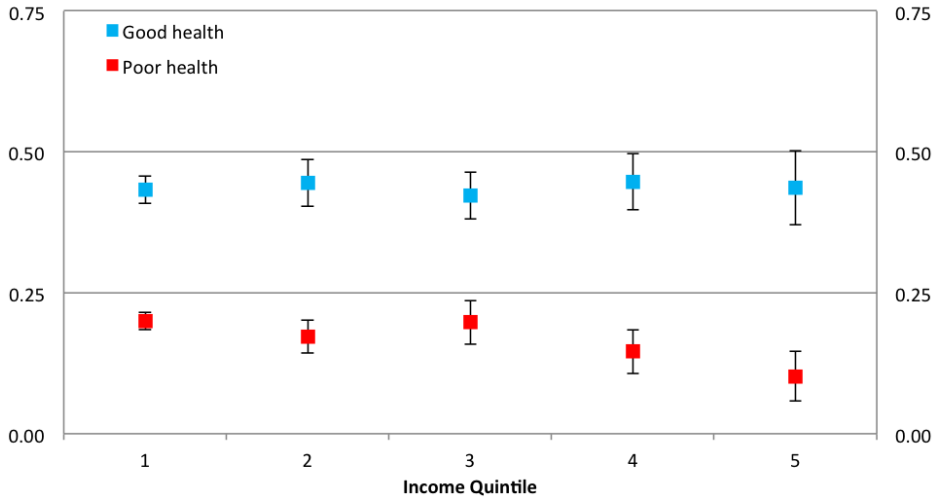
The change in health with income differs between remote and non-remote areas. On one hand, there is little evidence to suggest an income gradient of health exists for remote areas. On the other hand, the level of reported health in non-remote areas generally increases with increased income. The most significant changes in health occur between the first and second income quintiles. In addition, the decrease in the proportion reporting poor health is more marked than the increase in those reporting good health.

It is also interesting to note that, particularly in the first income quintile, reported health is worse in non-remote areas (e.g. 31% of people reported poor health in non-remote areas compared to 20% in remote areas). This suggests that having a relatively low income in non-remote areas is more of a stress on an individual's health than in remote areas.

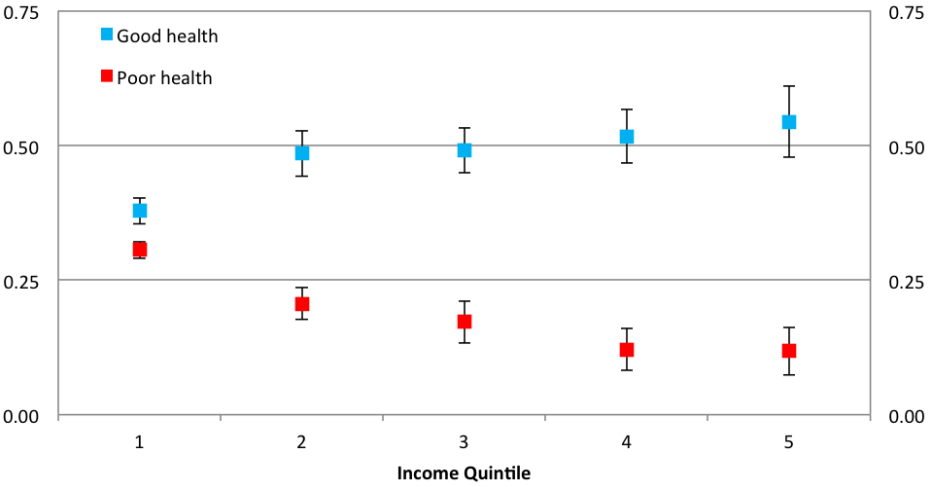
[1] Income quintiles divide the population into five groups based on their income. For example, the first income quintile contains households that have income in the lowest 20% of the sample.

Figure 1: Proportion of Indigenous Australians reporting good and poor health – by income and remoteness

(a) Remote



(b) Non-remote



Notes: Lines represent 95% confidence interval. 'Good health' = good and very good health. 'Poor health' = poor and fair health.

Figure 2 shows the proportion of Indigenous people reporting good and poor health at each education level for remote (Figure 2a) and non-remote (Figure 2b) areas. Similarly to income, if an education gradient existed, one would expect to see the overall level of health increase with increased level of education.

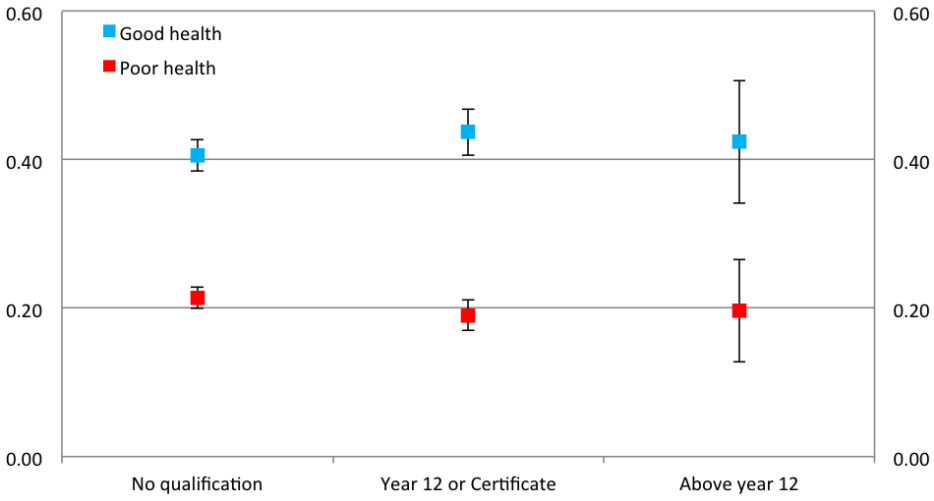
The figures illustrate a similar pattern to that seen with income. There is little evidence to suggest that health in remote areas increases with education.[2] In contrast, there is evidence to suggest that education does have an effect on health in non-remote areas. In particular, those who have finished school or obtained a vocational certificate are significantly more likely to have better health than those who do not have a qualification.

Similarly to income, those with the lowest level of education in non-remote areas have poorer overall health than those in remote areas (33% of people reported poor health in non-remote areas compared to 21% in remote areas).

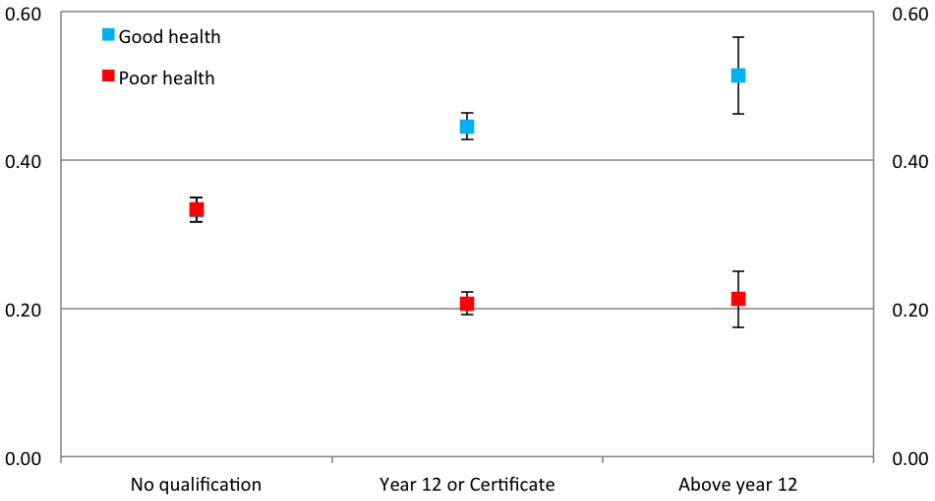
[2]It should be noted that there are large standard errors around the estimates for those in remote areas with education higher than Year 12. This is likely because it is not possible to undertake higher education in remote areas.

Figure 2: Proportion of Indigenous Australians reporting good and poor health – by education and remoteness

(a) Remote



(b) Non-remote



Notes: Lines represent 95% confidence interval. 'Good health' = good and very good health. 'Poor health' = poor and fair health. For those with no qualification in non-remote areas, the proportion of good and poor health is approximately equal.

4.2 Multivariate analysis

Factors associated with poor health are now investigated in a multivariate setting. Given the bivariate analysis in the preceding section showed marked differences in socio-economic effects on health for people in remote and non-remote areas, analysis will again be conducted by remoteness.

Two models were considered. The 'Reduced' model includes standard demographic (age and sex) and socio-economic (employment, income and education) variables. The 'Full' model extends the Reduced model to also include other social and cultural factors such as experiences of discrimination, community and cultural involvement, whether removed from natural family as a child, homelands recognition and main language spoken at home.

The regression results are presented in Table 1. Note that coefficients are expressed as odds ratios. An odds ratio of over 1 means that that factor increases the probability of having reported poor health. Conversely, an odds ratio of less than 1 means that a factor is decreases the probability of having reported poor health. The coefficients are interpreted as relative to a reference person defined by the omitted categories of the respective groups of explanatory variables.

4.2.1 Demographic factors

Unsurprisingly, the odds of reporting poor health generally increase with age. However, it is interesting to note that, in remote areas, the odds of reporting poor health for people aged 55 and over are not significantly different to those aged 35 to 54. This may be due to the fact that, because of the relative inaccessibility of health services, older people in remote areas are less aware of health problems they may have.

There was no evidence to suggest the odds of reporting poor health differed between males and females.

4.2.2 Socio-economic factors

People who are unemployed or not in the labour force are more likely to report poor health compared to those who are employed in non-CDEP jobs. In particular, not being in the labour force has the strongest association with poor health of all variables tested. This could be due to the underlying reasons why respondents were not in the labour force, possibly related to chronic illness or disability.

While the health outcomes of those employed in CDEP in remote areas are not significantly different to non-CDEP workers, CDEP workers are more likely to report poor health in non-remote areas. As the CDEP scheme is

most common as a form of Indigenous employment in remote areas, those participating in CDEP in non-remote areas are more likely to experience social exclusion and associated negative health consequences.

Income and education results are largely consistent with results seen in the bivariate analysis in Section 4.1. While lower income is associated with poor health outcomes in non-remote areas, there is no significant relationship in remote areas. In addition, people in non-remote areas who have completed school are significantly less likely to report poor health than those who have not completed school. However, there is little evidence of an association between health and education in remote areas.

It is interesting to note that, while achieving some level of income and education has a positive association with health in non-remote areas, this relationship does not hold across all levels. Indeed, the odds of reporting poor health for those in the highest income quintile and those with post-school qualifications are not significantly different to those with low income and no qualifications. This could be a consequence of the large standard errors associated with high income and education, due to the small number of Indigenous people who are in these groups.

4.2.3 Other social and cultural factors

The Full model shows the association between poor reported health and other social and cultural factors.

In terms of the social factors investigated, there were similar effects across both remote and non-remote areas. Those who were removed from their natural family when they were a child are more likely to have reported poor health, no matter what area they live in. In addition, those who have experienced discrimination were more likely to report poor health than those who have not. The association between poor health and experiencing discrimination is stronger in non-remote areas than remote areas. Indigenous people living in non-remote areas are exposed to more situations where they can be discriminated against, and thus are more likely to experience systemic discrimination over a long period of time.

Cultural factors had different effects on health depending on the area of residence. For non-remote areas, those who had a greater amount of community and cultural involvement were less likely to report poor health; however, these factors were not significant in remote areas. Indigenous people living in non-remote areas are more removed from their original culture and community and thus it may be more important for their health to consciously be involved in community and cultural events. In contrast, Indigenous people living in remote areas may be more likely to engage in community and

cultural activities in their daily life. It is interesting to note that, after controlling for all other factors, recognition of homelands had no significant effect on health status.

Finally, those living in remote areas whose main language was not English were less likely to report poor health than their English-speaking counterparts. This result is consistent with findings from Sibthorpe, Anderson et al. (2001) who suggest those who do not speak English are less likely to access health services and thus are less informed about their health.

Table 1: Factors associated with poor health

Model	Reduced		Full	
	Remote	Non-remote	Remote	Non-remote
Male	1.10	1.14*	1.10	1.08
Aged 15 to 24	0.15***	0.28***	0.16***	0.30***
Aged 25 to 34	0.27***	0.53***	0.28***	0.54***
Aged 55 plus	1.05	1.41***	1.06	1.57***
Not in labour force	3.02***	2.67***	3.17***	2.47***
Unemployed	1.65**	1.81***	1.64*	1.62***
Employed; main job is CDEP	1.10	2.45**	1.34	2.26**
Lowest income quintile	0.89	1.40***	0.85	1.38***
Highest income quintile	0.89	0.80	0.83	0.83
Completed year 12	1.13	0.51***	1.11	0.53***
Completed year 10 or 11	0.80*	0.63***	0.78*	0.64***
Degree or higher	0.89	1.25	0.83	1.13
Diploma	0.86	1.01	0.83	0.92
Certificate	1.33*	1.07	1.27	1.03
Experienced discrimination			1.26*	1.39***
Has a say in community			1.02	0.78***
Culturally active			0.87	0.84**
Removed when young			1.73**	1.46***
Recognises homelands			0.95	1.11
Non-English at home			0.79*	1.39
Pseudo R^2	0.11	0.12	0.12	0.13
Likelihood Ratio	258.67	632.17	256.73	648.94
Num. obs.	2375.00	4710.00	2273.00	4549.00

Notes: Coefficients are expressed at odds ratios. *** indicates statistical significance at 1%; ** indicates statistical significance at 5%; * indicates statistical significance at 10%. The dependent variable 'Poor health' was equal to 1 if self-assessed health was poor or fair and equal to 0 if self-assessed health was good, very good or excellent. 'Culturally active' means cultural events are attended as often as is desired. 'Removed when young' means the respondent was removed from their natural family as a child. The reference category is: female; aged 35 to 54; employed (Non-CDEP); income in middle three quintiles; completed year 9 or less; has not experienced discrimination; does not feel they can have a say in their community; not culturally active; not removed from natural family as a child; speaks English at home.

5 Discussion and Conclusion

Two main findings came out of the analysis presented in this paper. Firstly, there is a clear difference in the factors associated with health between Indigenous people living in remote and non-remote areas. Secondly, while there is some evidence that a socio-economic gradient of health exists in non-remote areas, it is important to be aware that other social and cultural factors play a role in influencing health outcomes.

The circumstances affecting health in remote areas are likely to be substantially different to non-remote areas. The lack of evidence for a gradient in income and education in remote areas suggests that socio-economic factors are not as important in these areas in determining health. This supports findings from prior research which shows Indigenous people, particularly those living in remote areas, do not place as much importance on achieving successful socio-economic outcomes as non-Indigenous people (Taylor 2008). For Indigenous people living in non-remote areas, however, socio-economic status is more pivotal in determining quality of life. Importantly, analysis also showed that other, non-socio-economic factors such as cultural and community involvement were associated with better health in non-remote populations.

The bivariate analysis suggested that Indigenous people in remote areas, especially of low SES, may report better health outcomes than their non-remote counterparts. This may be because they have less access to health services. It has been previously noted that self-assessed health could actually worsen with increased health infrastructure, simply because the respondents are better informed. Lack of English could also play an important role. Cunningham, Sibthorpe and Anderson (1994) likened language to a proxy measure of access to services. Those Indigenous people who do not speak English as a main language are likely to be less aware of their objective health status because they do not understand or cannot access health services.

Importantly, social and historical stressors that are unique to the Indigenous population have an on-going effect on health outcomes in both remote and non-remote areas. Results suggest that experiencing discrimination and being removed from one's family as a child could have serious ramifications for health outcomes.

The policy implications of the analysis are two-fold. Firstly, while closing the gap between Indigenous and non-Indigenous employment and education is likely to have a flow-on effect to better health outcomes, it is important to be aware of other factors that also influence Indigenous health. Policies to improve Indigenous health should incorporate ways to improve and ensure 'cultural health' and community involvement.

Secondly, results reiterated the importance of considering Indigenous health

at a local or regional level. The Indigenous population is a '... network of interconnected Aboriginal nations, with their own languages and ways of life' (Bell 1995, p. 4). Thus, targeted programs addressing Indigenous health at the community level may be the most effective way of improving overall health outcomes. Indeed, community-based programs have been shown to be particularly effective in influencing health outcomes in the past (Dwyer, Silburn et al. 2004).

Despite being an issue of major concern, Indigenous health is still somewhat poorly understood. Continued research and collaboration with the Indigenous community is essential to understanding the extent of Indigenous health issues. Maintaining a holistic view and considering health policy at the local level will be particularly important in continuing to strive for an improvement in health outcomes.

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Appendix

Table A.1: Characteristics of NATSISS sample aged 15 and over (n=7,823)

Characteristic	Element	%
Sex	Male	43.2
	Female	56.8
Remoteness	Remote	33.7
	Non-remote	66.4
Self-assessed health	Poor	7.9
	Fair	16.1
	Good	33.8
	Very good	27.5
	Excellent	14.7
Labour force status	Employed, non-CDEP	44.5
	Employed, CDEP	6.4
	Unemployed	9.3
	Not in labour force	39.8
Education	Year 9 or less	36.4
	Year 12	19.1
	Year 10 or 11	44.5
	Degree or higher	5.2
	Diploma	4.7
	Certificate	22.2
Cultural factors	Experienced discrimination	29.1
	Has a say in community	27.2
	Removed when young	9.7
	Speaks non-English at home	14.7
	Culturally active	68.8
	Recognises homelands	73.9

Notes: 'Culturally active' means cultural events are attended as often as is desired. 'Removed when young' means the respondent was removed from their natural family as a child. The mean age of the sample was 37.1 years with a standard deviation of 14.9 years.