


Suicide rates for young Aboriginal and Torres Strait Islander people: the influence of community level cultural connectedness

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The known: Suicide rates have been persistently higher for Aboriginal and Torres Strait Islander people than for other Australians. The effects of culturally specific protective factors and risk factors have not been examined at the community level.

The new: The suicide rate among young people was lower in communities where First Peoples had greater engagement with cultural events, ceremonies, and organisations, and where discrimination was less prevalent. Neither Indigenous language use nor socio-economic resource level significantly influenced suicide rates.

The implications: Strategies for increasing cultural connection and engagement and for reducing discrimination should be developed to reduce the number of First Nations young people who die by suicide.

Reducing the persistently high suicide mortality rate for Aboriginal and Torres Strait Islander people is a specific goal of the recent National Agreement on Closing the Gap.¹ Three times as many First Nations people under 18 years of age die by suicide as other young Australians, and 12 times as many First Nations children under 15.^{2,3} Further, First Peoples experience poorer outcomes in domains such as mental health, infant mortality, life expectancy, income, employment, and education because of continued injustice caused by colonisation, including the forced removal of communities from traditional homelands and of children from their families, genocide, dispossession, discrimination and exclusion.^{4,5}

Although cultural devastation is widely acknowledged to be a factor in the high suicide rates for Aboriginal and Torres Strait Islander people, investigation of the protective effects of community empowerment and cultural connectedness has been limited.^{3,6} Aboriginal and Torres Strait Islander conceptualisations of health encompass the interconnected social, emotional, and cultural wellbeing of the entire community rather than the simple absence of disease or symptoms in individuals.⁷ Both researchers and Elders have promoted community strengths and community level protective factors to foster the wellbeing of children and adolescents, and consequently to prevent suicide.^{8,9} Specifically, it has been suggested that community cultural connectedness protects against the unique challenges that First Peoples face as the result of the systemic legacies of colonisation.^{6,10}

The “cultural continuity” model proposes that community level cultural factors protect against youth suicide among First Nations peoples by facilitating perceptions by young people of their connectedness with a past and future cultural lineage.¹¹ Its proponents posit that identifying with a culture with bonds stretching into the past and positive projections

Abstract

Objectives: To examine associations between community cultural connectedness indicators and suicide mortality rates for young Aboriginal and Torres Strait Islander people.

Study design: Retrospective mortality study.

Setting, participants: Suicide deaths of people aged 10–19 years recorded by the Queensland Suicide Register, 2001–2015.

Main outcome measures: Age-standardised suicide death rates, by Indigenous status, sex, and age group; age-standardised suicide death rates for young First Nations people by area level remoteness and Index of Relative Socioeconomic Advantage and Disadvantage, and by cultural connectedness indicators (at statistical area level 2): cultural social capital index score, community Indigenous language use, and reported discrimination.

Results: The age-specific suicide rate was 21.1 deaths per 100 000 persons/year for First Nations young people and 5.0 deaths per 100 000 persons/year for non-Indigenous young people (rate ratio [RR], 4.3; 95% CI, 3.5–5.1). The rate for Aboriginal and Torres Strait Islander young people was higher in areas with low levels of cultural social capital (greater participation of community members in cultural events, ceremonies, organisations, and community activities) than in areas classified as having high levels (RR, 1.8; 95% CI, 1.2–2.7), and also in communities with high levels of reported discrimination (RR, 2.7; 95% CI, 1.7–4.3). Associations with proportions of Indigenous language speakers and area level socio-economic resource levels were not statistically significant.

Conclusion: We found that suicide mortality rates for Aboriginal and Torres Strait Islander young people in Queensland were influenced by community level culturally specific risk and protective factors. Our findings suggest that strategies for increasing community cultural connectedness at the community level and reducing institutional and personal discrimination could reduce suicide rates.

into the future can reinforce a young person’s connection with and commitment to their personal futures during periods of change or disruption of self-identity, reducing their suicide risk.¹¹ Supportive connections to personal futures is critical during adolescence, a developmental stage in which considerable social, physical, and emotional changes heighten the risk of a disrupted self-concept.¹² Indeed, it is during adolescence that the difference between suicide rates for First Nations and other young people is greatest in Australia.^{2,3} Cultural continuity indicators — self-governance, cultural facilities, indigenous language use, sovereign lands, and community control of health care, education, family, and police services — have been associated with lower youth suicide rates in First Nations communities in Canada.^{11,13}

There are critical differences between people who think about, attempt, and die by suicide.¹⁴ However, the protective effects of

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cultural connectedness for First Nations people in Australia have only been examined at the individual level, and suicide mortality has not been investigated.^{3,7} The capacity of community level cultural connections to protect against suicide is consequently important for suicide prevention strategies. We therefore examined associations between community level cultural connectedness indicators and suicide rates among young Aboriginal and Torres Strait Islander people.

Methods

We included all suicide deaths of people in Queensland aged 10–19 years during 1 January 2001 – 31 December 2015. Suicide mortality data were derived from the Queensland Suicide Register (QSR), a database maintained by the Australian Institute for Suicide Research and Prevention (AISRAP; Griffith University).¹⁵ The QSR collates data from police reports, post mortem examinations, and toxicology and coronial reports, cross-referenced with data from the National Coronial Information System and the Queensland Registry of Births, Deaths and Marriages.¹⁵ The QSR includes data on a wide range of demographic, psychosocial, psychiatric, medical, contextual, and behavioural characteristics for classifying the probability of suicide as unlikely, possible, probable, or beyond reasonable doubt according to the AISRAP *Suicide classification flow chart*.¹⁵ We included only cases in which suicide was classified as probable or beyond reasonable doubt.

Age-specific suicide rates

Population estimates by Indigenous status, age, and statistical area level 2 (SA2), compiled by the Queensland Government Statistician's Office,¹⁶ were used to calculate age-specific suicide rates as the annual number of suicide deaths per 100 000 persons aged 10–19 years for the study period; the rates for First Nations and non-Indigenous young people were compared in rate ratios (RRs) with 95% confidence intervals (CIs). Data for First Nations people included data for all Aboriginal and Torres Strait Islander peoples, as the available population data did not allow disaggregation according to the recognised cultural, historical, and social differences between First Nations peoples. Analyses were conducted in IBM SPSS Statistics 26.

The last known or usual addresses of First Nations young people were mapped to the 526 Queensland SA2s of the 2011 Australian Statistical Geography Standard (ASGS).¹⁷ The ASGS uses five categories (major cities, inner regional, outer regional, remote, very remote) to classify remoteness or accessibility to goods and services; all categories except major cities were merged as “regional and remote areas” for the purposes of our study.

The Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD) is a Socio-Economic Indexes for Areas (SEIFA) index that includes variables for ranking areas by education, occupation, disabilities, overcrowding, and income resources.¹⁸ For our study, we defined SA2s in the two lowest IRSAD quintiles as having low socio-economic resources status. Age-specific suicide rates for young First Nations people by SA2 remoteness and socio-economic resources were compared as RRs with 95% CIs.

Community level indicators

To assess cultural connectedness, we used selected Small Area Social Indicators for the Indigenous Population (synthetic

estimates), published by the National Centre for Social and Economic Modelling (NATSEM).¹⁹ NATSEM used a spatial microsimulation model combining geographic information from the 2011 Australian Bureau of Statistics (ABS) national census with data from the 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS)²⁰ to produce reliable small area (SA2) estimates of indicators. The NATSISS collects information on demographic, social, cultural, and environmental indicators, including language, cultural activities, social networks, support, health, and wellbeing, for First Nations people aged 15 years or more.²⁰ As confidentialised unit record files are unavailable for privacy reasons, NATSEM constructed a complete synthetic unit record file from the survey data extracted with the ABS Survey TableBuilder tool and weighted by population totals; a generalised regression algorithm was then applied to the synthetic unit record file, re-weighting it according to small area (SA2) census benchmarks, including income, age, sex, and education.¹⁹

As it is difficult to validate NATSEM model estimates at the SA2 level, the model was validated in a standard manner by comparing its estimates with aggregated NATSISS survey data.²¹ The validation process was undertaken with the assistance of staff at the Centre for Aboriginal Economic Policy Research, Australian National University, who calculated the estimates. Model estimates of cultural connectedness indicators (by remoteness area type) closely matched survey estimates.

The NATSEM model automatically eliminates an SA2 if the total absolute error for an estimate exceeds the population of the SA2, as described elsewhere.²² The number of SA2s excluded by this criterion differed by indicator; many were industrial and commercial areas of Brisbane.

Community level indicators selected for our study

Age-specific suicide rates by SA2 were calculated, aggregated by high and low classifications of cultural connectedness indicators for SA2s — cultural social capital, Indigenous language use, and reported discrimination — and compared as RRs with 95% CIs.

The cultural social capital index assesses culturally specific aspects of social capital, including involvement in cultural events, ceremonies, or organisations, social and community activities, contact with family and friends, and proportion of friends who are First Nations people. The index also includes the ability to receive or provide support outside the home and comfort in contributing to the community. The lowest one-third of SA2s ranked by score (“low”) were compared with the highest ranked two-thirds (“high”).

Discrimination was defined as the proportion of First Nations people who reported experiencing discrimination during the preceding year in occupational, community, educational, or recreational settings, in court, or from police, health professionals, or government agency staff while accessing a public service. SA2s in which 25% or fewer residents reported discrimination were classified as having “low discrimination”.

Indigenous language use was defined by the proportion of Aboriginal and Torres Strait Islander residents who reported speaking Indigenous languages at home. As the distribution was skewed toward lower language use values, SA2s in which the proportion of people who spoke an Indigenous language was at least 5% were classified as having “high Indigenous language use”.

Ethics approval

The Griffith University Human Research Ethics Committee approved this study (reference, GUHREC Ref #: 2010_537).

Results

The QSR recorded 127 suicide deaths of First Nations people aged 10–19 years in Queensland during 2001–2015 (age-specific rate, 21.1 deaths per 100 000 persons/year) and 404 of non-Indigenous young people (5.0 deaths per 100 000 persons/year; RR, 4.3; 95% CI, 3.5–5.1). Rates were higher than for non-Indigenous Australians for both young First Nations men (RR, 4.1; 95% CI, 3.3–5.1) and women (RR, 4.6, 95% CI, 3.4–6.4). The suicide rate for Aboriginal and Torres Strait Islander children (under 15 years of age) was also higher than for non-Indigenous Australian children (RR, 7.6; 95% CI, 5.0–12). The age-specific suicide rate for young First Nations men (27.5 deaths per 100 000 persons/year) was higher than for young women (14.4 deaths per 100 000 persons/year; RR, 1.9; 95% CI, 1.1–2.8) (Box 1).

The age-specific suicide rate for young First Nations people was higher in regional and remote areas than in metropolitan areas (RR, 1.7; 95% CI, 1.1–2.7), but was not significantly higher in communities with low socio-economic resource levels (*v* medium/high levels: RR, 1.3; 95% CI, 0.9–1.9) (Box 2).

The age-specific suicide rate for young First Nations people was similar in communities with low and high levels of Indigenous language use (RR, 0.9; 95% CI, 0.6–1.3). The rate was higher in areas with low levels of cultural social capital than in areas with high levels (RR, 1.8; 95% CI, 1.2–2.7) and in communities with high levels of reported discrimination than in areas with low levels (RR, 2.7; 95% CI, 1.7–4.3) (Box 2).

Discussion

We identified associations between suicide mortality rates for young Aboriginal and Torres Strait Islander people and culturally specific risk and protective factors at the community level. Specifically, the age-adjusted suicide rate was 80% higher in areas classified as having lower levels of cultural social capital; that is, it was 44% lower in communities with high cultural social capital, where larger proportions of First Nations people participate in cultural events, ceremonies, organisations, and community activities, and were more involved with their community. The rate was higher in communities with higher levels

of reported discrimination. Our findings suggest, as others have also proposed, that suicide by young Aboriginal and Torres Strait Islander people is influenced by factors often not included in traditional models of suicide causation.^{6,9}

Our findings are consistent with individual level analyses which found that cultural connectedness was associated with lower levels of suicidal ideation among Aboriginal and Torres Strait Islander young people.²³ Similarly, suicide rates were lower in Canadian First Nations communities with official cultural preservation and enrichment facilities.¹¹ However, as we employed a multiple item index that encompassed participation, attendance, and support, and did not exclude non-Indigenous influences, we cannot delineate how particular index components influenced suicide mortality.

Contrary to study findings for other First Peoples, language use did not influence suicide rates. In Canada, First Nations youth suicide rates were lower where more people spoke the local indigenous language, and the study authors proposed this was a critical marker of cultural persistence and predictor of wellbeing.¹³ As there were only two Queensland SA2s in which more than 50% of First Nations residents spoke Indigenous languages, and we defined high use as the proportion exceeding 5%, direct comparison of our results with the Canadian study is not possible.

The relationship between experienced racism and discrimination on suicidal ideation among young Aboriginal and Torres Strait Islander people has been reported.²³ Our findings suggest that the level of experienced discrimination in communities also influences community suicide rates. The age-specific suicide rate for people aged 10–19 years was higher where more respondents (over 15 years of age) reported discrimination. While it is likely that children also experience higher levels of discrimination in such communities, these results may corroborate other reports that the impact on Aboriginal and Torres Strait Islander people of racism and discrimination is not limited to those directly affected by it.²⁴

Community socio-economic resource levels were not significantly associated with suicide rates for First Nations young people, despite the recognised relationship between poverty and suicide rates in general.²⁵ First Nations people often experience more disadvantage than other residents in the same geographic area.²⁶ However, children from disadvantaged families in communities with greater socio-economic resources have better outcomes on indicators such as educational attainment

1 Age-specific suicide rates for First Nations and non-Indigenous young people (10–19 years of age) Queensland, 2001–2015, by sex and age group

Characteristic	First Nations people		Non-Indigenous Australians		Rate ratio (95% CI)
	Suicide deaths	Age-specific suicide rate (95% CI)	Suicide deaths	Age-specific suicide rate (95% CI)	
All people aged 10–19 years	127	21.1 (17.5–24.8)	404	5.0 (4.5–5.5)	4.3 (3.5–5.1)
Sex					
Male	85	28 (22–33)	280	6.7 (6.0–7.5)	4.1 (3.3–5.1)
Female	42	14 (10–19)	124	3.1 (2.6–3.7)	4.6 (3.4–6.3)
Age (years)					
10–14	26	8.0 (4.9–11)	42	1.1 (0.7–1.4)	7.6 (5.0–12)
15–19	101	37 (30–44)	362	8.8 (7.9–9.7)	4.2 (3.4–5.1)

CI = confidence interval. ♦

2 Age-specific suicide rates of young Aboriginal and Torres Strait Islander people (10–19 years), Queensland, 2001–2015, by cultural social capital, Indigenous language use, discrimination, remoteness, and socio-economic resources

Variable	SA2s	Suicide deaths	Suicide rate, per 100 000 persons (95% CI)
Indigenous language use	510		
Low (< 5% of residents)	459	98	20 (16–24)
High (> 5% of residents)	51	29	24 (15–32)
Cultural social capital	481		
Low (lowest one-third)	166	93	26 (21–31)
High (highest two-thirds)	315	33	14 (9.5–19)
Discrimination	481		
High (≥ 25% of residents)	310	106	24 (19–28)
Low (< 25% of residents)	171	20	8.7 (4.9–12)
Remoteness*			
Regional and remote	234	101	24 (20–29)
Major cities	292	26	14 (8.6–19)
Socio-economic resources status†			
Low (two lowest quintiles)	217	93	23 (18–28)
Medium/high (three highest quintiles)	295	34	18 (12–24)

CI = confidence interval; SA2 = statistical areas level 2.

* Australian Standard Geographical Classification.¹⁶ † Index of Relative Socioeconomic Advantage and Disadvantage (IRSAD).¹⁷

than children from areas with lower levels of socio-economic resources.²⁷ The effect of living in communities with more resources may be clearer in larger samples, or it may be that young First Nations people who die by suicide have not benefited from the socio-economic resources of their communities.

Limitations

We have reported ecological associations rather than causal effects; further research is needed, using study designs that can produce stronger evidence, such as longitudinal community-control comparisons. The relatively small sample size did not allow analyses of interactions between factors. Investigations including broader age groups and populations could examine whether culturally specific protective factors ameliorate or are mediated by community level risk factors. Further, community

level data were not available for several potentially confounding variables, such as substance use, treatment or diagnoses of mental illness, and exposure to violence.

Misclassification of SA2s was possible despite benchmarking in our spatial microsimulation model, including as the result of variations over time before or after the NATSISS data were collected in 2008. Finally, examining the impact of community level cultural connectedness factors based on treaty-based rights and associated with lower suicide mortality overseas — self-government, land rights, community control of policing, education and child protection — is difficult in Australia, where the autonomy of communities in these respects is highly limited.

Conclusion

We found associations between suicide rates for First Nations young people with both the level of engagement of members of their communities in cultural events, ceremonies, organisations, activities, and the broader community, and with the prevalence of discrimination in their communities, in addition to associations with risk factors for suicide for all Australians, including remoteness.¹⁵ These findings confirm the need for multifaceted approaches to suicide prevention in First People communities, including strategies to reduce systemic disadvantage, such as limited access to services, and incorporating features that recognise Indigenous-specific risk and protective mechanisms.^{6,9} Confounding

of the effects of cultural indicators and other community level factors requires further investigation. Despite the limitations of our study, our results support the appropriateness of trialling strategies that reduce Aboriginal and Torres Strait Islander youth suicide by increasing cultural connections and engagement, and reducing institutional and personal discrimination.

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