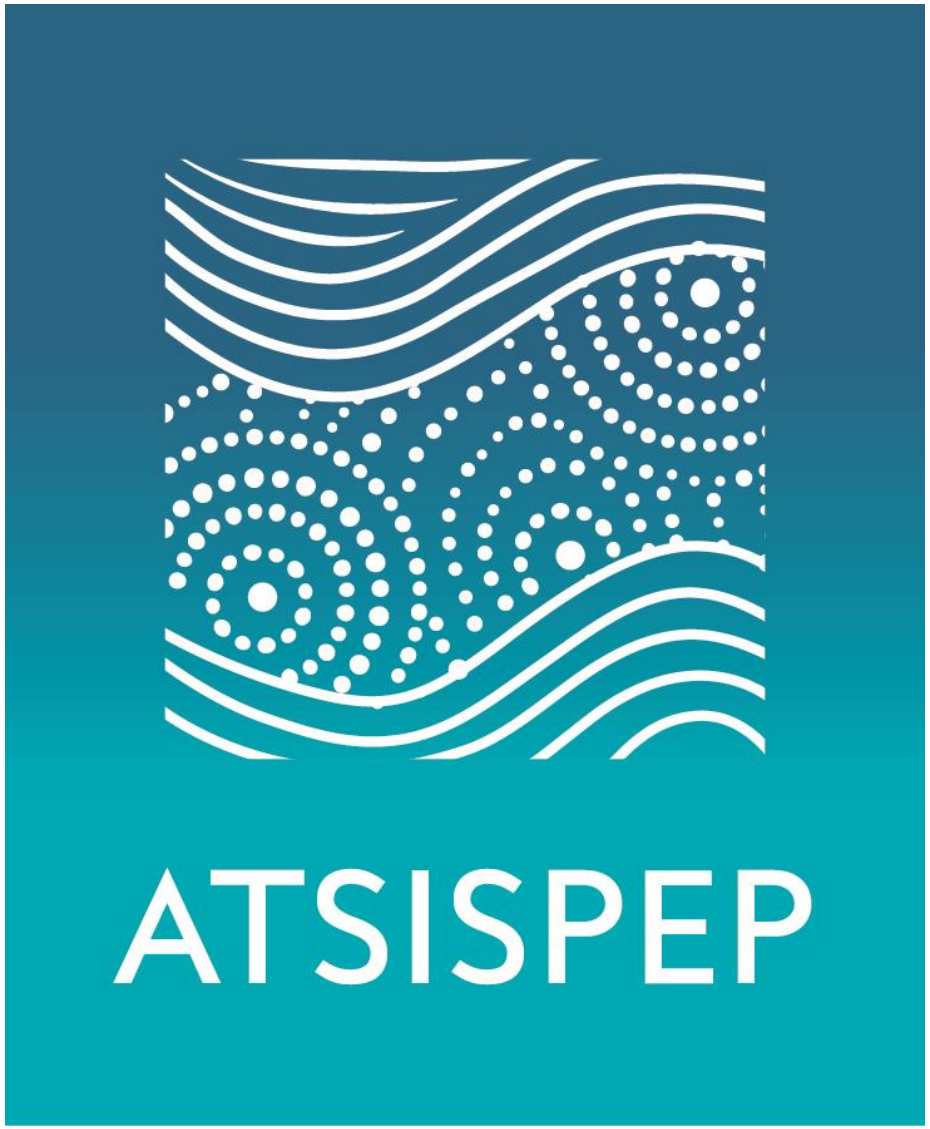
UNIVERSITY OF WESTERN AUSTRALIA

Suicide prevention in Indigenous communities

LITERATURE REVIEW



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The Aboriginal and Torres Strait Islander Suicide Evaluation Project is funded by the Australian Government through the Department of the Prime Minister and Cabinet. The opinions, comments and analysis expressed in this document are those of the author/s and individual participants and do not necessarily represent the views of the Government and cannot be taken in any way as expressions of Government policy.

ABBREVIATIONS

AATSIHS	Australian Aboriginal and Torres Strait Islander Health Survey
AIHW	Australian Institute of Health and Welfare
ATSIC	Aboriginal and Torres Strait Islander Commission
ATSISPEP	Aboriginal and Torres Strait Islander Suicide Prevention Evaluation Project
CBT	Cognitive Behaviour Therapy
HDI	Human Development Index
NEP	National Empowerment Project
NHMRC	National Health and Medical Research Council
PAR	Participatory Action Research
PTSD	Post-Traumatic Stress Disorder
RCT	Randomised Control Trial
SASPP	Shoalhaven Aboriginal Suicide Prevention Program
SEWB	Social and Emotional Wellbeing
SIS	School of Indigenous Studies
UK	United Kingdom
US	United States
UWA	University of Western Australia

1 INTRODUCTION

Suicide and self-harm are significant public health concerns and a major reason for premature mortality amongst Aboriginal and Torres Strait Islander people in Australia. Indigenous suicide was almost unheard of prior to the 1960s (Hunter & Milroy, 2006). However, there is growing concern over the high and increasing rates of suicide and suicide attempts among young Aboriginal and Torres Strait Islander people.

This is a problem of national significance. The Aboriginal and Torres Strait Islander Suicide Prevention Evaluation Project (ATSISPEP) is an important Australian Government funded initiative to identify what programs and services are most effective in helping reduce high rates of Aboriginal and Torres Strait Islander suicide. The project is led by the School of Indigenous Studies (SIS) and the Poche Centre at the University of Western Australia (UWA), in collaboration with the Telethon Kids Institute and with support from The Healing Foundation.

ATSISPEP is a renewed attempt to find enhanced ways of dealing with the problem of suicide in Aboriginal and Torres Strait Islander communities.

This literature review was prepared by Healthcare Management Advisors, in conjunction with the Telethon Kids Institute. It informed the companion report, *Suicide Prevention in Aboriginal and Torres Strait Islander Communities: Learnings from a meta-evaluation of community-led Aboriginal and Torres Strait Islander suicide prevention programs*

2 METHODOLOGY

2.1 METHODOLOGY

This literature review uses many of the processes and principles of a systematic literature review, but has restrictions on the breadth or depth of the research to suit a shorter timeframe.

Our literature review methodology placed a number of limitations on the search criteria and how the evidence was assessed. Also, while the strength of the evidence was assessed in a rigorous and defensible way, it is not necessarily as exhaustive as a systematic review and meta-analysis. A major strength, however, is that a literature review can inform policy and decision makers more efficiently by synthesising and ranking the evidence in a particular area within a relatively short space of time.

2.1.1 Research question

The research question used in this literature review consisted of two parts:

> *What evidence is there on effective interventions to promote suicide prevention and provide postvention support amongst Indigenous people, including Aboriginal and Torres Strait Islander people?*

and

> *What evidence is there to assess the effectiveness of evaluation frameworks developed for these programs?*

2.1.2 Search strategy

Relevant literature was sourced through systematic searches of databases, including MedLine (PubMed), PsychINFO, Cochrane library and Google Scholar, as well as pertinent journals including *Internet Interventions* and the *Journal of Medical Internet Research*.

2.1.3 Search terms

Search terms using the Title/s, Abstract/s and Keywords lists included:

> Suicide OR self-harm OR depression OR anxiety OR trauma OR stigma OR alcohol OR “alcohol abuse” OR drug OR “drug abuse” OR “self-harm” OR wellbeing OR social ***AND***
>
> Indigenous OR Aboriginal and Torres Strait Islander OR Maori OR First Nations OR Aboriginal OR Inuit OR American Indian OR Native American OR Alaskan Native OR adults OR youth OR adolescents OR colonization OR colonisation OR racism ***AND***
>
> prevention OR postvention OR promotion OR program OR policy OR intervention OR education OR strategy OR resource OR support OR social media OR “mobile applications” OR “mobile health” ***AND***
>
> Evaluation OR “Evaluation Framework” OR efficacy OR effectiveness OR engagement OR outcome OR monitoring OR implementation OR acceptability

2.1.4 Paper selection

After conducting searches, studies identified by a screen of title and abstract were evaluated against inclusion and exclusion criteria listed in

Table 2.1.

Table 2.1: Inclusion and exclusion criteria

Included:	Excluded:
• Internationally and locally published peer-reviewed research studies • Research papers that were published from 1995 to 2015 • Published book chapters, government reports and government websites • Trials with outcome data that assessed research outcome (e.g., depression, health seeking behaviour) • English language papers	• Non-English papers • Papers where full text was not readily available • Validation studies • Animal studies • Grey literature (e.g.,Media: non-government websites, newspapers, magazines, television, conference abstracts, theses) • Literature which did not include "Suicide" OR "Aboriginal Torres Strait Islander people / Indigenous Australians"

2.1.5 Information management

A screening process was adopted to code the eligibility of papers acquired through the literature search. All records that were identified through the literature search were screened for relevance against the inclusion criteria, and then processed using Microsoft Excel. Initial screening for inclusion was performed by one reviewer, and was based on the information contained in the title and abstract. Full text versions of all studies which satisfied this initial screening were obtained.

In screening the full text paper, the reviewer made the decision on whether the paper should be included or excluded, based on the pre-defined inclusion and exclusion criteria.

2.1.6 Results

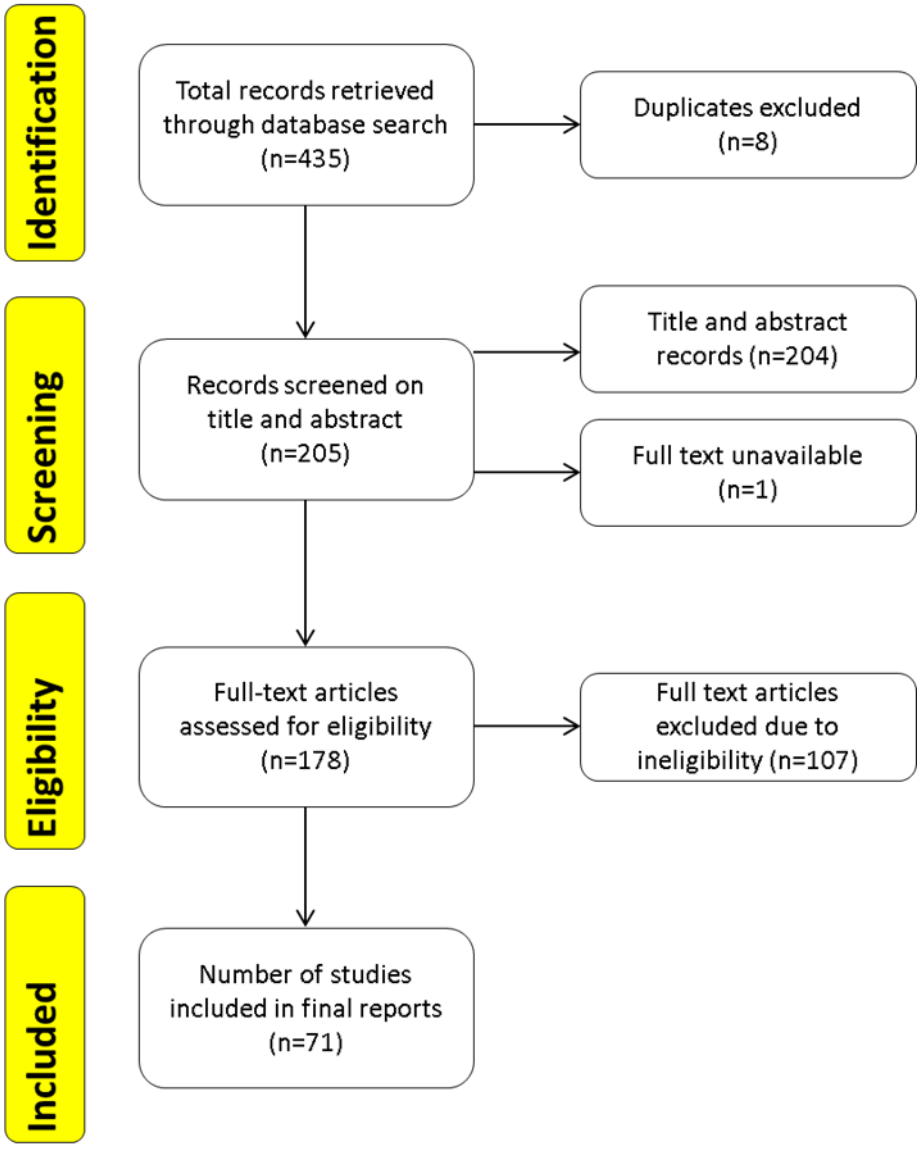
The following section presents the flowchart detailing the number of records identified at each stage of the literature review (refer to Figure 2.1). Seventy-one studies were included in this literature review. All included studies were conducted between January 1995 and December 2015. Studies were excluded if they did not meet all inclusion criteria. Of the seventy-one studies:

- 5 were systematic reviews
- 52 contained the term "suicide"
- 47 contained the terms "Aboriginal and Torres Strait Islander People / Indigenous Australians"
- 34 contained the terms "suicide" and "Aboriginal and Torres Strait Islander people / Indigenous Australians", and
- 20 contained the terms "suicide" and "Indigenous people".

The findings section of the paper is supplemented by grey literature on the broader policy context for suicide prevention in Australia.

Appendix A provides a table detailing all included articles.

Figure 2.1: Paper selection and included articles



3 FINDINGS

3.1 SUICIDE PREVENTION: POLICY CONTEXT IN AUSTRALIA

3.1.1 National strategies

Living is for Everyone (LiFE) Framework

The National Suicide Prevention Strategy (NSPS) is operationalised through the *Life is for Everyone (LiFE) Framework* (LiFE Framework) which sets out a strategic framework for the prevention of suicide across the Australian population (Commonwealth Government Department of Health and Ageing, 2007). The LiFE Framework is an adaptation of the LiFE Model which is based on the premise that individuals, professional groups and services are responsible for suicide prevention and activities and programs should be coordinated across eight overlapping domains of care and support. These domains include universal, selective and indicated interventions, symptom identification, early intervention, standard treatment and longer term treatment and support. These overlapping domains aim to target different sections of the population at all stages of suicide risk, treatment and recovery to provide comprehensive support and care.

The LiFE Framework aims to reduce the incidence and impact of suicide across the Australian population. The goals of the Framework include:

- building strength and resilience in individuals, families and communities;
- strengthening individual and community capacity and capability to identify needs and respond appropriately; and
- coordinating the response to suicide risk and smoothing the transition into and between treatment and care.

To achieve its objective and goals, the LiFE Framework sets out six action areas which have been adapted by other suicide prevention strategies including the National Aboriginal and Torres Strait Islander Suicide Prevention Strategy (Commonwealth Government Department of Health and Ageing, 2013). The action areas include:

- Improving the evidence base and understanding of suicide prevention through building a high quality body of research on effective activities and developing thorough evaluation methodologies;
- Building individual resilience and capacity for self-help by promoting supportive environments;
- Improving community strength, resilience and capacity in suicide prevention by raising awareness of suicide prevention in families and communities and when to take action;
- Taking a coordinated approach to suicide prevention that involves the collaboration of communities, organisations and all levels of government;
- Providing targeted suicide prevention activities with a focus on prevention and early intervention, individual resilience, help-seeking and supportive environments; and
- Implementing standards and quality in suicide prevention and drawing on the evidence base to determine effective activities.

National Aboriginal and Torres Strait Islander Suicide Prevention Strategy

The *National Aboriginal and Torres Strait Islander Suicide Prevention Strategy* (the Strategy) was released in 2013 to complement the *LiFE Framework* in acknowledgement of the disproportionately high rates of suicide and suicidal

behaviour among Aboriginal and Torres Strait Islander people (Commonwealth Government Department of Health and Ageing, 2013). The Strategy sets out six goals, with the overarching aim to reduce the cause, prevalence and impact of suicide:

- Reduce the rates and impact of suicide and suicidal behaviour in the Aboriginal and Torres Strait Islander population and communities;
- Develop effective prevention strategies to support Aboriginal and Torres Strait Islander populations and communities;
- Implement effective strategies to reduce the presence and impact of suicide risk factors;
- Support Aboriginal and Torres Strait Islanders' participation in the workforce in the areas of suicide prevention, early intervention and social and emotional wellbeing;
- Support evidence-based action and evaluation of suicide prevention activities; and
- Develop high quality resources, information and methods to support suicide prevention activities.

In order to achieve these goals, the Strategy sets out six action areas, based on the LiFE Framework (Commonwealth Government Department of Health and Ageing, 2007). These include:

- Building strengths and capacity in Aboriginal and Torres Strait Islander communities through encouraging leadership and self-determination within communities and developing and implementing prevention services;
- Building strength and resilience in individuals and families by coordinating services and activities to prevent risk and adversity in childhood which can increase suicide risk in later life;
- Targeted suicide prevention services which acknowledge and support high-risk groups (e.g., those with mental illness, those in or discharged from custody);
- Coordinating approaches to prevention between Commonwealth and state or territory government departments;
- Building the evidence base and disseminating information including a high quality body of research and accurate data on self-harm and suicide in Aboriginal and Torres Strait Islander populations and communities; and
- Standards and quality in suicide prevention including measures to strengthen the Aboriginal and Torres Strait Islander workforce, implement quality controls for prevention activities in primary health care and other services and building evaluation techniques to strengthen the quality and outcomes of prevention activities.

3.1.2 Jurisdictional strategies

Many states and territories adopted the principles and directions set out in the LiFE Framework, described above. The policy response of individual jurisdictions to the LiFE Framework is summarised in Appendix B.

3.2 RESULTS OF INQUIRIES INTO SUICIDE IN AUSTRALIA

Gone Too Soon: a report into youth suicide in the Northern Territory

The *Select Committee on Youth Suicides in the Northern Territory* (the Committee) conducted the inquiry in response to disproportionately high youth suicide rates in the Northern Territory (2012). Youth suicide in the Territory is 3.5 times the national average with Aboriginal and Torres Strait Islander youth comprising 50% of all suicide cases. The inquiry found that young Indigenous men were the highest risk group, although rates in girls and women were increasing. Major risk factors for suicide included family breakdown, violence and domestic violence, mental health issues, substance abuse, social, economic and educational disadvantage and cultural and sexuality issues. The Committee found a lack of essential physical infrastructure including crisis and safe accommodation for young people, and sporting and recreational centres to promote social interaction and community engagement.

In light of these findings, the Committee documented 23 recommendations, which largely concerned:

- the funding, development and implementation of youth programs including sports and recreation, drop-in centres and development programs; and
- the provision of training and professional development to health sector workers, teachers and police officers in suicide risk assessment and prevention approaches.

The Hidden Toll: Suicide in Australia

The Senate Community Affairs References Committee (the Committee) undertook an inquiry into suicide in Australia in response to the significant impact suicide makes on Australian individuals, families and communities (2010). The result of the inquiry was 42 recommendations addressing broad strategies to reduce the incidence and impact of suicide in Australia. In relation to Aboriginal and Torres Strait Islander people, the Committee recommended:

- a separate suicide prevention and awareness strategy should be developed for Indigenous communities within the National Suicide Prevention Strategy;
- gatekeeper training should be directed at people living in regional, rural and remote areas; and
- restricting access to means in identified suicide 'hotspots' where suicide incidence is high.

3.3 SUICIDE AMONGST INDIGENOUS PEOPLE

In the context of vast social change, suicide among Indigenous people has emerged as a public health priority. Of serious concern are suicide rates amongst the Indigenous people in Australia (Aboriginal and Torres Strait Islander people), New Zealand (Maori people), Canada (First Nations/Indian, Inuit and Métis people) and the US (American Indian/Native American people). For example, in Canada, suicide rates have been estimated to be at least two times higher for First Nations people compared with non-Indigenous Canadians (Clifford, et al., 2012). Similarly, in the US, suicide rates have been estimated to be at least 1.5 times higher for American Indian people compared with the national average (Clifford, et al., 2012).

In the past, suicide predominantly occurred in older Indigenous people (Harder, et al., 2012). However, in recent decades suicide has become more common in youth, particularly between the ages 15–24 (Harder, et al., 2012). In New Zealand, the suicide rate of Maori people is 1.8 times higher than the non-Maori population. However, the suicide rate for Maori youths is even higher at 2.4 times the rate for non-Maori youths (Ministry of Health, 2015). The rates of suicide among Canada's Inuit youth under the age of 18 was disturbingly high; between 1994 and 2008 rates of suicide were 30 times higher compared to the rest of the under-18 population (Fraser, et al., 2015).

Globally, suicide disproportionately affects males compared to females, with the age standardised rate for males being 15.0 per 100,000, compared to 8.0 per 100,000 for females (World Health Organization, 2014). In Australia between 2001 and 2010, the highest suicide rate of any group was for Aboriginal and Torres Strait Islander males aged between 25 and 29 years (90.8 deaths per 100,000 population) (Australian Bureau of Statistics, 2012). The highest suicide rate for Aboriginal and Torres Strait Islander females was in the 20–24 age group (21.8 deaths per 100,000 population). Although the rates for males are alarmingly high, rates of both male and female Aboriginal and Torres Strait Islander people are significantly different when compared to non-Indigenous Australians, with the age standardised rate for males four times higher and the female rate five times in the 15–19 years age group (Australian Bureau of Statistics, 2012).

3.3.1 Historical context and the consequences of colonisation

The current incidence of suicidal acts among the world's Indigenous populations cannot be fully realised without an acknowledgement of the preceding historical context. The Indigenous peoples of Australia, New Zealand, Canada and North America, amongst others, experienced a similar history of colonisation by

European settlers. In the Australian context, colonisation for Aboriginal and Torres Strait Islander people was characterised by immediate loss of life and disruption to culture through dispossession from ancestral lands and relocation to 'reserves', suppression of traditional activities and language, separation of families, economic marginalisation and systemic discrimination (Australian Institute of Health and Welfare, 2015; Australian Indigenous HealthInfoNet, 2015). Though there were significant differences in the experiences of Indigenous peoples from other settled countries, Reading and Wien (2009) contend the lasting consequences of colonisation such as health and socioeconomic disadvantage are comparable across the Indigenous populations of Australia, New Zealand, Canada and North America.

Cooke *et al* (2007) examined continuing health and socioeconomic disparities between Indigenous and non-Indigenous populations of Australia, New Zealand, Canada and North America using the *United Nation's Development Programme's Human Development Index* (HDI). The HDI estimates wellbeing based on three indicators: educational attainment and literacy, material standard of living, and life expectancy. Measuring HDI over the decade spanning 1990 to 2000, Cooke *et al* found that non-Indigenous groups performed better than Indigenous groups for all indicators across all countries. However, during this period, the gap between Indigenous and non-Indigenous achievement against HDI indicators decreased in New Zealand, Canada and North America as the position of Indigenous peoples improved. In Australia, the gap significantly widened.

The study by Cooke *et al* (2007) found the life expectancy of Aboriginal and Torres Strait Islander peoples was the lowest of all Indigenous and non-Indigenous population groups across all countries. Aboriginal and Torres Strait Islander life expectancy did not increase while non-Indigenous life expectancy increased by 2.6 years over the decade. Average rates of Aboriginal and Torres Strait Islander educational attainment and literacy improved by 2000, although non-Indigenous Australian educational attainment and literacy improved more rapidly. Finally, while both Aboriginal and Torres Strait Islander and non-Indigenous Australian median annual incomes decreased between 1990 and 2000, the disparity between the groups widened. Though now dated, this research shows that while disadvantage was prevalent amongst Indigenous populations from Australia, New Zealand, Canada and North America, Aboriginal and Torres Strait Islander people experienced poorer outcomes than any other group and the disparity grew over time.

Several authors have asserted that the substantial health and socioeconomic disadvantage currently experienced by Aboriginal and Torres Strait Islander people is a symptom of the complex interplay between events of the past and their lasting consequences (Reading & Wien, 2009; Zubrick, et al., 2010). The experience of colonisation, resulting in marginalisation and social exclusion in the form of racism and exclusion from economic and civic participation has precipitated the current state of disadvantage. Social, economic and educational disadvantage are recognised as significant risk factors for suicide, particularly among young people (Beautrais, 2000).

3.3.2 Suicide risk factors

A review of the literature identified a number of other suicide risk factors for Indigenous peoples which included lack of cultural continuity (Chandler & Lalonde, 2008), exposure to trauma (Ralph, et al., 2006), alcohol abuse (Hunter & Milroy, 2006), being a young male (Hunter & Harvey, 2002) and suicide clustering (Hunter, et al., 2001). The following sections will highlight these risk factors, which are disproportionately or exclusively experienced by Indigenous people to illustrate the interconnected relationship between a history of colonisation, consequential risk factors and suicide. To facilitate this complex discussion, the following sections will focus predominantly on risk factors and their relationship to suicide within the Australian context, drawing on international literature as required.

Cultural continuity

A study by Chandler and Lalonde (2008) examined cases of suicide among young First Nations people of British Columbia and the protective effects of "cultural continuity". The authors defined "cultural continuity" as Indigenous self-control

over aspects of culture and community which encompassed several markers – self-government; land rights litigation; local control over health, education and police services; and operation of cultural facilities. Chandler and Lalonde mapped suicides in all 197 communities or 'bands' in British Columbia and found that communities that achieved all markers had no cases of suicide among young First Nations people. Conversely, where communities achieved none of these "protective" markers, youth suicide rates were many times the national average. An article by Hunter (2013) contends that "cultural continuity" as a protective marker cannot be applied to Aboriginal and Torres Strait Islander communities because the opportunity for self-determination is significantly lacking. Hunter states control of Aboriginal and Torres Strait Islander communities sits not within the community itself, but external governing bodies. For instance, true community control over Aboriginal and Torres Strait Islander health services cannot be fully achieved when such services are largely reliant on government funding to function. Further, self-government is hampered when nationally representative bodies such as the Aboriginal and Torres Strait Islander Commission (ATSIC) are discontinued and when the management of communities is delegated to the military as in the Northern Territory Intervention (Hunter, 2013). Hunter's article, along with the findings of Chandler and Lalonde, suggests community control over the affairs of Indigenous people is key to empowerment and a reduction in suicide, at least for young people.

The Elders' Report reinforces the importance of self-determination and cultural connectedness and continuity for suicide prevention in Aboriginal and Torres Strait Islander communities. The Elders' Report summarises the comments of 31 Elders and community representatives from 17 communities across northern Australia (Culture Is Life, 2014). The interviews were conducted to gain insight into the disproportionately high rates of suicide among Aboriginal and Torres Strait Islander children and young people in these areas. Each speaker was asked the same interview questions:

- Why is self-harm and suicide happening?
- What is the solution?

Unanimously, the Elders and community representatives interviewed attributed the increase in self-harm to the loss of connection to culture and the encroachment of non-Indigenous lifestyles and ideals. One speaker noted:

> *"if they lose language and connection to culture they become a nobody inside and that's enough to put them over the edge."*

When asked about solutions to this loss of culture and more broadly, youth suicide, most speakers stated that Elders held significant cultural knowledge and should be provided government funding to lead cultural activities and healing programs that involve "taking young people out there and showing them country, teaching them culture". Anecdotally, speakers saw improvements in the social and emotional wellbeing of young people who were taken on to country and spent time with Elders.

Another common theme among many speakers' responses was that "Aboriginal people need to be involved in solving [their] own problems". Speakers called for increased training of Aboriginal and Torres Strait Islander health workers to equip members of the community to respond to at-risk people in a culturally appropriate way. While many speakers recognised the availability of mental health services, these services were seen as not accessible for young Aboriginal and Torres Strait Islander people who did not want to be seen as "silly". Further, too few of the available mental health services considered the important aspect of cultural connectedness, with one speaker commenting:

> *"there are not enough of those services that involve going out to the bush."*

The findings of the Elders' Report support suicide prevention programs that are designed either wholly or in partnership with communities to address their specific and complex circumstances. Elders are key proponents of change and should provide leadership to young people to strengthen cultural knowledge and connection to country. Suicide prevention initiatives and mental health services need to train and employ community members to strengthen the local knowledge and presence of the program. Government funding needs to be redirected from

top-down approaches to promote programs that feature strong community consultation and engagement.

An important feature of Australia's history of colonisation was the Stolen Generations – the removal of Aboriginal and Torres Strait Islander children from their families which still impacts mental health today. According to the 2015 AIHW report, *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples*, during 2012–2013 48% of Aboriginal and Torres Strait Islander adults reported that either they or their relatives had been forcibly removed from their family (Australian Institute of Health and Welfare, 2015). The report also found that people who had been removed from their families, or had a relative removed, experienced significantly higher rates of high to very high psychological distress than those who had not been removed (35% versus 29% for those who had and had not been removed; 34% versus 26% for those with and without a relative who had been removed). The *Bringing Them Home* report identifies suicide as a common cause of death amongst this group (Commonwealth of Australia, 1997). These findings show that the removal of Aboriginal and Torres Strait Islander children from their families, a policy which was abolished in the 1970s, has had lasting impacts on the mental health and suicide rates of Aboriginal and Torres Strait Islander people.

Transgenerational effect of trauma on mental health and suicide

According to the 2013 *Australian Aboriginal and Torres Strait Islander Health Survey* (AATSIHS) of approximately 13,000 Aboriginal and Torres Strait Islander people, 30% of Aboriginal and Torres Strait Islander adults experienced *high to very high* levels of psychological distress – 2.7 times the rate of non-Indigenous Australians (Australian Bureau of Statistics, 2013). High levels of psychological distress are significantly linked to exposure to multiple stressors or traumatic events (Australian Bureau of Statistics, 2010).

Trauma can be described as the experience of one or a number of stressors including significant health issues, family breakdown or the death of a family member, unemployment, homelessness, financial stress, violence and racism amongst others (Australian Bureau of Statistics, 2013). According to AATSIHS figures, exposure to traumatic stressors was common among Aboriginal and Torres Strait Islander people from 2012–2013 with 73% of participants having experienced (or a family member experienced) at least one stressor in the preceding 12 months. Common stressors reported by Aboriginal and Torres Strait Islander people included the death of a family member or friend (37%), a serious illness (23%), unemployment (23%) and mental illness (16%). Non-Indigenous Australians experienced these same stressors, but Aboriginal and Torres Strait Islander people were 1.4 times more likely to experience at least one of these stressors. Similarly, a study by Nadew (2012) of 271 Aboriginal participants from Western Australia found that almost all (97.3%) participants had been exposed to traumatic events. The same group of participants also had a lifetime prevalence of 55.2% for post-traumatic stress disorder (PTSD), 20% for depression and 73.8% of participants met diagnostic criteria for alcohol abuse or dependence.

A study by Ralph *et al* (2006) linked exposure to trauma and suicidal ideation in 747 West Kimberly Aboriginal adolescents (n=327), young adults (n=40) and adults (26+ years, n=77) and non-Aboriginal adolescents (n= 283). The study found that in comparison to non-Aboriginal adolescents, Aboriginal adolescents reported significantly increased exposure to *direct* (trauma occurring to self) and *secondary* (witnessing trauma occurring to others) trauma. Aboriginal adolescents were four times more likely than non-Aboriginal adolescents to have a family member commit suicide (29% Aboriginal compared to 8% non-Aboriginal). Multiple regression analysis revealed suicidal ideation and previous suicide attempts were significantly predicted by exposure to direct trauma and PTSD.

Research by Atkinson described in Atkinson *et al* (2014) contends trauma can be passed through generations, whereby abuse incurred during childhood increases the likelihood of perpetuating abuse and destructive behaviours as an adult. Traumatic events have been a feature of history for Aboriginal and Torres Strait Islander people through the experience of the Stolen Generations as described previously, and the continuing presence of racism in institutions and the broader population. A study by Priest *et al* (2011) found self-reported exposure to racism

was a significant predictor of suicide risk (Odds ratio = 2.32, P=0.01) for Aboriginal and Torres Strait Islander people. These studies suggest that Aboriginal and Torres Strait Islander people are disproportionately exposed to traumatic events, whether past or present, and this experience has repercussions for the mental health and suicide risk of future generations.

Alcohol abuse

An article by Hunter and Milroy (2006) describes the period of "deregulation" that occurred during the 1960s in Australia. This period was characterised by the lifting of discriminatory government policy that enabled Aboriginal and Torres Strait Islander people to access both welfare and alcohol without restriction. The authors note that while these rights had been instated, Aboriginal and Torres Strait Islander people were still excluded from the social and economic privileges and resources available to the wider population such as opportunities for employment, education and political influence. Hunter and Milroy contend this led to widespread dysfunction in Aboriginal and Torres Strait Islander communities that had access to welfare and alcohol but no means for community empowerment.

Hunter and Milroy contend this period of "deregulation" preceded the rapid increase in suicide rates of Aboriginal and Torres Strait Islander people in the 1980s who were born into a state of "normative instability", where alcohol abuse and dysfunction were commonplace. The link between alcohol abuse and suicide has been established by several studies, including a national survey by Chikritzhs *et al* (2007) that found suicide to be the most common cause of alcohol-related deaths among Aboriginal and Torres Strait Islander males and the fourth most common cause among Aboriginal and Torres Strait Islander females. Alcohol abuse is strongly linked to cases of suicide, though Hunter *et al* suggest alcohol abuse is a symptom of wider Aboriginal and Torres Strait Islander disadvantage which the authors describe as a "lifestyle of risk" (Hunter, et al., 2001).

Prevalence in males

As described previously, suicide rates for Aboriginal and Torres Strait Islander males are significantly higher than for females, although both exceed the national average. While suicide rates for both young Aboriginal and Torres Strait Islander males and females are of great concern, males have a greater lifetime risk of suicide. Hunter and Harvey (2002) offer two explanations for the preponderance of suicide in young Aboriginal and Torres Strait Islander males. Firstly, young Aboriginal and Torres Strait Islander males are overrepresented in terms of other suicide risk factors (e.g., alcohol abuse, traumatic exposure) and secondly, young males are a product of wider disadvantage and the deeper issue of loss of cultural continuity as described previously. As the authors contend, the high rates of suicide for young Aboriginal and Torres Strait Islander males is likely to be due to a combination of these factors.

Suicide clustering

Hunter *et al* (2001) describe the phenomenon of suicide clustering in remote Aboriginal and Torres Strait Islander communities. The study by Hunter *et al* specifically considers suicide clustering in Northern Queensland, though comparisons have been made to similar reports of suicide clusters in Native American and Inuit communities (Hunter, et al., 2001). A suicide 'cluster' refers to a series of suicide completions or self-harming acts that occur within a single community over a period of weeks or months. A single suicide might inspire others to model this behaviour. This is an important feature of Aboriginal and Torres Strait Islander suicide as clustering may indicate deeper issues affecting a particular community.

3.4 SUICIDE PREVENTION STRATEGIES

Suicide is preventable (World Health Organization, 2014).The World Health Organization's report titled *Preventing suicide: a global imperative* categorises suicide prevention strategies into three broad groups, described below.

- Universal interventions: aim to engage the entire population of a country in an effort to maximise health and minimise risk of suicide. This can include strategies that strengthen social support and reduce:
  - barriers to care;
  - access to means of suicide; and
  - inappropriate media coverage of suicide.

  Key findings from this report on universal interventions included:
  - at a national level suicide prevention strategies need to be both comprehensive and multisectoral to ensure their effectiveness; and
  - means restriction (including pesticides, firearms and certain medications) was effective in preventing both suicides and suicide attempts.
- Selective interventions: Selective interventions work with vulnerable groups or communities to build resilience, capacity and a supportive environment. Individuals may not currently express suicidal behaviours, but may have an elevated level of biological, psychological or socioeconomic risk. This report found community engagement was an effective selective intervention, alongside the involvement of communities providing social support to vulnerable individuals, engaging in follow-up care, fighting stigma and supporting those bereft by suicide. The report also recognised when culturally tailored for Indigenous people, gatekeeper training and other educational activities were successful in reducing suicide vulnerability. The most effective selective interventions were those with high amounts of local control and involvement of the Indigenous community.
- Indicated interventions: Indicated interventions target vulnerable individuals who show signs they are at risk of suicide or present with an illness known to heighten the risk of suicide (e.g., severe depression). Key findings on indicated intervention from this report included early identification and treatment of both mental health disorders and alcohol abuse to assist in ensuring people receive the care they need. In addition, suicide prevention should be incorporated as a core component of health services.

The following section of the literature review examines the evidence for suicide prevention strategies for Indigenous people. This is structured to cover prevention strategies that address each of the three broad prevention groups listed above.

3.4.1 Universal interventions

Policies to reduce harmful use of alcohol

Policies that reduce the harmful use of alcohol are a form of universal intervention. Alcohol attributable suicides are up to 30% higher for Aboriginal and Torres Strait Islander males compared to non-Indigenous Australians (Pascal & Chikritzhs, 2009). There is literature examining the success of alcohol supply reduction strategies in Australia though not specifically the effect it has had on suicide rates. For example, in the Northern Territory, one study found supply reduction strategies have been effective in reducing consumption of alcohol, interpersonal violence and property damage (d'Abbs & Togni, 2000). Gray *et al* (2000) were less conclusive, finding supply reduction did not reduce consumption or improve health outcomes. Internationally, there is some evidence of the success of supply reduction – Bergman *et al* (2000) evaluated alcohol restrictions in multiple Native Alaskan communities, finding less restrictive measures were more effective at reducing suicide rates than restrictive measures.

Means Restriction

One common prevention strategy is restriction of highly lethal means to enable suicide. In Australia, the restriction of semi-automatic firearms has resulted in reduction in both firearm-related suicides and a reduction in the overall suicide rate (Baker, et al., 2007). Restricting the amount of drugs that can be purchased at once and the use of blister packs has also been found to be effective in reducing mortality and morbidity from paracetamol overdose in the UK (Hawton, et al., 1996; 2001).

The literature found no evidence specific to means restriction in Indigenous populations. However, given that in Australia many of the means restriction efforts

are already in place (Christensen & Petrie, 2013), and up to two thirds of Aboriginal and Torres Strait Islander suicides are from hanging (Hunter & Harvey, 2002), further means restriction is unlikely to provide a strong solution.

Media

Media reporting of suicide has the potential to assist in suicide prevention efforts through raising awareness. However, it can also hinder efforts as it can glamourise suicide, leading to increased rates (Mann, et al., 2005). Responsible reporting of suicide in the media is another universal prevention strategy. In particular, banning media from reporting on suicide has been shown to decrease suicide rates. For example, a ban on reporting on suicides in the subways in Austria in the 1980s resulted in an 80% reduction in subway suicides (Mann, et al., 2005).

Reporting the suicide of an Aboriginal and Torres Strait Islander person in the media is particularly fraught with difficulty given that reproduction of a deceased person's name or using their photograph is restricted (Australian Government, 2009; Garvey, et al., 2005). In a qualitative study, Garvey *et al* (2005) asserts the media should endeavour to report on suicide, despite its challenges, as it presents an opportunity to promote and educate the community on suicide prevention.

Stoneham *et al* (2014) conducted a study which analysed articles in the media which covered Aboriginal and Torres Strait Islander health issues. News stories were categorised as either being negative, positive or neutral, with all stories mentioning suicide classed as negative. The study found 74% of all articles analysed were negative (Stoneham, et al., 2014). Media reporting of negative stories of Aboriginal and Torres Strait Islander people can negatively impact their self-esteem and perpetuate adverse stereotypes amongst the broader Australian community (Stoneham, et al., 2014).

Sweet *et al* (2014) acknowledge that although much work has been done, they suggest that journalism needs to adopt more decolonising practices to assist in tackling negative attitudes and promote positive representation of Indigenous people.

These studies raise important questions about whether it is possible to report on suicide prevention in a positive light whilst not presenting negative perceptions of Aboriginal and Torres Strait Islander people in the community.

3.4.2 Selective interventions

Community prevention

A number of suicide prevention programs aiming to increase community participation and local capacity have been developed and implemented specifically for Indigenous populations. In Australia, the National Suicide Prevention Strategy (NSPS) has provided funding for numerous local community suicide prevention projects. A 2006 review by Headey *et al* identified a total of 156 NSPS-funded programs, of which 43 targeted Aboriginal and Torres Strait Islander people (Headey, et al., 2006). The review found many programs lacked a robust evaluation methodology, which made it impossible to draw conclusions on the effectiveness of different programs. The authors summarised promising components of programs, which included:

- *understanding local context* by undertaking needs assessment or service mapping activities;
- *gaining project acceptance* through building partnerships with key community stakeholders and involving respected elders in projects; and
- *recognising the sensitivities surrounding suicide and mental health problems* such as stigma or cultural taboos.

In another Australian study, Tsey *et al* (2000) evaluated the effectiveness of a *Family WellBeing empowerment course* developed for Aboriginal and Torres Strait Islander people with funding received in 1998 under the *National Youth Suicide Prevention Strategy*. The course consisted of four ten-week stages where participants attended one four-hour session each week. The stages covered qualities of a counsellor, the process of personal change, self-caring and understanding relationships. The participants included professionals, family members and youth. The study found participants reported subjective

improvements in protective factors for suicide (Tsey & Every, 2000; Clifford, et al., 2013). However, the study did not examine the immediate effects that participation in the course had on youth suicide rates (Tsey & Every, 2000).

The *National Empowerment Project* (NEP) aims to promote social and emotional wellbeing (SEWB) and reduce community distress and suicide in Aboriginal and Torres Strait Islander communities (Dudgeon, et al., 2013). Eight communities across Australia were selected to represent the diversity of Aboriginal communities (Dudgeon, et al., 2013). Using participatory action research (PAR), communities were involved in identifying risk factors that challenge individuals, families and their community and strategies to strengthen factors protective of suicide (Cox, et al., 2014). Following this initial project, the NEP could be implemented in other communities. Cox *et al* (2014) found the NEP works to strengthen SEWB of individuals, families and communities. This study reinforces community involvement in the development and delivery of suicide prevention programs (Cox, et al., 2014).

May *et al* (2005) conducted an outcome evaluation of a public health–oriented suicide behaviour prevention program in an American Indian Tribal Nation. The program targeted youths aged from 10 to 24 years and was multifaceted including universal, selective and indicated prevention strategies. Program aspects included extensive data collection, school-based education, screening interventions and community functions such as traditional and modern dances. This 15-year study found a substantial drop occurred in suicidal gestures and attempts, although there was no decrease in suicide completions (May, et al., 2005).

The *Elluam Tungiinun* prevention program was developed within a cultural framework of community development for circumpolar Yup'ic youth living in Alaska (Clifford, et al., 2013). The program targeted suicide and co-occurring alcohol abuse (Allen, et al., 2009). It consisted of a toolbox of community prevention modules and other strategies, including alcohol controls, prayer walks and a suicide crisis response team. Allen *et al* (2009) conducted a study looking at the outcomes of the *Elluam Tungiinun* program and findings suggested that participation in the program improved protective factors in both adults and youth.

The *Alive and Kicking Goals!* program was trialled in the Kimberley, Western Australia, in response to local suicide rates that were up to seven times higher than the national average (Tighe & McKay, 2012). The 12-month pilot program provided training and education to players from the Broome Saints Football Club that included how to recognise early warning signs and promote healthy coping strategies. Training and education was also provided to a total of 644 participants, 421 of whom were Aboriginal. At the end of the pilot, 16 participants had become peer educators. The report on the pilot does not detail prevention outcomes being measured. However, the major strength of the program was building upon an existing community of practice that facilitated community empowerment, local knowledge and engagement – particularly among youth.

Education Programs

Education programs can assist in preventing suicide by teaching participants to identify people at high risk of suicide and how to intervene effectively, as well as equipping individuals with self-help strategies.

The *Zuni Life Skills Development Program* in America delivered an education curriculum to diverse American Indian tribal groups (LaFromboise & Lewis, 2008).The program was community initiated for high school aged students. LaFramboise *et al* reported on the program, finding students who participated in the program and received culturally tailored suicide prevention education-based intervention were less suicidal ($P<0.07$) and showed significantly ($P<0.05$) less feelings of hopelessness than those who did not (LaFromboise & Howard-Pitney, 1995; Clifford, et al., 2013).

Haggarty *et al* (2006) evaluated the effectiveness of a CD-ROM based suicide education program in an Inuit Hamlet in Nunavet, Canada. The CD-ROM taught skills in crisis intervention and suicide assessment to people with minimal computer skills. This study concluded that multimedia technology may be helpful in providing suicide prevention education with some increase in knowledge following use of the program. However, the small sample size limited the conclusions that could be drawn (Haggarty, et al., 2006).

Gatekeeper training

Gatekeeper training involves teaching key members and groups of the community about suicide risk factors and warning signs to enable them to identify individuals at risk of suicide and refer them to appropriate services (Clifford, et al., 2013). Training may be provided to young people, families, service providers or healthcare workers who are in regular contact with at-risk individuals. Wexler *et al* (2015) contend gatekeeper training must be adapted to Aboriginal and Torres Strait Islander people, as the definition, warning signs and risk factors of suicide experienced by Aboriginal and Torres Strait Islander people are complex, highly variable by community and distinct from non-Indigenous Australians' notions of suicide.

A number of gatekeeper programs exist that target Indigenous populations. A systematic review of these programs by Clifford *et al* (2013) found that gatekeeper training programs have led to significant short-term increases in participants' knowledge of suicide and intention to assist at-risk persons. However, none of the programs discussed were evaluated for their effectiveness in reducing suicide rates (Clifford, et al., 2013).

A study by Muehlenkamp aimed to review a multifaceted suicide prevention program targeting American Indian college students (Muehlenkamp, et al., 2009). At the time of writing, 90 American Indian college students had participated in the program, which encompassed a variety of suicide prevention initiatives including gatekeeper training, education workshops and seminars, social activities, individual counselling, student support teams, social networking and spiritual ceremonies. Gatekeeper training resources were adapted to be appropriate for young American Indian people. A systematic review of suicide prevention initiatives found the program evaluated by Muehlenkamp significantly improved problem-solving skills among participants and marginally improved communication skills and knowledge of suicide (Clifford, et al., 2013). It is unclear if these improvements were due to the gatekeeper training component of the program or other service design aspects.

An Australian study by Capp *et al* involved 48 Aboriginal Australians who participated in the *Shoalhaven Aboriginal Suicide Prevention Program* (SASPP) (2001). The major component of the program was a series of eight, free one-day gatekeeper training workshops, which 48 Aboriginal people attended. Evaluation of the workshops revealed an increase in participants' knowledge about suicide and greater confidence and intention to identify someone at risk of suicide and provide help. A subsequent study of the SASPP by Deane *et al* followed up with participants at two years post-intervention, at which point 37.5% (n=15) of participants reported they had helped an individual at risk of suicide since the workshops (2006). This rate was considered high by the authors. Confidence and intentions to help at-risk persons was sustained at two years post-intervention, though there was a weak relationship between confidence and intention to help and actually helping at-risk persons. The authors note it was unclear from their study if the lasting confidence and intention to help was due to the workshop participation.

Screening

It has been suggested that many of the mainstream social risk factors for suicide cannot be broadly applied to Indigenous populations (Hunter & Harvey, 2002). It can be inferred from this that screening tools designed for non-Indigenous people may be unreliable at identifying people at high risk of suicide in Indigenous communities.

There are very few culturally validated screening measures for health professionals to use. The tools that are available are primarily designed as screening tools for mental health issues, but include assessment of suicide risk. This literature review has not examined studies assessing the effectiveness of screening tools in non-Indigenous populations. For that reason, only one article was reviewed.

Thomas *et al* validated the *Strong Souls assessment tool* which was developed to assess SEWB of Aboriginal and Torres Strait Islander adolescents (Thomas, et al., 2010). The *Strong Souls assessment tool* is unique because it was developed with input from Aboriginal and Torres Strait Islander youths living in the Northern

Territory. This ensured the cultural and face validity of questions and it was found to demonstrate strong construct validity, reliability and appropriateness as an assessment tool. Three items within the *Strong Souls assessment tool* examined suicide risk and these items were found to be robust. Interestingly, feelings of hopelessness were not linked to suicide risk which suggests that unlike non-Indigenous populations, Aboriginal and Torres Strait Islander people do not necessarily contemplate or plan suicide prior to the event (Thomas, et al., 2010).

Online technology and crisis support

No evidence was found showing the extent to which Aboriginal and Torres Strait Islander people at risk of suicide use crisis telephone lines, online counselling services or forums (Australian Institute of Health and Welfare, Australian Institute of Family Studies, 2013). Findings from a qualitative study on help-seeking among Aboriginal and Torres Strait Islander adolescents found that youth, particularly in metropolitan regions, viewed the internet as a less threatening environment to gain information and support regarding mental health issues (Price & Dalgleish, 2013). Aboriginal and Torres Strait Islander people are known to use social media at higher rates than non-Indigenous people (20% higher than the national average) (Carlson, et al., 2015). Carson *et al* (2015) found that Aboriginal and Torres Strait Islander people experience social media as a place for mutual support and care, and social media could aid suicide prevention efforts by disseminating information.

In 2013, Shand *et al*, proposed a randomised control trial (RCT) protocol to examine the effectiveness of a suicide prevention app for Aboriginal and Torres Strait Islander youth (Shand, et al., 2013). This study will look at the effectiveness of a mobile app, which uses principles of commitment therapy and mindfulness-based cognitive behaviour therapy (CBT). Potential participants will be screened and those with suicide risk behaviours included in the trial. After further assessment, participants considered at *high risk* of suicide (e.g., have suicide intent) will be excluded and offered assistance. Unfortunately results from the study were not yet available at time of writing however, the iBobbly app as it is called, has become well known.

3.4.3 Indicated Interventions

Indicated interventions include the assessment and management of mental illness, substance abuse and suicidal ideation as well as postvention, follow-up and community support after suicide has taken place (World Health Organization, 2014). Indicated interventions target individuals who are at high risk of suicide due to mental illness, substance abuse or previous suicide attempts.

This literature review did not identify any studies testing the effectiveness of indicated interventions, including postvention, in Indigenous populations for preventing suicide. This finding is shared by a number of authors, including Katz *et al* (2006) who noted a lack of RCTs in the area, especially amongst Indigenous youth. This lack of research may be due to a number of factors identified in the literature, including:

- The lack of help-seeking behaviour among suicidal Aboriginal and Torres Strait Islander people. Non-Aboriginal Australians who had committed suicide are twice as likely as Aboriginal and Torres Strait Islanders to have sought treatment for a mental illness prior to their death (Sveticic, et al., 2012);
- Lack of access to specialist mental health services or crisis support for Indigenous people in remote communities (Australian Health Ministers' Advisory Council, 2015); and
- Unpreparedness of mental health services to adequately reach, manage and treat Indigenous people at high risk of suicide (Department of Health and Aged Care, 2000).

3.5 EVALUATION FRAMEWORKS

Previous sections have summarised suicide prevention initiatives and programs targeting Indigenous peoples in Australia and internationally. However, very few of these programs had evaluations and none were assessed for their impact on suicide rates amongst Indigenous people. The LiFE Framework outlines indicators

for evaluation of suicide prevention activities, summarised in Table 3.1 (Australian Government Department of Health and Ageing, 2007).

Table 3.1: Indicators for evaluation of suicide prevention activities

Effectiveness indicators	Program quality indicators	Efficiency indicators	Quantity indicators
• Policy and program objectives outcomes met – policy objectives – program objectives – project / service objectives	• Quality of process – conforms to requirements – quality of activities and methodologies – enagagement of key stakeholders	• Allocative efficiency – best use of available resources in addressing the issue of suicide prevention – best return on investment for this outcome	• Quantity delivered in terms of: – policy – need – agreed targets – inputs to project
• Stakeholder satisfaction – sponsoring agency – key stakeholders – project partners – customers / consumers	• Quality of products – adequacy – right type, mix, range – appropriate to need – target market covered	• Resource efficiency • staffing • infrastructure • consumables	
• Sustainability – outcome is relevant and applicable – outcome is easily understood and adopted – outcome is sustainable	• Quality of service – accessible – equitable – professional – comptetence / knowledge and understanding	• Cost efficiency – absolute cost – recurrent cost – value for money • Time efficiency – responsiveness – meets agreed timelines	

These indicators should be applied when evaluating suicide prevention programs.

The following section will draw upon the literature to outline some of the main reasons why research and evaluation in Aboriginal and Torres Strait Islander communities is fraught with complexity. This insight will be reflected in recommendations for future studies.

Dudgeon and Kelly (2014) contend that the relationship between Aboriginal and Torres Strait Islander people and academic research was founded on a history of objectification. Aboriginal and Torres Strait Islander people were excluded from participating in the construction of their own identity in Australian history, and the consequences of this exclusion may explain the continuing withdrawal of Aboriginal and Torres Strait Islander people from health research. The literature identified a number of concerns held by Aboriginal and Torres Strait Islander people regarding health research in their communities, including:

> *"poor consultation, lack of communication and infringement of deeply held values arising from cross-cultural insensitivity" (National Health and Medical Research Council, 2003).*

Community consultation is integral to both the ethics and quality of research conducted in Aboriginal and Torres Strait Islander communities (National Health

and Medical Research Council, 2003). Dudgeon *et al* (2010) contend that while most research institutions require evidence of community consultation prior to granting ethics approval, once approved, no mechanisms exist to monitor the ethical evaluation and reporting of research outcomes. The National Health and Medical Research Council (NHMRC) (2003) *Values and ethics: guidelines for ethical conduct in Aboriginal and Torres Strait Islander health research* stipulates participation of Aboriginal and Torres Strait Islander people should occur in all phases of research, from conceptualisation to dissemination. Studies have achieved this by adopting a participation action research (PAR) methodology. The aim of PAR is to involve those being studied in the conduct of research to gain a deeper understanding of cultural values and support the relationship between researchers and participants (Dudgeon & Kelly, 2014; Tsey, 2010). Dudgeon *et al* (2010) identify two case studies where community PAR was applied, including the *Western Australian Aboriginal Child Health Survey* and the *Kalgoorlie Otitis Media Research Project*. Their analysis found that where projects included early and ongoing community participation and adherence to ethical practice, the communities in the studies felt greater ownership of the research findings and better uptake of the program, resulting in an increased potential to improve health outcomes. PAR has also been applied to suicide prevention in the National Empowerment Project described previously (Cox, et al., 2014).

Ethical considerations also affect the choice of study design when researching suicide. In their systematic review of suicide prevention programs targeting Indigenous youth, Harlow *et al* (2014) found no studies adopted a randomised controlled trial (RCT) methodology, which is considered the gold standard in study design. However, the authors contend that RCT study design is poorly adapted to research in Indigenous communities and especially in suicide research for a number of ethical reasons, including withholding treatment from an at-risk control group. To overcome these issues, Harlow *et al* suggest studies on suicide in Indigenous communities should adopt a valid and unbiased mixed methods approach and outcome measures.

The NHMRC guidelines for ethical conduct in Aboriginal and Torres Strait Islander health research emphasise that acknowledging difference in Aboriginal and Torres Strait Islander cultures, knowledge systems and values is integral to the capacity of research to facilitate improved health outcomes. Research cannot be “difference-blind”, as this is likely to cause harm and hamper any positive outcome of the research. In the context of suicide research, a “difference-blind” approach would only consider the definitions and ideas around suicide in the context of the general population. Aboriginal and Torres Strait Islander people view health holistically, as a complex interaction between social, emotional and cultural factors in the individual and the whole community (Department of Health and Aged Care, 2000). This concept must be considered in partnership with communities when designing a research question to accurately and appropriately frame the health issue.

4 CONCLUSION AND IMPLICATIONS

4.1 OBSERVATIONS ON THE LITERATURE

This literature review drew on 71 articles to identify information on the rates and causes of suicide in Indigenous people both in Australia and internationally and effective interventions to prevent suicide at the population, community and individual levels. Finally, approaches to suicide research in Aboriginal and Torres Strait Islander communities were explored. The literature review identified only five systematic reviews, which indicates further research into effective suicide prevention in Indigenous populations is required. In particular, evidence was lacking to support the effectiveness of screening tools, online technology and crisis support and indicated interventions, including postvention, for preventing suicide in Indigenous populations. The literature review has provided a number of key findings, including:

- When compared to non-Indigenous suicide rates, Indigenous suicide rates were significantly increased in Australia, New Zealand, and North America.
- The history of colonisation experienced by Indigenous peoples is linked to the current predominance of social and economic disadvantage.
- Major factors that impact on Indigenous suicide rates in Australia and internationally include lack of cultural continuity, exposure to trauma, alcohol abuse, being a young male and the phenomenon of suicide clustering.
- The most effective suicide prevention strategies included community prevention programs such as Yirriman and the *Elluam Tungiinun* prevention program and gatekeeper training, though none of these programs can be shown to have directly resulted in reduced suicide rates among Indigenous peoples.
- Aboriginal and Torres Strait Islander people must be consulted in all phases of research, and PAR methodology is useful in achieving this. Community consultation and the sharing and valuing of different knowledge systems benefit the ethics and outcomes of health research.

Finally, while some evidence exists to support community consultation in implementing research, the literature review did not identify any frameworks for the evaluation of research or programs specifically concerning suicide prevention in Aboriginal and Torres Strait Islander people.

4.2 IMPLICATIONS FOR FUTURE PROGRAM DEVELOPMENT

We propose the following approaches to future program development, based on the literature review findings:

- Policy should support suicide prevention programs that have been developed by Aboriginal and Torres Strait Islander people for Aboriginal and Torres Strait Islander communities. Encouraging use of participatory action research methods may assist in ensuring development of suicide prevention programs that are both effective and collaborative.
- While research that provides evidence on a program's effectiveness in reducing suicide rates is ideal, this is not always feasible or appropriate. Rather, policy and program development should recognise there are also benefits from considering a program's ability to improve social and emotional well being (SEWB) and increase protective factors for suicide.
- Funding for the continuation and design of new suicide prevention programs for Aboriginal Torres Strait Islander people must include provisions for integrating community consultation at every stage of program development. In addition,

funding must be provided to support evaluation activities and strengthen the evidence base.

Finally, there is emerging evidence indicating the effectiveness of a systems approach to suicide prevention at a local level (Black Dog Institute, 2016). A systems approach refers to the implementation of multiple evidence-based interventions that simultaneously target the population (universal interventions), community (selective interventions) and individual (indicated interventions). This encourages collaboration of service providers to implement a combination of activities across a range of intervention types including reducing access to lethal means, awareness programs, school-based and youth group peer support, gatekeeper training, training of GPs, and high quality primary care treatment. This approach is currently being championed by the Black Dog Institute in Australia.

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APPENDICES

APPENDIX A REFERENCES BY KEYWORD

No.	Reference	Systematic review	Contained the terms		
			"Aboriginal and Torres Strait Islander people"	"Indigenous people"	"Suicide"
(1)	Allen, J. et al., 2009. Suicide prevention as a community development process: understanding circumpolar youth suicide prevention through community level outcomes. *International Journal of Circumpolar Health*, 68(3), p. 274.			x	x
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No.	Reference	Systematic review	Contained the terms		
			"Aboriginal and Torres Strait Islander people"	"Indigenous people"	"Suicide"
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No.	Reference	Systematic review	Contained the terms		
			"Aboriginal and Torres Strait Islander people"	"Indigenous people"	"Suicide"
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No.	Reference	Systematic review	Contained the terms		
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No.	Reference	Systematic review	Contained the terms		
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(42)	Hunter, E., 2013. Indicators of psychoses or psychoses as indicators: the relationship between Indigenous social disadvantage and serious mental illness. *Australasian Psychiatry*, 21(1), pp. 22–26.		x		x
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(46)	Katz, L. et al., 2006. Aboriginal suicidal behaviour research: from risk factors to culturally-sensitive interventions. *Journal of the Canadian Academy of Child and Adolescent Psychiatry*, 15(4), pp. 159–167.	x		x	x
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(56)	Price, M. & Dalgleish, J., 2013. Help-seeking among indigenous Australian adolescents: exploring attitudes, behaviours and barriers. *Youth Studies Australia*, 32(1), p. 10.		x		x
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(59)	Reading, C. & Wien, F., 2009. *Health inequalities and social determinants of Aboriginal peoples' health*. Prince George, BC: National Collaborating Centre for Aboriginal Health.			x	x
(60)	Shand, F., Ridani, R., Tighe, J. & Christensen, H., 2013. The effectiveness of a suicide prevention app for indigenous Australian youths: study protocol for a randomized controlled trial. *Trials*, 14(1), p. 396.		x		x
(61)	Stoneham, M., Goodman, J. & Daube, M., 2014. The portrayal of Indigenous health in selected Australian media. *The*		x		x

No.	Reference	Systematic review	Contained the terms		
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(66)	Tsey, K., 2010. Making social science matter? Case studies from community development and empowerment education research in rural Ghana and Aboriginal Australia. *Asian Social Science*, 6(3–12).		x		x
(67)	Tsey, K. & Every, A., 2000. Evaluating Aboriginal empowerment programs: the case of Family WellBeing. *Australian and New Zealand Journal of Public Health*, 24(5), pp. 509–514.		x		x
(68)	Wexler, L., White, J. & Trainor, B., 2015. Why an alternative to suicide prevention gatekeeper training is needed for rural Indigenous communities: presenting an empowering community storytelling approach. *Critical Public Health*, 25(2), pp. 205–217.			x	x
(69)	World Health Organisation, 2011. *Global status report on alcohol and health: Australia*. Geneva: World Health Organisation.			x	x
(70)	World Health Organization, 2014. *Preventing Suicide: a global imperative*. Luxembourg: World Health Organization.				x
(71)	Zubrick, S. et al., 2010. Social determinants of Aboriginal and Torres Strait Islander social and emotional wellbeing. In: *Working together: Aboriginal and Torres Strait Islander mental health and wellbeing principles and practice.* Canberra:		x		x

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	AIHW, pp. 75–90.				

APPENDIX B SUMMARY OF JURSIDICTION POLICY RESPONSES TO THE *LIFE FRAMEWORK*

New South Wales

The *NSW Suicide Prevention Strategy 2010–2015* (the Strategy) follows on from NSW's first suicide prevention strategy, *Suicide: we can all make a difference* and is aligned with the strategic directions set out in the *LiFE Framework* (NSW Government Department of Health, 2010). The Strategy recognises Aboriginal people – particularly Aboriginal men – as a high-risk group. The directions set out in the Strategy focus on sharing the responsibility of suicide prevention among all levels of government as well as between individuals, families, schools, workplaces and communities.

Victoria

In 2015, the Victorian Government released *Victoria's 10-Year Mental Health Plan* which stipulates that a suicide prevention strategy will be published that provides direction for all levels and departments of Victorian government (Victorian Government Department of Health and Human Services, 2015). The *Victorian Aboriginal Suicide and Self-Harm Prevention and Response Action Plan 2010–2015* (the Action Plan) was released in 2010 to provide strategic directions to reduce the incidence and impact of suicide in Aboriginal populations and communities across Victoria (Victorian Government Department of Health, 2010). The Action Plan sets out four priority areas which include:

- Prevention through building resilience in individuals, families and communities;
- Improving access to care and support for those at risk;
- Improving the crisis response and providing support to communities after suicide; and
- Building the evidence base and improving data collection and analysis.

The Action Plan and Victorian suicide prevention policies are aligned with the strategic directions set out in the *LiFE Framework.*

Queensland

The *Queensland Suicide Prevention Action Plan 2015–2017* (the Action Plan) is the first step towards Queensland Mental Health Commission's broader goal of reducing suicide in the state by 50% within a decade (2015). The Action Plan recognises Aboriginal and Torres Strait Islander people as at greater risk of suicide. The Action Plan sets out four priority areas including:

- Stronger community awareness and capacity to enable families, workplaces and communities to recognise suicide risk and act appropriately;
- Improved service system responses and capacity to ensure appropriate and timely access to support and care for those at risk;
- Focused support for vulnerable groups; and
- A stronger, more accessible evidence base to drive improvement in research, policy and service delivery.

The Action Plan acknowledges that the *LiFE Framework* sets out current best practice in suicide prevention suicide and incorporates the Framework's continuum of care across eight domains into its strategic directions.

Western Australia

Suicide Prevention 2020: Together we can save lives (Suicide Prevention 2020) follows on from the *Western Australian Suicide Prevention Strategy 2009–2013* and provides principles and action areas to reduce the incidence and impact of suicide in Western Australia. A key principle of *Suicide Prevention 2020* stipulates suicide prevention activities must be *tailored for diversity* and acknowledge the unique needs of diverse groups including Aboriginal people. The action areas set out in Suicide Prevention 2020 are aligned with those included in the *LiFE Framework* and include:

- Greater public awareness and united action through communications campaigns;

- Local support and community prevention across the lifespan through evidence-based and culturally appropriate suicide prevention activities and partnerships with primary care providers;
- Coordinated and targeted services for high-risk groups with a focus on early intervention;
- Shared responsibility across government, private and non-government sectors to build mentally healthy workplaces;
- Increased suicide prevention training including gatekeeper training for schools, tertiary education facilities and primary health services; and
- Timely data and evidence to improve responses and services with a focus on monitoring and evaluating initiatives.

South Australia

The *South Australian Suicide Prevention Strategy 2012–2016* (the Strategy) recognises Aboriginal and Torres Strait Islander people are at increased risk of suicide and self-harm and specific strategies to address this group are present throughout the Strategy's seven action areas (South Australian Government Department of Health and Ageing, 2012). These action areas include:

- Increase individual and community resilience through supportive and socially inclusive environments;
- Provide a sustainable and coordinated approach to suicide prevention services, resources and information;
- Provide targeted suicide prevention initiatives and programs with a key focus on Aboriginal and Torres Strait Islander people (especially men);
- Address issues that affect regional South Australians with a key focus on building capacity in Aboriginal and Torres Strait Islander communities;
- Provide targeted postvention initiatives and programs;
- Strengthen the evidence base around suicide and suicide prevention with a key focus on research and evaluation of programs; and
- Implement standards and continuous improvement of practice in suicide prevention.

Tasmania

Tasmania's *Suicide Prevention Strategy 2010–2014* (the Strategy) is the state's first strategy specifically concerning suicide prevention and was informed by the *LiFE Framework* (Tasmanian Government Department of Health and Human Services, 2010). The Strategy identifies Aboriginal people as a high-risk group for suicide and self-harm. To address the incidence and impact of suicide in Tasmania, the Strategy outlines five action areas:

- Governance and leadership initiatives in government and non-government health sectors;
- Primary prevention through providing prevention and training activities at the primary health level;
- Secondary prevention including postvention activities;
- Tertiary prevention to support people transitioning from, and between care; and
- Evaluation and quality improvement to build the evidence base around suicide prevention activities.

Australian Capital Territory

The latest strategy released by ACT Health is *Managing the Risk of Suicide: A Suicide Prevention Strategy for the ACT 2009–2014* (the Strategy) has a focus on suicide prevention across the lifespan in the ACT (ACT Health, 2009). The Strategy is the product of local consultations and informed by the *LiFE Framework*. The Strategy recognises Aboriginal and Torres Strait Islander people as a high-risk group and aims to facilitate suicide prevention initiatives that reflect how Aboriginal and Torres Strait Islander people view health and wellbeing. The action areas set out in the Strategy reflect those established in the *LiFE Framework*, described previously.

Northern Territory

The Northern Territory Suicide Prevention Strategic Action Plan 2015–2018 (the Action Plan) sets out directions to reduce the incidence and impact of suicide on people in the Northern Territory (Northern Territory Government Department of

Health, 2015). One-third of the actions set out in the Action Plan specifically target Aboriginal and Torres Strait Islander individuals and communities. The action areas set out in the document align with those in the *LiFE Framework* and include:

- Provision of targeted suicide prevention activities in the NT that are accessible to those in greatest need (e.g., children and young people, Aboriginal and Torres Strait Islander people);
- Building strength and resilience in individuals and families at risk in the NT with a key focus on culturally appropriate activities to engage youth and build cultural strengths and leadership;
- Improving wellbeing and resilience of communities across the NT with a key focus on community controlled prevention activities;
- Coordinating approaches to suicide prevention in the NT at the policy, program coordination and service provision levels;
- Improving the evidence base and disseminating information with an emphasis on local knowledge and creating research partnerships; and
- Implementing high standards and quality in suicide prevention to improve practice.

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