

Review Article

Evaluating community-based suicide prevention initiatives in rural and remote Australia: a scoping review

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Abstract

Introduction: Suicide rates in rural and remote areas of Australia are notably higher compared to urban regions, with the incidence increasing with greater remoteness. Factors contributing to this include limited access to mental health services, social isolation and economic challenges, which result in lower rates of diagnosis and treatment for mental health disorders. This is particularly among men, youth and Australian Indigenous populations. Community-based suicide prevention programs aim to reduce barriers to mental health care and to increase awareness and support for those in need. This scoping review evaluates the impacts and outcomes of these initiatives in rural and remote Australia, identifying evidence-based practices, knowledge gaps and opportunities for future research.

Methods: The scoping review followed the PRISMA-ScR framework (2018). Key databases and grey literature were searched for studies published between 2014 and 2024 from Australia, New Zealand and the Pacific region, focusing on farmers, youth, Indigenous populations and LGBTQIA+ communities. Eligible sources were analysed using Braun and Clarke's (2006) thematic analysis approach.

Results: Eleven studies involving 2866 participants were included. Most interventions (60%) lasted 18–24 months, while the remainder were 6–12 months long. The interventions primarily focused on education, raising awareness of services and skill improvement, with only three studies evaluating direct

interventions with at-risk individuals. Self-reported improvements in knowledge and skills post-intervention were not reflected in validated measures, with most changes not being statistically significant, although showing positive trends. Baseline levels of psychological distress and depression were very high among Indigenous participants, indicating that brief interventions may not be sufficient to significantly reduce distress.

Discussion: A major challenge is the prevalence of publications describing the initial set-up of community-based interventions or pilot studies without follow-up evaluations. This gap is due to insufficient funding, inadequate initial financial planning, unplanned costs and the cessation of programs due to a lack of sustained staffing and funding. While implementation methods are known, there is little evidence for their sustained implementation.

Conclusion: Despite numerous community-based suicide prevention programs, rigorous evaluations are rare. This lack of assessment results in missed opportunities for knowledge acquisition and ability to identify financial inefficiencies. The few evaluations conducted indicate minimal short-term impact, highlighting the complexity of suicide prevention, especially in rural and remote areas. It may be overly optimistic to expect that a multifaceted issue like suicide, influenced by social determinants such as economic stability, social relationships, cultural norms, access to health care and education, can be effectively addressed through short-term, isolated interventions.

Keywords

Australia, farming communities, Indigenous populations, LGBTQIA+, mental health crisis intervention, suicide intervention, suicide prevention.

Introduction

Suicide remains a significant global public health concern¹. Internationally, suicide rates tend to be higher in less populated, rural areas. A systematic review and meta-analysis of studies reporting suicide in the UK, the US, Canada and Australia found people living in rural areas were 1.22 times more likely to die by suicide compared to those living in urban areas². Studies in this systematic literature review that assessed gender showed that rural

men were 1.41 times more likely to die by suicide than urban men. In contrast, there was no difference in deaths by suicide for women based on place of residence.

In Australia, data from 2022 show that while most (63.1%) deaths by suicide occur in major cities, the death rate per 100,000 in major cities is the lowest (10.5/100,000) and is below the national rate of 12.3/100,000³. In contrast, very remote and remote areas of Australia have the highest death rates (24.5/100,000 and 23.7/100,000, respectively), with those living in regional areas

having death rates between urban and remote regions (outer regional 16.0/100,000, inner regional 16.2/100,000). Multiple factors have been identified to explain the high rates of death by suicide among rural people⁴. Sociodemographic variables related to suicide are more common among rural residents, including older age⁵, lower levels of education^{3,6} and lower levels of income⁷. McLaren found that residing in rural areas is correlated with a diminished number of reasons for living among men⁸. Specifically, rurality was associated with fewer survival and coping beliefs, responsibility to family, child-related concerns and moral objections to suicide, which in turn were related to higher levels of suicidal ideation.

The availability of firearms and their lethality⁹ have been implicated in rural suicides. In Australia, suicide deaths by firearm have been reported to increase with level of rurality (10.1% of deaths in regional areas compared with 24.7% of deaths in remote/very remote areas¹⁰). Firearms are the main method of death by suicide among farmers¹¹. Farmers have easy access to firearms and use them as part of their regular farming work. Firearms are used to solve problems, including euthanising animals that no longer have a purpose¹². Similarly, it may be that farmers use a highly accessible and lethal means to die by suicide when they perceive themselves to no longer have a function. This may relate to the acquired capability of suicide, specifically reduced fearlessness about death, which transitions people from the desire to die by suicide to actively engaging in suicidal behaviours¹³.

A recent study of rural Australians who had died by suicide showed that the prevalence of a diagnosed mental illness among men (but not women) decreased as rurality increased¹¹. This has been attributed to less access to mental health services in rural areas rather than a lower incidence of mental illness⁴. The use of medications and psychological therapies among men (but not women) also decreased as rurality increased¹¹. While those who died by suicide visited health services at similar rates, regardless of level of rurality, the use of emergency departments decreased as rurality increased.

Evidently, there are a range of risk factors associated with the higher rates of suicide among rural adults. The sociocultural context of rural communities is also implicated. Historically, there is a culture of self-reliance¹², where seeking help is perceived as a sign of weakness¹⁴. Higher levels of stoicism and more negative attitudes toward seeking professional psychological help were associated with fewer help-seeking intentions among rural adults¹⁵. Rural people perceive more stigma towards seeking professional help for mental health concerns than urban people¹⁶. Rural men have higher levels of conformity to masculine norms and self-stigma for seeking help than urban men, and the association between conformity to masculine norms and stoicism has been reported as twice as strong for men living in rural areas than in suburban and urban areas¹⁷. The need for control and self-reliance has been shown as a significantly stronger barrier to seeking professional mental health support for farmers than other rural-dwelling adults¹⁸. It has been proposed that the unique sociocultural context of rural communities must be considered when seeking to address mental health inequalities, including deaths by suicide, evident in rural communities¹⁹. Failing to do so may lead to the under-utilisation of suicide intervention plans or even to harmful practices⁴.

Context – suicide prevention/intervention for rural suicide

Governments, communities and organisations worldwide are increasing investment in suicide prevention, leading to the development and implementation of diverse interventions across countries²⁰. Recognising that no single approach effectively prevents suicide at individual or population levels²¹, multi-component models have been developed over the past decade. These combine targeted interventions for high-risk individuals with universal strategies for the wider community²⁰. Evidence from the US, UK and Japan indicates that multilevel, multimodal systems that target both health and community settings are more effective in reducing suicide rates than more traditional, siloed approaches²²⁻²⁴.

Since the release of the Communities Matter toolkit, various national suicide prevention programs have been implemented in Australia²⁵. Evaluations of the National Suicide Prevention Trial identified barriers in regional and rural communities, including uncertainty about appropriate programs and how to adapt strategies locally^{26,27}. This has led to greater recognition of regional diversity and the importance of co-designing tailored interventions with communities.

Community-based suicide prevention initiatives aim to reduce barriers to mental health care, enhance awareness, and provide support and are recognised as cost-effective approaches that leverage community touchpoints, coordinate local prevention efforts, and develop outreach activities and distress interventions²⁶. In rural areas, addressing barriers such as stigma is critical to enhance community readiness²⁸. Interventions often include community education, gatekeeper training, establishing or increasing access to mental health and crisis services, and encouraging community-building, through action groups and peer support networks²⁹.

Despite anecdotal increases in such initiatives in rural and regional Australia, formal evaluations remain limited³⁰. This study aims to map the breadth of community-based suicide prevention initiatives, examine their impacts and outcomes in rural and remote Australia, New Zealand and the Pacific Islands, and identify evidence-based practices, knowledge gaps and future research directions.

Methods

We used a qualitative systematic review protocol grounded in Butler et al's framework³¹. This framework includes six components: developing the research question, formulating key search terms and strategies, designing a multistage review process, critically appraising the literature, developing data extraction techniques and synthesising the data. The results of this scoping review follow the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines³².

Review question

The Population, Exposure, Outcome (PEO) framework was used to develop the research question. Population refers to any rural and remote based Indigenous peoples, youth, farming or LGBTQIA+ people from Australia, New Zealand or the Pacific. Exposure was defined as participation in a community-based suicide prevention program or an intervention to address mental health crises. Eligible

interventions included any programs, activities or initiatives aimed at preventing suicide or managing mental health crises that were delivered within community settings or directly engaged community members. Interventions exclusively targeting health professionals working in hospital or tertiary care settings were excluded. However, programs designed for other professional groups, such as disability workers, were considered within scope. Outcome in this review refers to decrease in suicide risk as measured by changes in knowledge, attitudes, action and/or mental health symptomatology. Therefore, this review investigates the question 'What is the evidence for positive outcomes for community-based suicide prevention programs as effective interventions to decrease suicide risk among rural and remote Indigenous people, youth, farming or LGBTQIA+ people?'

Keywords and search terms

The key words in the PEO framework were used as a starting point, and a list of relevant synonyms was developed to guide the search strategy. The inclusion and exclusion criteria are presented in Supplementary table 1.

Search strategy

In May 2024, a comprehensive search was conducted using online databases such as Scopus, Medline, CINAHL, Informit and ProQuest. Boolean operators AND/OR were combined with Medical Subject Headings (MeSH) terms and keywords. An example of the search strategy employed with the CINAHL database is provided in Supplementary table 2. The search results were then imported into Covidence (Veritas Health Innovation), a web-based platform for screening and data extraction.

After duplicates were eliminated, we identified 345 records. The titles and abstracts of these records were independently screened for potential inclusion, with at least two different authors voting on each article and a third author resolving any conflicts. Subsequently, 113 full-text articles were retrieved into Covidence. Because of the high number of studies identified, it was decided to limit the article to be reviewed to the previous 10 years. The team conducted a thorough review of each article, with at least two authors voting on each and a third one resolving any conflicts (see Supplementary figure 1 for the PRISMA flow diagram).

Data extraction and synthesis

A data extraction tool was developed specifically for the purpose of this study. The tool was piloted on two articles prior to use and minor modifications made before the final version was uploaded to Covidence. The following information was extracted from each article: bibliographic information, study aims and design, methodological underpinnings, sample information (strategy, size

and characteristics), results and quotes, and reviewer comments. In this review, results encompassed both first-order constructs (participants' quotes) and quantitative outcomes from various survey instruments used by the authors. To facilitate a convergent integrative analysis, we transformed quantitative findings into qualitative form through a process known as *qualitising*³³. In this process, numerical outcomes were re-expressed as short descriptive statements that could be synthesised alongside qualitative findings. For example numerical data from a table on participants' ability to advise someone on where to access mental health services and information, such as 'M=3.75, SD=1.09; M=4.23, SD=0.97, $p=0.002$ ' was rewritten as 'Significant self-reported improvement was found in participants' ability to advise someone on where to access mental health services and information'. This approach allowed for integration of diverse study designs within a unified narrative synthesis.

Two authors extracted the data from each study, and a third author conducted the consensus before all the data were collated and downloaded into Excel format for ease of manipulation and data synthesis. The extracted data were analysed by AS and JB using Braun and Clarke's thematic analysis framework³⁴. The authors began by familiarising themselves with the data through repeated readings. After becoming well acquainted with the material, they generated codes to identify relevant parts of the data. These codes and corresponding data extracts were then collated to form initial themes. The themes were reviewed, cross-checked against the dataset and refined. Throughout the analysis, the research team met to discuss the themes and examine text examples to ensure the results' credibility. The final step involved weaving the narrative and situating the analysis within the context of existing literature.

Results

Eleven studies met the inclusion criteria (Table 1). Despite the initial search covering Australia, New Zealand and the Pacific, the included studies were all from Australia. Four studies were mixed methods, two studies were randomised control studies, three were case control studies, and two were participatory research studies. Nine studies provided quantitative data, and eight studies provided qualitative results. In six studies the interventions were aimed at Australian Indigenous communities or people, four were targeted towards farmers or people who had contact with the farming and agricultural sector, and the remaining two studies were aimed at specific whole communities. A total of 2866 people participated in the studies, but only 2662 people were included in the analysis. The duration of the interventions ranged from 18 hours delivered over 3 days for specific training programs such as *Deadly Thinking*³⁵ to 3 years for the whole-of-community initiatives³⁶.

Table 1: Characteristics of included studies

Author, year	Study design	Intervention	Duration	Data collection instruments	Participants (included in analysis)	Demographics of participants
Snodgrass et al, 2020 ³⁵	Case control	Deadly Thinking	18 hours over 3 days	Kessler Psychological Distress Scale – 5 item (K5) MINI Suicidal Scale Alcohol, Smoking and Substance Involvement Screening Test (ASSIST-Lite)	N=413 (330)	Aboriginal and Torres Strait Islander communities: 70.4% Aboriginal, 69.8% female, mean age 41 years

Ludowyk, 2020 ³⁶	Community action research study	Live4Life	36 months	Surveys Interviews Mental health service data analysis	N=954 (954) for survey N=187 for interviews	Students (years 8–11) and adults living in rural area
Davies et al, 2017 ³⁷	Mixed methods	Farm-Link	18 months	Literacy of Suicide Scale (LOSS) Stigma of Suicide Scale (SOSS) Semi-structured interviews	N=65 for survey N=5 for interviews	General public, financial counsellors, health professionals
Tighe et al, 2020 ³⁸	Randomised control trial	iBobbly	12 weeks	Depressive Symptom Inventory – Suicidality Subscale (DSI-SS) Patient Health Questionnaire 9 (PHQ-9) Kessler Psychological Distress Scale (K10) Semi-structured interviews	N=61 (13)	Aboriginal and Torres Strait islander people: 77% female, mean age 24.15 years
Kennedy et al, 2020 ³⁹	Mixed methods	Ripple Effect	12 weeks	Literacy of Suicide Scale (LOSS) Stigma of Suicide Scale (SOSS) Effect of Suicide survey	N=169 (169)	Farming males aged 30–64 years
Davies et al, 2020 ⁴⁰	Mixed methods	WeYarn	6 months	Pre- and post- surveys Interviews Workshop observations	N=106 (91) for survey N=9 for interviews	Aboriginal Community Controlled Health Organisation staff and community members
Robinson et al, 2020 ⁴¹	Non randomised experimental study	Skills for Life	90 min over 12 weeks for 2 years	Strengths and Difficulties Questionnaire (SDQ) Kessler 6 (K6) Connected Self Scale (CSS)	N=71 (63)	Aboriginal and Torres Strait Islander students (years 7–9)
Perceval et al, 2020 ⁴²	Case control	SCARF (Suspect, Connect, Ask, Refer, Follow-Up)	10 months	Literacy of Suicide Scale (LOSS) Stigma of Suicide Scale (SOSS) Warwick Edinburgh Mental Wellbeing Scale	N 225 (127)	Agricultural workers and farmers
Tighe et al, 2017 ⁴³	Randomised control trial	iBobbly	12 weeks	Depressive Symptom Inventory – Suicidality Subscale (DSI-SS) Patient Health Questionnaire 9 (PHQ-9) Kessler Psychological Distress Scale (K10) Barratt Impulsivity Scale (BIS-11)	N=61 (61) for survey	Aboriginal and Torres Strait Islander communities: 88% Aboriginal, 64% female, mean age 26.2 years
Nasir et al, 2017 ⁴⁴	Case control, pre and post intervention	INSIST (Indigenous Network Suicide Intervention Skills Training)	Not reported	Semi-structured interviews Focus groups	Not reported (29 consultations)	Aboriginal and Torres Strait Islander communities
Powell et al, 2019 ⁴⁵	Mixed methods	Our Healthy Clarence	34 months	Semi-structured interviews	N=36 (36)	Stakeholders and key informants

Ethics and cultural safety

Five studies provided no information on participant Indigeneity and failed to engage with Indigenous perspectives in their design or reporting^{36,37,39,42,45} (Table 2). Four studies did not report participant Indigeneity and relied solely on mainstream understandings of suicide^{36,37,39,45}. Where reported, ethics approval was granted through university human research ethics committees, but there was no indication of Indigenous involvement in governance, design or implementation⁴². This absence risks reinforcing mainstream frameworks of suicide prevention and limits the cultural safety, relevance and applicability of findings for Australian Indigenous communities.

By contrast, all six studies that targeted Indigenous people or communities were explicitly co-designed or implemented in partnership with Indigenous communities. These initiatives took varied but culturally grounded approaches, including the co-

design of digital and arts-based resources such as apps, imagery, audio and artwork with Indigenous youth, artists and mental health professionals^{38,43}. Some programs were promoted and delivered through community-led processes, with Indigenous community leaders and local organisations playing a central role in recruitment^{35,44}. Others adopted participatory action research methods, where measures and therapeutic protocols were adapted for language and cultural understanding^{38,41} and engagement of community leaders and Indigenous organisations was prioritised to ensure ownership of data and validation of findings through collective review^{40,44}. Finally, some programs began as mainstream models but were revised through consultation with Indigenous Elders and facilitated jointly by Indigenous and non-Indigenous trainers with lived experience of suicide⁴⁰. Collectively, these studies demonstrated stronger attention to cultural safety, ethics and co-design, showing how Indigenous leadership and cultural protocols can shape suicide prevention strategies that are both relevant and community-owned.

Table 2: Ethical considerations for reviewed studies

Author, year	Type of article	Target of intervention	Ethics approval	Reported participant Indigeneity	Cultural considerations
Snodgrass et al, 2020 ³⁵	Peer-reviewed article	Indigenous community	Yes	Yes	Yes
Ludowyk, 2020 ³⁶	Evaluation report	Entire local government area	No	No	No
Davies et al, 2017 ³⁷	Conference paper	Service providers that work with farmers	Yes	No	No
Tighe et al, 2020 ³⁸	Peer-reviewed article	Indigenous community	Yes	Yes	Yes
Kennedy et al, 2020 ³⁹	Peer-reviewed article	Male farmers	Yes	No	No
Davies et al, 2020 ⁴⁰	Peer-reviewed article	Indigenous community and service providers	Yes	Yes	Yes
Robinson et al, 2020 ⁴¹	Peer-reviewed article	Indigenous students	Yes	Yes	Yes
Perceval et al, 2020 ⁴²	Peer-reviewed article	Rural workers	Yes	No	No
Tighe et al, 2017 ⁴³	Peer-reviewed article	Indigenous community	Yes	Yes	Yes
Nasir et al, 2017 ⁴⁴	Peer-reviewed article	Indigenous community and service providers	Yes	No	Yes
Powell et al, 2019 ⁴⁵	Peer-reviewed article	Entire local government area	Yes	No	No

Knowledge, attitudes and practice

The Knowledge, Attitudes and Practices model was applied to the analysis of results, and the themes were categorised and discussed under each criterion and summarised in Table 3. The model focuses on how the three components influence behaviour, with changes to components of the model being strong predictors of behavioural and intentional changes⁴⁶.

Across multiple studies, there was a consistent and statistically significant increase in mental health and suicidality literacy and skills, as measured by validated instruments^{35,37,38} and self-reported⁴⁰. Non-statistically significant improvements in awareness of services^{37,41}, and coping skills and protective factors³⁹⁻⁴¹, were reported, suggesting that interventions have the potential to address barriers to help-seeking and impact on psychological resilience. Notably, general knowledge gains around suicide prevention were statistically significant in one study³⁶, with corroborating self-reported improvements in two studies^{40,42}. These findings suggest that targeted interventions can successfully enhance mental health literacy and coping mechanisms. However, the reliance on self-report in several studies raises concerns about potential response bias, and future research should prioritise validated tools to strengthen the evidence base.

Non-significant reductions in stigma and shame were observed in three studies³⁷⁻³⁹ and self-reported in one⁴². Importantly, subgroup analyses revealed stigma decreased significantly among older men and individuals with a history of mental health issues^{35,42}, highlighting the potential for tailored interventions to address specific population needs. Significant increases were reported in participants' confidence to openly discuss mental health and suicidality^{36,37}, as well as in the perceived normalisation of these issues within their communities^{39,42}. These attitudinal shifts are critical, as stigma remains a major barrier to help-seeking²¹. The statistically significant findings suggest that interventions were effective in reshaping perceptions, although the durability of these changes over time remains unclear.

Behavioural outcomes were less frequently measured but showed promising trends. Health-seeking behaviour increased significantly in one study³⁵, and long-term wellbeing improvements were self-reported in another⁴². Statistically significant reductions in depression and psychological distress were reported in one study³⁸, while a 3-year long intervention³⁵ found self-reported translation of mental health knowledge into actionable behaviours and increased service utilisation. These behavioural changes, particularly those supported by validated measures, underscore the potential for knowledge and attitudinal improvements to translate into meaningful action.

Table 3: Outcomes of changes in knowledge, attitudes and practices in reviewed studies

	Direction of change	Validated measures	Self-reported changes
Knowledge	↑ Mental health/suicidality literacy and skills*	Snodgrass et al, 2020 ³⁵ Davies et al, 2017 ³⁷ Tighe et al, 2020 ³⁸	Davies et al, 2020 ⁴⁰
	↑ Awareness of services		Davies et al, 2017 ³⁷ Robinson et al, 2020 ⁴¹
	↑ Coping skills/protective factors		Kennedy et al, 2020 ³⁹ Davies et al, 2020 ⁴⁰ Robinson et al, 2020 ⁴¹
	↑ Knowledge	Ludowyk, 2020 ³⁶	Davies et al, 2020 ⁴⁰ Perceval et al, 2020 ⁴²
Attitudes	↓ Stigma/shame	Davies et al, 2017 ³⁷ Tighe et al, 2020 ³⁸ Kennedy et al, 2020 ³⁹	Perceval et al, 2020 ⁴²

	↓ Stigma (subgroups: older men, history of mental health issues)*	Snodgrass et al, 2020 ³⁵	Perceval et al, 2020 ⁴²
	↑ Confidence*	Ludowyk, 2020 ³⁶ Davies et al, 2017 ³⁷	
	↑ Normalisation of mental health/suicidality*	Kennedy et al, 2020 ³⁹	Perceval et al, 2020 ⁴²
Behaviours/practice	↑ Health-seeking behaviour*	Snodgrass et al, 2020 ³⁵	
	↓ Depression and psychological distress*	Tighe et al, 2020 ³⁸	
	↑ Long-term wellbeing improvements		Perceval et al, 2020 ⁴²
	↑ Translation of knowledge into action and service use	Ludowyk, 2020 ³⁶	

*Results statistically significant.

Enablers and barriers

Analysis of enablers and barriers to successful outcomes in community-based suicide prevention programs identified five key domains: accessibility and relevance, ownership, strength-based approaches, sustainability and resourcing, and cultural considerations (Table 4). These enablers and barriers were either features of the intervention itself or external factors in the community or population group that impacted the project.

Participant and community accessibility to and relevance of intervention were reported as enablers in 10 of 11 studies^{35,36,38-45}. This domain encompassed programs that were holistic in scope, simple to comprehend, easy to access and tailored to the needs of different audiences such as health professionals, community members and farmers.

Ownership, which referred to whole-of-community approaches, strong partnerships or co-design processes involving local stakeholders, was identified in eight studies and was perceived to enhance engagement, acceptability and program sustainability³⁵⁻

^{39,43-45}. Strength-based approaches, reported in seven studies^{36-38,42-45}, included interventions that built on existing individual and community strengths, incorporated positive and empowering strategies and were considered effective in achieving intended outcomes.

Sustainability of interventions and adequate resourcing were identified in six studies as key enablers/barriers reflecting the need for long-term funding, workforce capacity and organisational support required for program continuity^{35-37,40,44,45}. Finally, cultural considerations were reported in seven studies^{35,37,38,40,41,43,44}, predominantly those engaging Indigenous communities, highlighting the importance of culturally grounded content and delivery. Programs lacking this component risked reduced relevance and impact within specific cultural contexts.

Three studies identified the high baseline level of distress among Indigenous participants as a factor affecting the impact of the intervention^{35,38,41}. This was reported to contextualise the limited measurable change in mental health status as a result of the intervention.

Table 4: Enablers and barriers to successful outcomes for community-based suicide prevention programs

Author, year	Accessibility and relevance	Ownership	Strength-based approaches	Sustainability and resourcing	Cultural considerations
Snodgrass et al, 2020 ³⁵	Yes	Yes	No	Yes	Yes
Ludowyk, 2020 ³⁶	Yes	Yes	Yes	Yes	No
Davies et al, 2017 ³⁷	No	Yes	Yes	Yes	Yes
Tighe et al, 2020 ³⁸	Yes	Yes	Yes	No	Yes
Kennedy et al, 2020 ³⁹	Yes	Yes	No	No	No
Davies et al, 2020 ⁴⁰	Yes	No	No	Yes	Yes
Robinson et al, 2020 ⁴¹	Yes	No	No	No	Yes
Perceval et al, 2020 ⁴²	Yes	No	Yes	No	No
Tighe et al, 2017 ⁴³	Yes	Yes	Yes	No	Yes
Nasir et al, 2017 ⁴⁴	Yes	Yes	Yes	Yes	Yes
Powell et al, 2019 ⁴⁵	Yes	Yes	Yes	Yes	No

Discussion

This article reviews 11 studies on the impacts of community-based suicide prevention initiatives in rural and remote Australia, identifying knowledge gaps and directions for future research. The limited number of studies underscores the lack of academic attention to rural mental health programs, echoing calls for further research³⁰.

The reviewed studies skew towards farmers^{39,42} and Australian Indigenous communities^{35,38}. Almost half (five) failed to incorporate Indigenous perspectives relying solely on mainstream suicide frameworks, which may limit cultural safety and relevance. Where programs were adapted for language and

culture, and engaged with community leaders and Indigenous organisations, more ethical, culturally safe and relevant suicide prevention strategies were demonstrated.

Current studies largely overlooked groups like the LGBTQIA+ communities, older Australians, culturally and linguistically diverse Australians and people with a disability who are disproportionately impacted by suicide⁴⁵. In rural/regional Australia, these groups are often minoritised and socially excluded, and each faces distinct risk factors and barriers: Indigenous communities have unique cultural protocols and kinship structures; farmers face occupation-specific stressors and access to lethal means; LGBTQIA+ individuals encounter stigma and limited affirming care; older adults face mobility and digital literacy barriers; culturally diverse populations experience language and cultural misunderstandings; and people with disability face accessibility challenges and

discrimination^{4,8}. Given no single prevention approach is superior²¹, tailored initiatives that consider these lived experiences are needed, and including these populations in program evaluations can help identify the most effective strategies.

The reviewed studies primarily rely on self-reported measures of depression⁴³, knowledge³⁷, confidence³⁹, attitudes⁴² and behaviour⁴⁰, yet many fail to show statistically significant changes. Combined with self-report bias, this suggests current measures may need reconsideration. Triangulating data from next of kin or care providers, incorporating observational or health service data³⁶ and measuring mechanisms that reduce suicide risk – such as limiting firearm access⁹ – could provide a more holistic assessment. Overall, the lack of standardised measures limits comparability, highlighting the need for a unified approach to better evaluate intervention efficacy.

Most of the studies in the sample took a cross-sectional view to evaluate the program outcomes. An exception is Ludowyck et al, who examined the impact of a 3-year intervention³⁶. They too, however, did not examine the effect of that intervention beyond the intervention period. Considering behavioural change theories suggests behavioural outcomes can be delayed following an intervention (eg the transtheoretical model of change⁴⁷), there is a need for more longitudinal studies to examine the sustained impact of suicide prevention programs in rural communities. Such an examination will enable the identification of programs, and by extension program design elements, that can have a lasting impact over time, informing priorities for future interventions.

These recommendations consider the sociopolitical context of rural community-based suicide prevention initiatives. Limited funding necessitates programs that demonstrate impact at both individual and community levels while addressing barriers and enablers, including accessibility, relevance, ownership, sustainability, resourcing and cultural considerations. Evaluating cost-effectiveness and broader environmental factors⁴⁸ can inform program design, maximise return on investment and provide evidence aligned with funders' objectives. Existing studies focus on individual outcomes, largely overlooking environmental influences on suicide risk, highlighting the need for broader evaluations by national bodies, such as the National Mental Health Commission, to guide initiative development and modification.

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Conclusion

This review explores community-based suicide prevention initiatives across rural and remote areas of Australia, New Zealand and the Pacific Islands. Although national programs like the Communities Matter toolkit and the National Suicide Prevention Trial have driven significant efforts, the studies evaluating these initiatives face key limitations, such as small sample sizes, reliance on self-reported data, short evaluation time frames and inconsistent inclusion of culturally diverse groups. As a result, despite strong investment and good intentions, the current evidence base remains too limited to confidently determine which approaches are effective, for whom and under what conditions.

Given the diversity of needs across groups such as farmers, Indigenous Australians, LGBTQIA+ individuals, older adults, culturally and linguistically diverse populations and people with disability, future research should prioritise inclusive, longitudinal evaluations that integrate both qualitative and quantitative data. These efforts should also address broader structural determinants of suicide, including social, economic and political factors.

Rather than offering definitive recommendations, this review points to promising directions for future research and practice. Strengthening the evidence base through rigorous, context-sensitive evaluation will be essential to inform policy and support the development of sustainable, community-driven suicide prevention strategies in rural and remote settings.

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Conflicts of interest

The authors report no conflicts of interest.

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