



Identifying priority areas of research to be addressed in the area of suicide prevention

Interim Report 1: Review of published literature

**Jo Robinson, Jane Pirkis, Karolina Kryszynska,
Sara Niner, Susy Harrigan and Tony Jorm**

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Chapter 1: Background

Consistent with the evidence-based approach of the National Suicide Prevention Strategy, the national Advisory Council for Suicide Prevention has recommended the development of a national suicide prevention research agenda and options to encourage further research in the field.

As a consequence, the Commonwealth Department of Health and Ageing has funded a consortium from the University of Melbourne (School of Population Health and ORYGEN Research Centre), Griffith University (Australian Institute for Suicide Research and Prevention) and Suicide Prevention Australia to conduct a project designed to identify future areas of research to be addressed in suicide prevention. The project aims to identify current priorities in suicide prevention, as evidenced by the kinds of research that have been funded and published in recent times. It also aims to identify future priorities, by considering the gaps in existing research, and by consulting with stakeholders in the field via a web-based survey and a series of focus groups. A national research agenda will be recommended, based on the project's findings.

The current report outlines the findings from one component of the project. Specifically, it considers the extent and nature of Australian suicide prevention research published in the past seven years (i.e., the duration of the National Suicide Prevention Strategy), with a view to informing questions related to current priorities.

Chapter 2: Method

Overview

The review analysed the extent and nature of current research by examining the abstracts of peer-reviewed journal articles on suicide prevention research published during the period 1999-2006 inclusive. The review drew on the methodology employed by Jorm and colleagues in their examination of research priorities in mental health.^{1,2} The abstract identification and retrieval process is described in more detail below, as is the way in which the abstracts were coded. The approach to data analysis is also described.

Defining suicide prevention research

Suicide prevention research was defined relatively broadly, drawing on the definition of mental health research used by Jorm and colleagues.^{1,2} Specifically, 'suicide prevention research' was defined as

'... [involving] activities which collect new data or carry out some novel analysis of existing data, and which pertain to suicide prevention but may not necessarily involve evaluation of suicide prevention initiatives.'

For the purposes of the current review, research relating to euthanasia was excluded from the above definition.

Abstract identification and management

A decision was made at the outset to restrict the review to literature published in peer-reviewed journals, on the grounds that this was the most systematic way to identify current research. Time and resources did not permit a comprehensive search of other sources, such as reports in the 'grey' literature or student theses. Letters, reports, conference abstracts, book chapters, news items, magazine articles and newsletters were also beyond the scope of the review. The decision to focus on peer-reviewed journal articles is consistent with the approach taken by Jorm and colleagues,^{1,2} and affords some check on the quality of the research included in the review.

Searches of the following databases were conducted from their respective years of inception to May or June 2006: Medline; PsychInfo; CINAHL; AUSTInfo; ISI Web of Science (including the Social Science Citation Index and the Arts and Humanities Index).

The following search terms were used in this process: suicid* OR parasuicid* OR deliberate self harm OR deliberate self-harm OR suicid* attempt* AND Australia.

Articles were excluded from the review if they:

- Did not include a full abstract;
- Did not involve primary research, a systematic or narrative review or an evidence-based commentary;
- Did not have a first author with an Australian address or were not conducted in Australia; or
- Pertained to euthanasia (or assisted suicide).

All abstracts were downloaded or manually entered into an Endnote database.

Abstract classification

Consideration of definitional issues and preliminary inspection of the included abstracts enabled a comprehensive framework to be developed by which the abstracts could be classified. The framework enabled each abstract to be classified according to the following categories:

- Publication type;
- Publication focus;
- Type of data;
- Research design;
- Research type;
- Suicidal behaviour;
- Suicide method;
- Target group; and
- Setting

The sub-categories within each of these overarching categories are provided at Appendix A.

Each abstract was examined and classified according to the above categories by a single team member (JR), in consultation with the team leader (JP) wherever necessary. Data were entered into a purpose-designed Access database.

Chapter 3: Results

Overview

In total, 373 abstracts were retrieved and reviewed. Consideration was given to each abstract's focus, in terms of whether suicide or suicidal behaviour constituted the primary focus of the research, or whether it was more secondary in focus. This is perhaps best explained by example. An abstract reporting on an epidemiological study of the rates of suicide among young people would have been classified as having suicide or suicidal behaviour as its primary focus. By contrast, an abstract pertaining to an intervention study of cancer among older people in which suicidality was listed as one of many outcome variables would have been classified as having suicide or suicidal behaviour as its secondary focus. In 265 (71%) of the 373 abstracts, suicide or suicidal behaviour was rated as being the primary focus of the reported research.

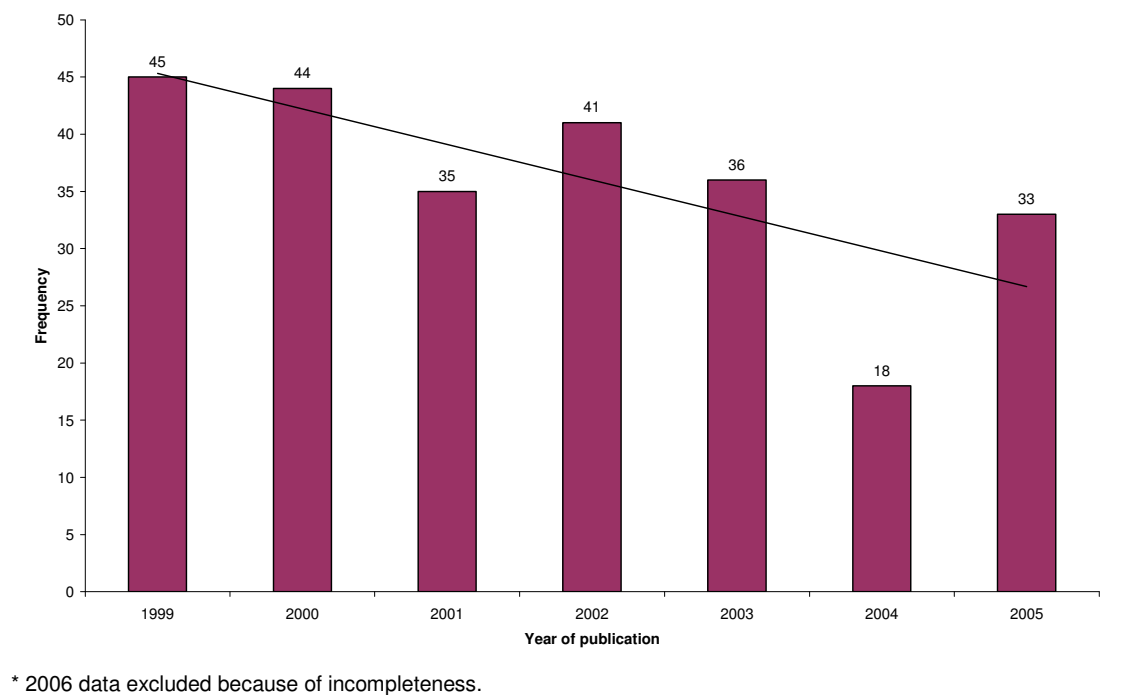
The remainder of this chapter focuses on the 265 abstracts with suicide or suicidal behaviour as their primary focus, on the grounds that these provide the most representative picture of the priority that has been given to suicide prevention research in the past seven years.

It should be noted that multiple responses were permissible for all variables, with the exception of the year of publication. So, for example, when abstracts were coded for type of suicidal behaviour, it was possible for the same abstract to be classified as being about completed suicide, attempted suicide and suicidal ideation. For this reason, percentages sometimes add to greater than 100%.

Year of publication

Forty five of the 265 abstracts were published in 1999, 44 in 2000, 35 in 2001, 41 in 2002, 36 in 2003, 18 in 2004, 33 in 2005 and 13 in 2006. Figure 1 provides a graphical representation of these data on year of publication, excluding the data for the 2006 year because abstracts were only available for the first four months of that year. The trendline in Figure 1 indicates that there has been an overall decline in abstracts published over the course of the National Suicide Prevention Strategy.

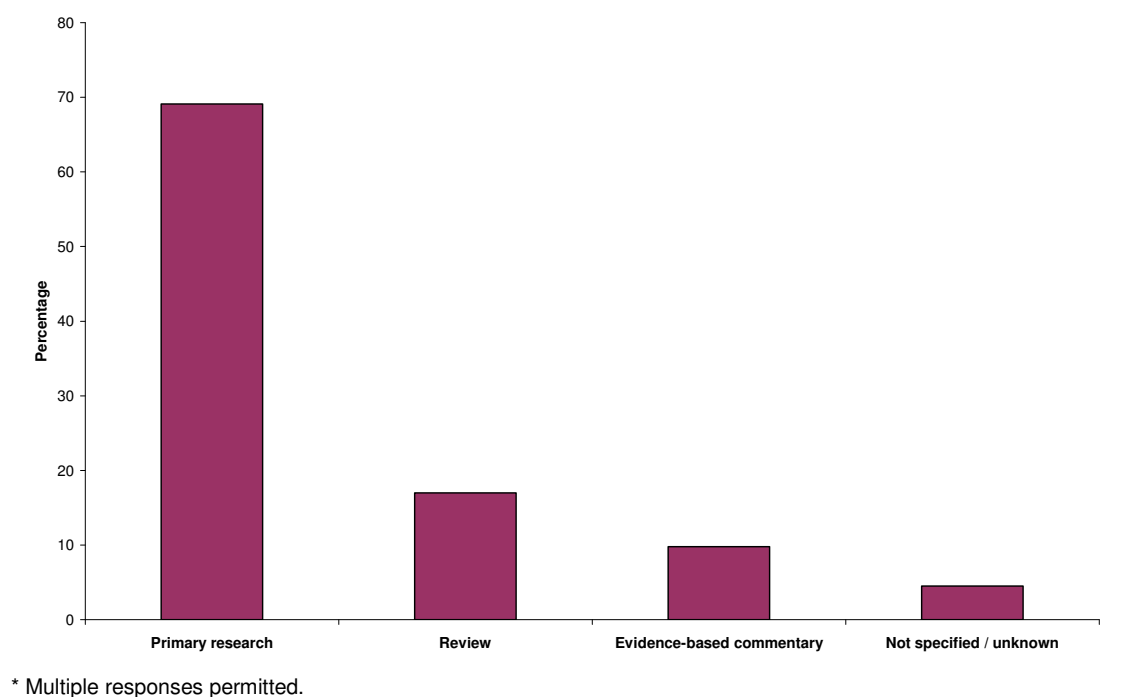
Figure 1: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by year of publication



Publication type

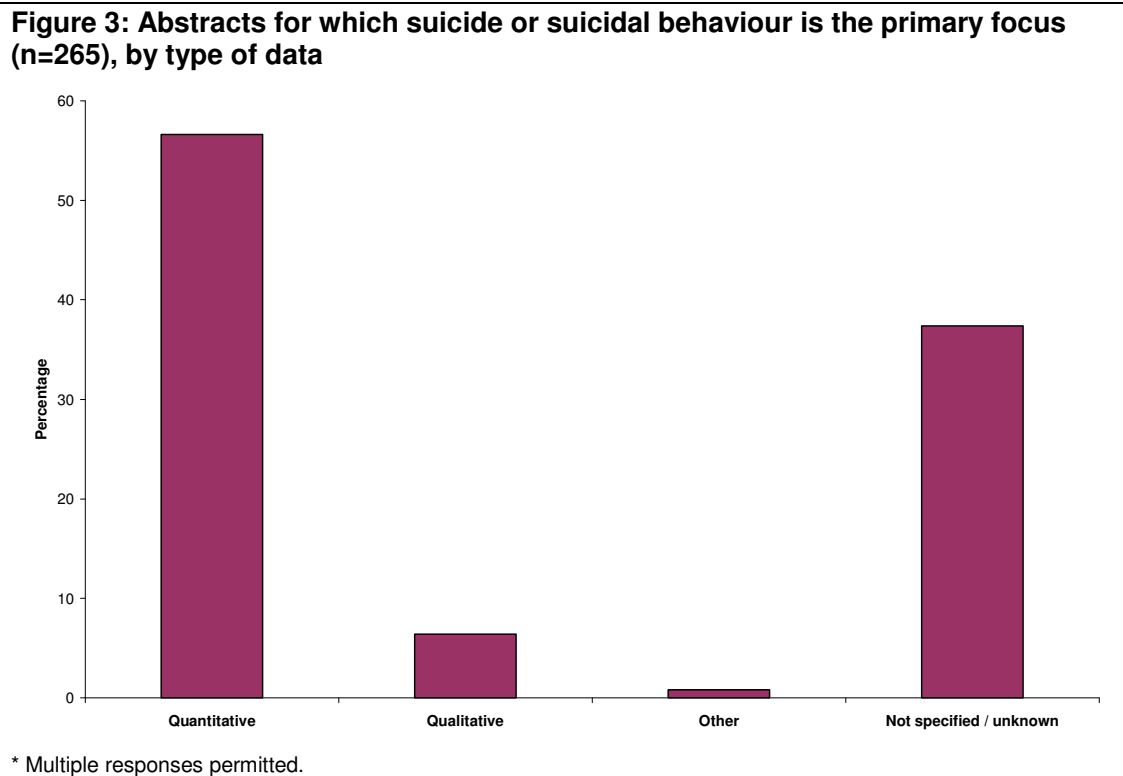
Figure 2 profiles the abstracts by publication type. The majority (69%) constituted primary research. A further 17% involved systematic or narrative reviews, and 10% were classified as evidence-based commentaries, which drew on expert opinion or evidence from selected studies (e.g., case studies), but did not constitute full comprehensive reviews. For the remainder, the publication type was not specified or unknown.

Figure 2: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by publication type



Type of data

Figure 3 summarises the broad type of data reported in each of the 265 abstracts. Over half (57%) reported on quantitative data, while a much smaller proportion (6%) drew on qualitative data. It should be noted, however, that in 37% of cases, the type of data was not clear from the abstract.

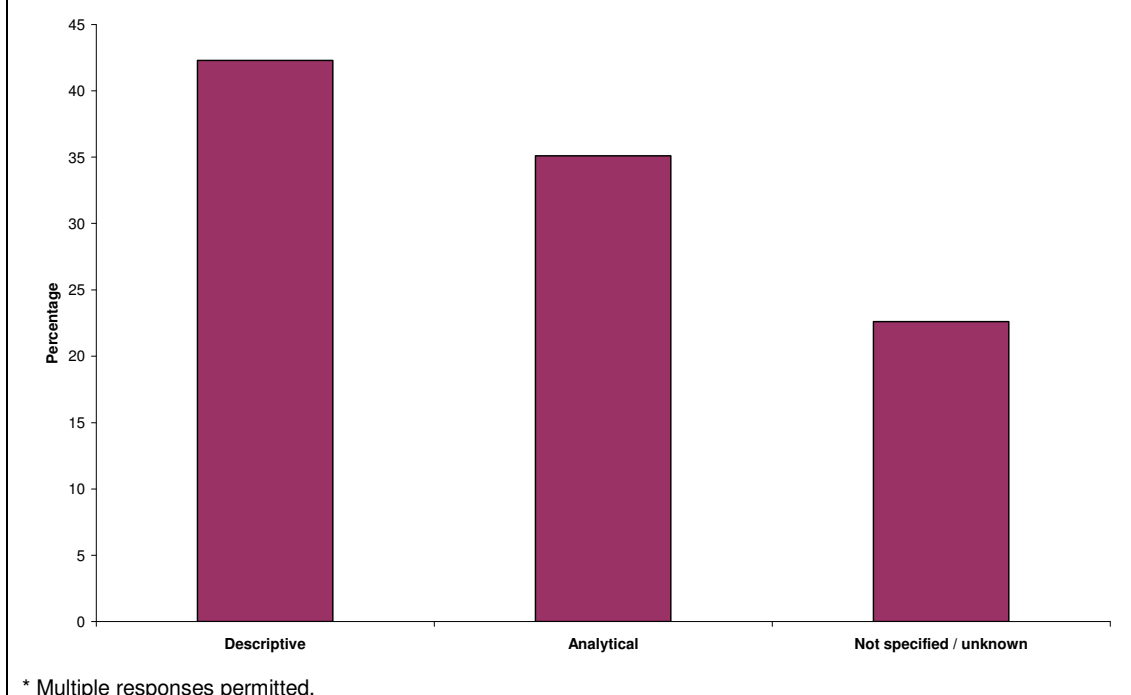


Research design

Figure 4 reports on a related concept to type of data, namely study design. Specifically, it considers whether a given abstract reported on descriptive studies or analytical studies. Following Hennekens and Buring,³ descriptive studies were defined as those which profiled characteristics of suicide or suicidal behaviour in relation to particular individuals or groups, with no point of comparison. By contrast, analytical studies were defined as those which explicitly made comparisons between different groups in terms of risk and/or protective factors (i.e., exposure variables) and suicide or suicidal behaviour (i.e., outcome variables). It is acknowledged that these distinctions apply more to quantitative studies than to qualitative ones (see above), and are particularly applicable in the context of epidemiological studies and intervention studies (see below), but an effort was made to classify all abstracts according to this taxonomy.

It can be seen from Figure 4 that 42% of all abstracts were classified as descriptive, 35% as analytical, and 23% as not specified or unknown.

Figure 4: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by research design



Research type

Figure 5 profiles the abstracts by research type. The identified types were deliberately designed to be as inclusive as possible, and to recognise that suicide prevention research occurs not only in medical and psychiatric domains, but also in the social sciences.

By far the most common research type was the epidemiological study. One hundred and forty two (54%) of all abstracts described epidemiological studies. Of these, 69% examined rates of suicide or suicidal behaviour, 44% considered risk factors, and 5% looked at protective factors.

Intervention studies were the next most common research type, accounting for 17% of all abstracts, or a total of 45 abstracts. Twenty nine per cent of these considered the efficacy of universal interventions,^a 16% the efficacy of selective interventions^b and 33% the efficacy of indicated interventions.^c One quarter (24%) examined general intervention issues and methods, and 9% directed their attention to practice guidelines.

Evaluation studies were also relatively common, being the focus of 23 abstracts (9%). Evaluations of specific services were the most frequent (39%), followed by evaluations of policies (35%) and programs (26%).

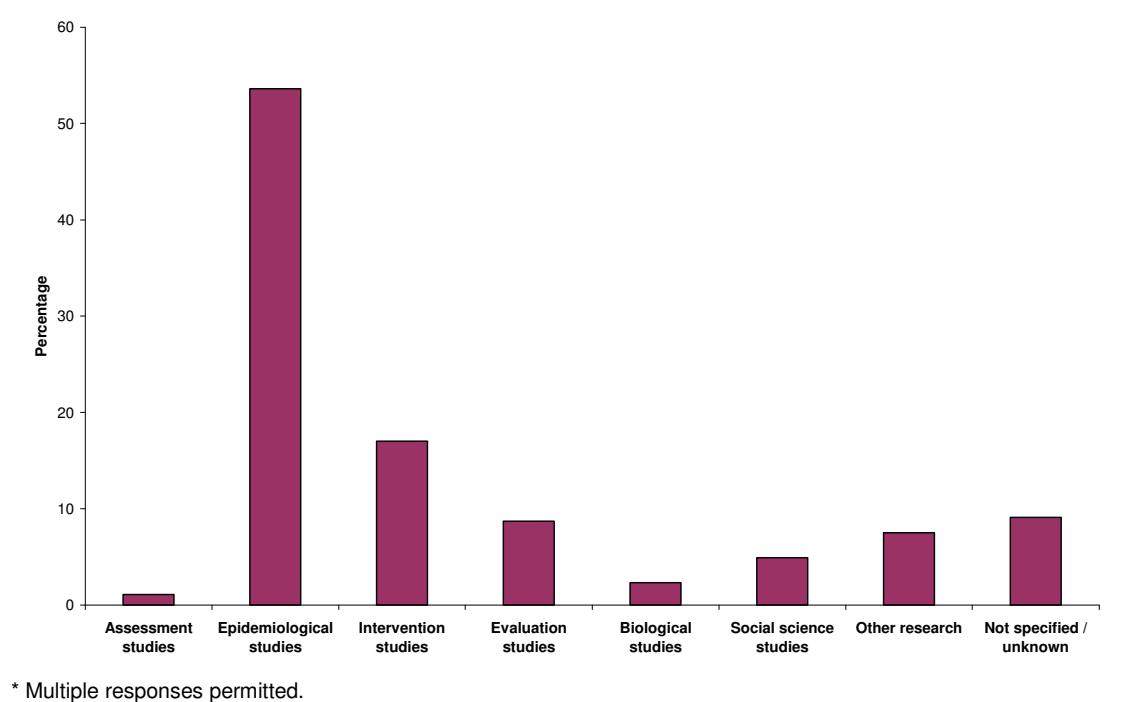
^a Interventions targeting whole populations, with the aim of favourably shifting risk and protective factors across the whole population

^b Interventions targeting population subgroups with particular risk factors for suicide who are not yet exhibiting suicidal thoughts or behaviours

^c Interventions designed for people who are already beginning to exhibit suicidal thoughts or behaviours

Comparatively less research effort had focused on assessment studies, biological studies and social science studies.

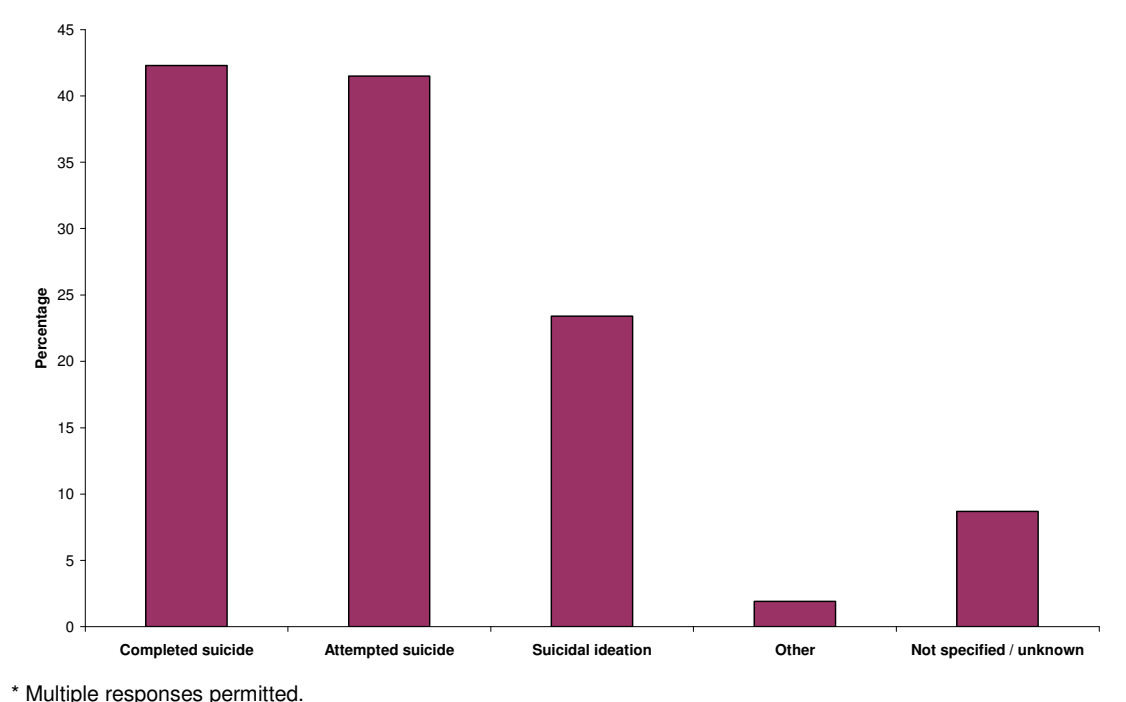
Figure 5: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by research type



Suicidal behaviour

Figure 6 provides a breakdown of the suicidal behaviour of interest in the abstracts.

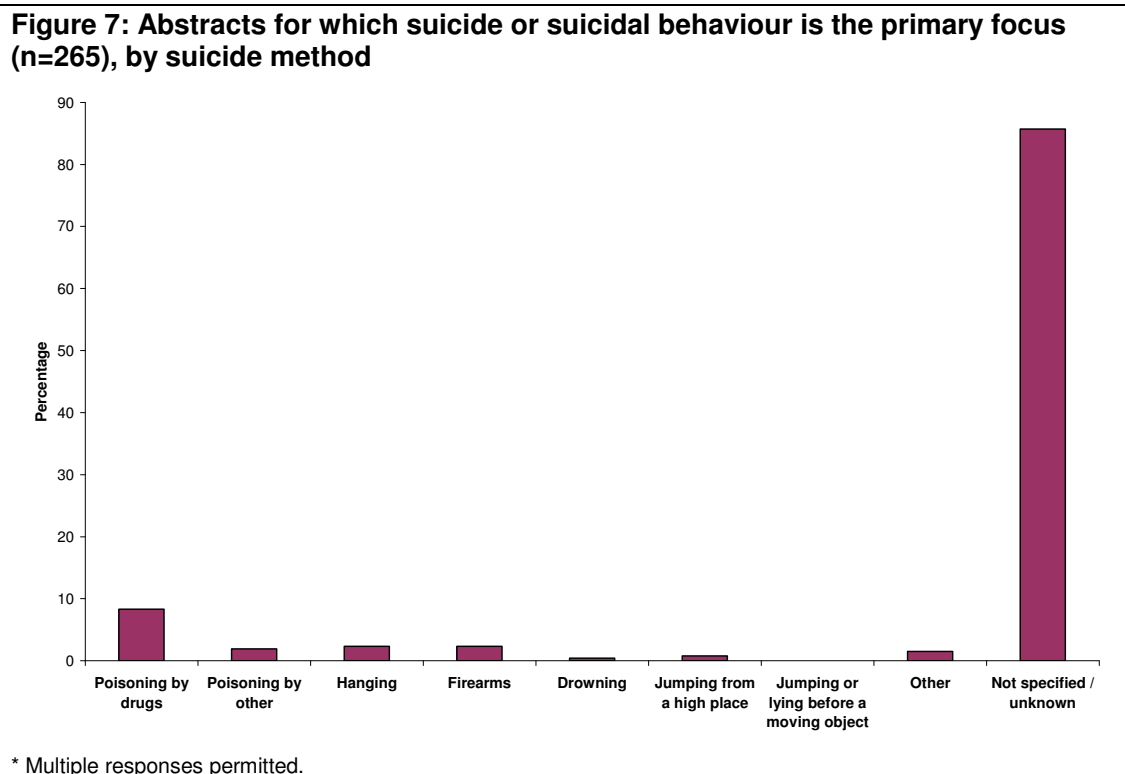
Figure 6: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by suicidal behaviour



Forty two per cent of all abstracts focused on completed suicide, 42% on attempted suicide and 23% on suicidal ideation. A further 2% focused on some other kind of suicidal behaviour, most notably suicide plans and threats of suicide. In 9% of abstracts, the suicidal behaviour of interest was not specified or unknown.

Suicide method

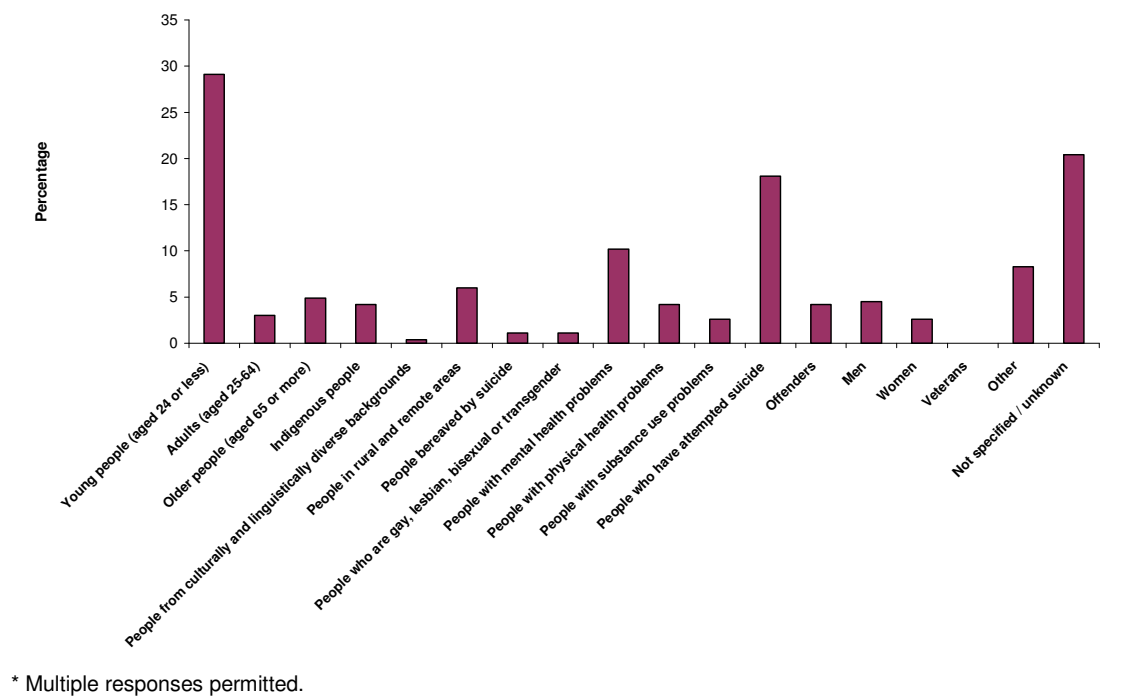
Figure 7 presents the suicide method of interest across all 265 abstracts. It shows that the majority of abstracts (86%) did not focus on an individual method, but presented research about suicide more generally. Only one method was the focus of more than 20 abstracts, namely poisoning by drugs (8%).



Target group

Figure 8 shows the target groups of interest in the 265 abstracts. It shows that, collectively, greatest emphasis has been given to young people (29%), followed by people who have attempted suicide (18%), people with mental health problems (10%) and people in rural and remote areas (6%). Twenty per cent of all abstracts did not specify a target group.

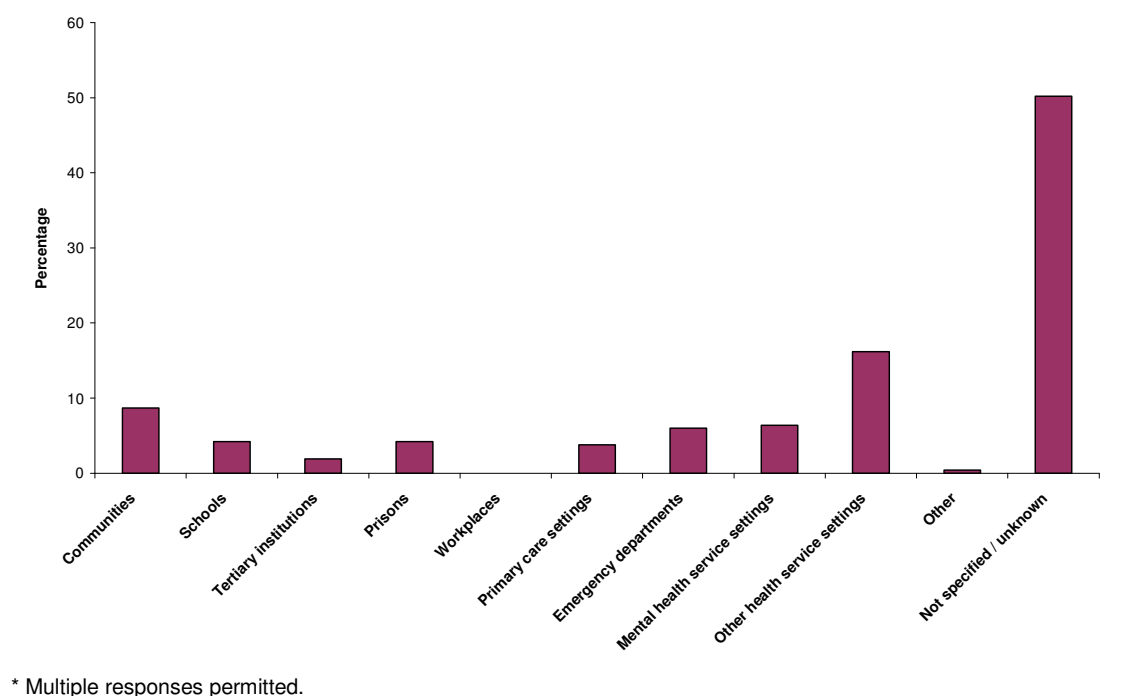
Figure 8: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by target group



Setting

Figure 9 shows the settings with which the research reported in the abstracts was concerned.

Figure 9: Abstracts for which suicide or suicidal behaviour is the primary focus (n=265), by setting



In half of all abstracts (50%), no setting was specified. Certain settings took precedence in the remaining abstracts, with other health service settings and community settings receiving particular emphasis (referred to in 16% and 9% of all abstracts, respectively). Mental health service settings and emergency departments were the next most common, with each accounting for 6% of all abstracts. Schools, prisons and primary care settings each accounted for 4% of all abstracts. Tertiary institutions and workplaces received the least attention.

Chapter 4: Discussion

During the life of the National Suicide Prevention Strategy, 265 journal articles have been published in the peer-reviewed literature that qualify as research where suicide is the primary focus. This number seems small, given the fact that suicide is a major public health issue, with significant individual and societal consequences. Worryingly, the number seems to be reducing, rather than increasing, despite the fact that one of the six action areas of the National Suicide Prevention Strategy's LIFE Framework is progressing the evidence base for suicide prevention and good practice.

Around two thirds of these journal articles represent primary research, which is positive in the sense that it indicates that original, Australia-specific efforts are being fostered at least to some extent. The majority of this research is epidemiological, which is also appropriate, given the fact that Australia's response to the problem of suicide is occurring within a population health framework. However, there is an argument that the balance of this epidemiological research is not quite right, since there is a clear focus on descriptive analyses of rates. While there is certainly a place for this, it would be desirable to see greater emphasis be given to analytical studies of risk and protective factors, which could underpin evidence-based interventions, services, policies and programs which, in turn, could then be thoroughly evaluated. This would seem to be crucial, since relatively little is known about which suicide prevention strategies represent the 'best bets' in terms of efficacy.⁴

There may also be an argument for matching the largely quantitative approach of epidemiology with additional qualitative endeavours, particularly those which seek the experiences of people who have been affected by suicide and those who provide services for them. This is important for informing the evidence base for suicide prevention initiatives, since there is debate in the suicide prevention literature about what constitutes 'evidence' of efficacy of suicide prevention programs. The nature of suicide makes it ethically and practically difficult to evaluate suicide prevention initiatives via randomised controlled trials with suicide as the outcome measure of interest, so various commentators have advocated supplementing this sort of evidence with findings from other types of well-designed studies, including those which draw on individuals' experiences.⁵

In the international suicidology literature, there is a recognition that suicidal behaviours occur on a gradient, from suicidal ideation to attempted suicide to completed suicide, and there has been a consequent acknowledgement that it is important for prevention to focus on the full spectrum of suicidality. It may be appropriate, therefore, that where a particular suicidal behaviour has been emphasised in the 265 journal articles, equal weight has been given to completed suicide and attempted suicide. Although completed suicide is regarded as the more extreme manifestation of suicidality, suicide attempts are more prevalent and may affect different populations.⁶

Few of the retrieved journal articles reported on research into specific methods of suicide. Again, this may be appropriate in the sense that much of the research effort has focussed on understanding suicidal behaviours in general, rather than on examining particular means. Having said this, reducing access to means has been acknowledged internationally as one promising way of preventing suicide, so it would be desirable to augment the current knowledge base with some more detailed analyses of method-specific issues. It may be appropriate to focus on particularly common methods, such as hanging, which have not received significant attention to date.

Along similar lines, it is worth examining the relative emphasis on particular target groups and settings, and to consider ways of prioritising the suicide prevention research effort in this regard. There is an argument, for example, that those groups who are

acknowledged as having particularly high levels of suicide risk (e.g., people who have attempted suicide and people with mental health problems) should remain on the research radar, and that groups (e.g., adult men) for whom suicide rates are on the rise may warrant renewed attention.

To conclude, the current review of published literature presents a picture of the status quo with regard to suicide prevention research, identifying some areas where there are clear gaps and others where relatively greater efforts have been made. Interpreting these findings in a manner that informs a research agenda is not simple, and is not just a matter of giving weight to previously under-emphasised areas and reducing the attention paid to previously well-covered areas. The results of the other components of this study will assist in this interpretation exercise. In particular, the findings from the web-based survey and the focus groups will enable the current results to be assessed through the lens of what key stakeholders view as priorities. Taken together, these findings may assist in re-directing Australian suicide prevention research endeavours to help fill internationally-identified gaps in knowledge about what works and what doesn't work in suicide prevention.

References

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Acknowledgements

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Appendix 1: Framework for classifying abstracts

Publication type	
a. Primary research	c. Other (Evidence-based commentaries)
b. Review	d. Not specified / unknown
Publication focus	
a. Suicidal behaviour is the primary focus	c. Other
b. Suicidal behaviour is the secondary focus	d. Not specified / unknown
Type of data	
a. Quantitative	c. Other
b. Qualitative	d. Not specified / unknown
Research design	
a. Descriptive	c. Other
b. Analytical	d. Not specified / unknown
Research type	
a. Assessment studies <ul style="list-style-type: none"> • Assessment/classification of suicide risk (including development/validation of risk assessment tools) • Assessment studies – Other 	d. Evaluation of policies/programs/services <ul style="list-style-type: none"> • Policy evaluation • Program evaluation • Services evaluation • Evaluation of policies/programs/services - Other
b. Epidemiological studies <ul style="list-style-type: none"> • Rates (including comparisons of rates) • Risk factors • Protective factors • Epidemiological studies – Other 	e. Biological research <ul style="list-style-type: none"> • Neurobiology (including brain anatomy and physiology) • Genetics • Biological research – Other
c. Intervention studies <ul style="list-style-type: none"> • General intervention issues and methods • Practice guidelines • Efficacy of universal interventions • Efficacy of selective interventions • Efficacy of indicated interventions • Intervention studies - Other 	f. Social science <ul style="list-style-type: none"> • Sociology • History • Literature • Media studies • Social science – Other
	g. Other
	h. Not specified / unknown
Suicidal behaviour	
a. Completed suicide	d. Other
b. Attempted suicide	e. Not specified / unknown
c. Suicidal ideation	
Suicide method	
a. Poisoning by drugs	f. Jumping from a high place
b. Poisoning by other	g. Jumping or lying before a moving object
c. Hanging	h. Other
d. Firearms	i. Not specified / unknown
e. Drowning	
Target group	
a. Young people (aged 24 or less)	j. People with physical health problems
b. Adults (aged 25-64)	k. People with substance use problems
c. Older people (aged 65 or more)	l. People who have attempted suicide
d. Indigenous people	m. Offenders
e. People from culturally and linguistically diverse backgrounds	n. Men
f. People in rural and remote areas	o. Women
g. People bereaved by suicide	p. Veterans
h. People who are gay, lesbian, bisexual or transgender	q. Other
i. People with mental health problems	r. Not specified / unknown
Setting	
a. Communities	g. Emergency departments
b. Schools	h. Mental health service settings
c. Tertiary institutions	i. Other health service settings
d. Prisons	j. Other
e. Workplaces	k. Not specified / unknown
f. Primary care settings	