Australian Government
National Mental Health Commission

NATIONAL MENTAL HEALTH RESEARCH STRATEGY

BACKGROUND PAPER: Suicide prevention research (Session 2C)

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Background

In 2006, our team profiled the suicide-related research that had been undertaken in Australia in the previous eight years by identifying the journal articles that had been published and the grants/fellowships that had been funded in the area.[1] We conducted a similar exercise in 2014 (focusing only on youth suicide prevention)[2] and another in 2017.[3,4] In each case, we found that suicide prevention research was dominated by descriptive epidemiological studies and that intervention studies were lacking.[1,2,3,4] We found that the situation was the same when we searched the conference programs of the largest international suicide prevention conferences held between 2003 and 2008; the paucity of intervention studies in the area sat in stark contrast to the wealth of epidemiological studies.[5]

Gaps and uncertainties

The result of this research emphasis is that we can fairly confidently list the complex array of socio-demographic, clinical, personality-based, environmental/situational, genetic and neurobiological factors that heighten suicide risk. However, our knowledge is still lacking when it comes to identifying which interventions work best in suicide prevention. We don't know which interventions are the most effective, much less which are the most cost-effective. A recent systematic review by Zalsman and colleagues identified only a handful of interventions which were effective or showed significant promise in reducing suicide-related outcomes across the population. These were restricting access to means, school-based awareness programs and particular psychological therapies (e.g. cognitive behavioural therapy).[6]

This lack of knowledge regarding optimal interventions makes it difficult for governments to know where to direct their resources, and most have chosen to 'hedge their bets' and fund a range of universal, selective and indicated interventions.[7] This is appropriate in the circumstances; we cannot sit back and do nothing. But there is a real need for more high quality intervention research if we are to reduce the suicide rate.

This need has been recognised by many stakeholders. When we conducted two of the above studies of what kind of suicide prevention research had been published and funded in Australia, we also asked a variety of key players in suicide prevention about where they thought that suicide prevention research efforts would best be placed. We conducted two surveys with individuals who conducted, used or funded suicide prevention research and/or had lived experience of suicide (one in 2006, n=231;[1] the other in 2017, n=390[3]). The 2006 survey was accompanied by in-depth focus groups with a further 28 stakeholders.[8] Overwhelmingly, these stakeholders told us that the epidemiology of suicide had been exhaustively explored, and that the time had come to give priority to evaluating the efficacy of specific interventions.[1,3,8]

Challenges

It is worth considering why intervention research in the suicide prevention field is not stronger and more definitive. The problem of study design has beset many suicide prevention researchers who have tried to evaluate interventions. Many potentially useful suicide prevention initiatives are not amenable to evaluation by gold-standard randomised controlled trials (RCTs). Universal interventions are particularly difficult to test in this manner because, by definition, they are introduced to the whole community. Taking the example of a barrier on a bridge, it is not feasible to randomise half the community to receive the bridge intervention and half to act as a control group. In addition, despite being a major public health problem, suicide is still (fortunately) a relatively rare event, so intervention studies that use suicide as their primary outcome measure require prohibitively large sample sizes.

This is compounded by the fact that intervention research in the suicide prevention field faces particular ethical challenges. For example, trials of both pharmacological and non-pharmacological therapies for depressed individuals often explicitly exclude suicidal individuals for ethical reasons, which means that their utility as selective interventions for suicide prevention remains untested. Conversely, there are situations where it is regarded as ethically improper to withhold potentially useful interventions from suicidal individuals, which means that it is difficult to compare outcomes for those who are exposed to the intervention against outcomes for any sort of comparison group even when it might be practically possible.

In addition to the practical and ethical problems associated with designing rigorous evaluations of suicide prevention interventions, the funding sources available for this kind of work have presented some issues. Traditionally, funding for the evaluation of suicide prevention activities has come from two main sources. One is academic granting bodies like the National Health and Medical Research Council (NHMRC), which provide competitive grants for research. The other is Commonwealth and state/territory health departments, which tender out evaluations of particular suicide prevention activities that they have funded. Each has advantages and disadvantages. Grants received from granting bodies are investigator-driven and peer-reviewed, so they are typically very strong methodologically; but because the funding is limited and must be shared around, the interventions they test tend to be fairly small in scale. By contrast, contracts awarded by health departments provide for evaluations of typically much larger and often more complex initiatives, but the evaluations tend to be more constrained. For example, the intervention is often well under way by the time the evaluation is commissioned, making it difficult to gather baseline information.

Opportunities

A number of opportunities have arisen recently that may help to strengthen suicide prevention research and ramp up its focus on interventions. There has been an increased emphasis on suicide prevention by governments. The National Mental Health Commission's review of mental health programs and services included suicide prevention as one of its major foci.[9] The Australian Government's response to that review outlined a range of reforms to mental health and suicide prevention funding and program delivery,[10] including a renewed approach to suicide prevention that is now embodied in the Fifth National Mental Health and Suicide Prevention Plan.[11] The approach involves combining strong national leadership with systematic regional efforts that recognise local differences, and strengthening the evidence base for suicide prevention.

At the national leadership level, funds have been made available for the provision of direction and support in particular areas. Our team was funded to provide national leadership in suicide prevention research and we have been doing this in a variety of ways. For example, our recent identification of research priorities was part of this program.[3,4] We have also set up a network of 100+ suicide prevention researchers from around

the country, established a mentoring program and hosted several events and forums. In addition, we have conducted two studies exploring the issues that researchers face when they submit suicide-related research applications to ethics committees,[12,13] and we are now conducting a third which is seeking the views of ethics committee members. The findings from these studies will inform a resource for suicide prevention researchers.

More locally, and also as a direct result of the reforms, there has been an increased emphasis on delivering comprehensive suites of suicide prevention interventions through what has become known as the 'systems-based approach'.[14] The idea here is that the whole is greater than the sum of the parts and that addressing the wicked problem of suicide from multiple angles in multiple ways will yield results. In Australia, the most prominent example of the systems-based approach is LifeSpan which was developed by the Black Dog Institute and involves nine interventions. Primary Health Networks (PHNs) have had a major role in rolling out suicide prevention activities on the ground, with 29 sites being supported by the Black Dog Institute in four different trials. Evaluations are occurring in all of these trials, including one that is being conducted by the Black Dog Institute and another that is being conducted by our team. The scale of the implementation across the 29 sites and the fact that the evaluations are using overlapping or complementary approaches creates an opportunity to advance knowledge about suicide prevention interventions that has not previously existed.

In parallel with the above developments, there has been a recent increase in funding for suicide prevention research through initiatives like Suicide Prevention Australia's National Suicide Prevention Research Fund and the Medical Research Future Fund's recent Million Minds Mission on Suicide Prevention. Both of these initiatives have explicitly called for proposals relating to intervention research and have cited our studies[3,4] as the rationale for this.

Conclusion

We need to get smarter about the suicide prevention research we do. We need to redress the imbalance between epidemiological and intervention research. We should use what we know about the epidemiology of suicide to test interventions for those at risk of suicide, whether these be delivered universally, selectively or in an indicated fashion. Many promising interventions already exist but have not yet been well evaluated, so as researchers we should work with organisations that are delivering potentially life-saving interventions at the coalface. This was the approach we took in our recent Million Minds Mission application: we focused on boys and men, arguing that because three-quarters of all suicides are by males, preventing suicide among boys and men would go further than any other single approach to achieving the Prime Minister's goal of working towards zero suicides.[15] We partnered with 14 organisations that are delivering (a) universal/selective interventions that encourage help-seeking through a focus on masculinity or (b) indicated interventions that are tailored to the specific needs of boys and men. We proposed to conduct a suite of RCTs to test these interventions and then model the effect of optimising them and scaling them up.

We also need to expand our thinking beyond RCTs. Of course, where RCTs are possible we should do them. There are examples of well-designed RCTs in the suicide prevention literature, including some RCTS of complex, systems-based approaches (e.g. an intervention with a school-based suicide prevention program with a gatekeeper training component, a component designed to raise awareness among students, and a component involving screening and referral of at-risk students).[16] Where RCTs aren't possible, however, we need to look for methodologically robust alternatives. Again, there are some great examples here. Some researchers have mimicked randomisation in clever ways (e.g. using propensity score matching in a large-scale, register-based evaluation of psychological therapy for people who have made a suicide attempt).[17]

Others have avoided randomisation or pseudo-randomisation and instead used other best-practice evaluation methods (e.g. using program logic and assessing a variety of outcomes via mixed methods in an evaluation of a program designed to increase adherence of health professionals to a national suicide prevention guideline).[18]

We need to conduct epidemiologically informed intervention studies, rather than do more epidemiological research. We also need to make clever evaluation designs more commonplace and capitalise on the policy and funding opportunities that currently exist. That way, we will be able to consolidate and expand our existing knowledge about what works in suicide prevention, and ultimately save lives.

References

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