Research Bulletin

Learning to live

What works in youth suicide prevention in educational settings?

ISSUE 14

Suicide in young people has been receiving increasing attention as it is one of the leading causes of death in youth. Growing efforts at suicide prevention have led to a number of different approaches being studied in research settings and applied in the real world. Because it is hard to predict who is at risk of suicide, some researchers have aimed their interventions in educational settings, where they can access a broad range of young people. This research bulletin summarises findings from research studies and reviews that have focussed on intervening in educational settings in order to prevent youth suicide.

Background

Suicide is the second most common cause of death in young people worldwide.[1] In addition to cutting young lives short, suicide also has broader emotional and economic impacts on families and communities.[2,3]

There has been a growing focus in recent years on youth suicide prevention and a number of efforts have been pursued.[4] Despite these efforts, recent evidence suggests that the youth suicide rate is increasing slightly.[5] There is a clear need for further development and dissemination of effective youth suicide prevention approaches. Educational settings, such as schools, universities and TAFEs, are one focus of suicide prevention interventions for young people.

What are the main approaches to intervention with suicidal young people?

Suicide is a statistically rare event that is very difficult to predict. A range of approaches have been considered, from targeting all young people in a population, to focussing in on high-risk youth. The diagram on page two represents the definitions of universal, selective and indicated interventions.

Why focus on education settings?

The most prominent and clear reason to target suicide prevention efforts in educational settings, is that most Australian adolescents attend school.[6] This therefore means that schools provide a setting for getting close to reaching all young people. They also provide a setting for screening efforts that aim at capturing as much of the population as possible. Additional benefits for intervention in educational settings are that they have teachers and other staff who are motivated to receive training on preventing suicide.[7] Schools also provide infrastructure and support services that can facilitate the implementation of evidence based practices in the real world.

Despite this promise, researchers have suggested that more research is needed to determine what works.[8] This bulletin covers a selection of that research.

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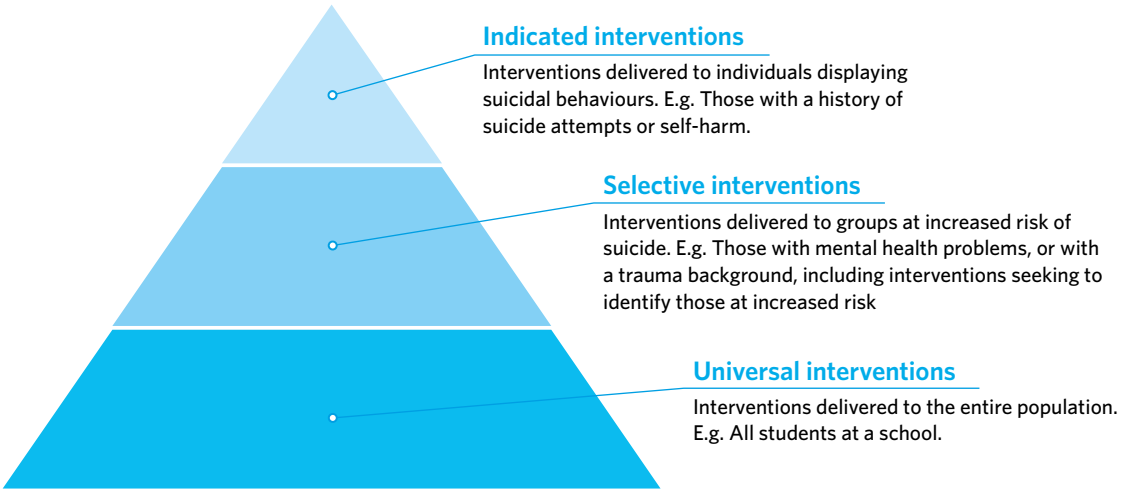

So what does the evidence say about what works in preventing suicide in young people through school based interventions?

Robinson, J. et al., **What works in youth suicide prevention? A systematic review and meta-analysis. (2018).** *E Clinical Medicine.*

This recent high quality systematic review[9] comprehensively assessed research on preventing youth suicide across clinical, community and educational/workplace settings. It involved screening over 34,000 studies and 99 were included in the review. Studies were included if they focussed on interventions designed to reduce self-harm or suicide in people aged 12–25, although many focussed on teenagers.

The component on educational settings incorporated 31 studies, including 21 in schools, seven in universities, two in military workplace settings and one in both schools and community public places. Randomised controlled trials are considered to be high quality evidence and involve randomly allocating young people to receive an intervention, or a control group, and comparing the differences on suicide related outcomes. Eleven trials were able to be included in a meta-analysis, which summarises effects across a number of studies. They incorporated universal and indicated interventions, some of which were provided face-to-face and others were online.

Examples of existing interventions

A range of different approaches have been trialled separately or in combination in an attempt to address youth suicide. The list below includes a selection of these.

- Educational workshops
- Changes in school policy
- In-class presentations
- Group therapy
- Individual therapy sessions
- Online therapy modules
- Teacher / trainer educational workshops (also known as gatekeeper training)
- Video presentation and discussion guide
- Screening for suicide risk and referral
- Restricting access to mean (e.g. restriction of access to guns)
- Crisis hotline
- Psycho-education groups
- Web site resources
- Educational posters
- Writing based interventions
- Role play sessions

Results suggested that interventions were superior to control groups in terms of reducing self-harm and suicidal thoughts, but that these effects were not consistent. Sometimes intervention effectiveness depended on whether suicidal thoughts were measured as present or absent (dichotomous measurement) or on a sliding scale from absent to severe (continuous measurement). The evidence also suggests that the impacts on suicidal ideation took place immediately after the intervention, but that these effects diminished when young people were followed up at a later date (e.g. 12 months later). The authors also noted some issues with study quality, for example issues with small samples or dropout.

Take home messages

This systematic review and meta-analysis provides a useful and thorough overview of the full range of studies aimed at preventing youth suicide. The authors note that there are comparably few high quality studies conducted in educational settings and more research is needed on a range of interventions. Yet the emerging evidence suggests that providing a combination of screening for suicide risk and psycho-education is a promising approach. Psycho-education involves providing information about key issues like risk factors for suicide, how and when to seek help. Studies mainly focussed on teenagers, and further research could be conducted in university settings.

Wasserman D, Hoven CW, Wasserman C, Wall M, Eisenberg R, Hadlaczky G, et al. **School-based suicide prevention programmes: the SEYLE cluster-randomised, controlled trial.** *The Lancet. 2015;385(9977):1536-1544.*

This high quality multisite cluster randomised controlled trial recruited 11,110 students, aged 14–16, from 168 school across 10 European countries.[10] Titled the Saving and Empowering Young Lives in Europe (SEYLE) trial, this study involved randomly assigning each school (not each individual student) to one of four conditions:

- Question, Persuade and Refer (QPR), a gatekeeper training approach that equips school staff to recognise suicide risk and respond appropriately.
- Youth Aware of Mental Health (YAM), a universal intervention, targeted towards students. This involved three hours of interactive workshops that included role plays. It also involved two one-hour educational lectures, six posters being displayed and providing a written content booklet aiming to raise awareness about suicide risk and enhance relevant skills in managing stress and adverse life events.
- Screening by Professionals (ProfScreen) provided a referral to clinical services to those screening as at-risk for suicide.
- Control group, who were provided with educational posters on suicide.

There were no significant differences between the first three intervention groups and the control group when young people were followed up three months after the start of the project. At 12-month follow up, the YAM group had a lower rate of suicide attempts (0.70%) compared with the control group (1.51%). The YAM group also had lower rates of severe suicidal thoughts compared to the control group. There were no differences between the other interventions and the control group at 12-month follow up.

Take home messages

This study showed evidence for a school-based intervention that was applied to all students, suggesting that universal interventions have some promise. It also demonstrated the effectiveness of interventions with different components. This study suggested that psychoeducation may be more effective than gatekeeper training and screening. The YAM intervention had several different components including workshops,

> “There is a clear need for further development and dissemination of effective youth suicide prevention approaches.

lectures and written content. Finally, the study is one of few large high quality studies in suicide prevention research.

Schilling EA, Aseltine RH, James A. **The SOS suicide prevention program: Further evidence of efficacy and effectiveness.** *Prevention science. 2016;17(2):157-166.*

This cluster randomised controlled trial looked at the impact of the Signs of Suicide (SOS) intervention on a range of factors, including self-reported suicidal ideation, planning and attempts, in ethnically diverse students.[11]

The SOS intervention consisted of a multi-media kit, including a self-assessment questionnaire, DVD, discussion guide and written information regarding signs of depression and suicide, and how to respond. Teachers were given a one-day training session and manualised support to implement the program.

The waitlist control group waited until after the intervention schools had completed the SOS program and all assessments for the study before they then also received the SOS program.

Eight technical schools in Connecticut, in the USA, were randomly assigned to the intervention or control condition. Across these schools 1302 9th grade students started the study and 1052 completed it.

Results showed students receiving the SOS program were 64% less likely to report a suicide attempt in the last three months compared with those in the control condition, although reported suicide planning or ideation was not affected. However, when narrowing comparison to just those students who had previously attempted suicide, receiving the intervention was related to significantly less suicide planning in the previous three months. The intervention also enhanced student's attitudes toward intervening with friends and getting help for themselves if they felt depressed.

Take home messages

Results showed a school-based intervention, delivered by teachers and applied to all students, can reduce suicide attempts, adding to the justification for universal interventions and their effectiveness in standard classroom settings.

It was unclear if the intervention engaged the highest risk students well. Participants in the intervention group who reported a suicide attempt in the previous three months before the study were more likely to drop out than their counterparts in the control condition. For those students who reported a life time history of suicide attempts and who stayed in the study, the effect of the intervention appeared broader than for lower risk students. These higher risk, engaged students reported both reduced suicide attempts and reduced suicide planning. Research looking further into types of interventions that are relevant, engaging and effective for young people across a range of risk levels is needed.

Tang TC, Jou SH, Ko CH, Huang SY, Yen CF. **Randomized study of school-based intensive interpersonal psychotherapy for depressed adolescents with suicidal risk and parasuicide behaviors.** *Psychiatry and Clinical Neurosciences. 2009;63(4):463-470.*

This study was based in Taiwan and investigated a psychological therapy know as Intensive Interpersonal Psychotherapy for depressed adolescents who were at risk for suicide (IPT-A-IN).[12] IPT-A-IN is based on interpersonal therapy, which focusses treatment on interpersonal problems in the domains of interpersonal conflict, interpersonal sensitivity, role transitions and grief. Suicidal thinking and depression are viewed as connected interpersonal problems, and the treatment focusses on targeting one specific problem area per young person.

Seventy-three students aged 12–18 were recruited from schools. They were randomised to receive either:

- IPT-A-IN (35 participants) which comprised two face-to-face 50 minute therapy sessions and one follow up phone call per week for six weeks. Or
- Treatment as Usual (TAU; 38 participants): Which involved counselling one–two times a week for 30-60 minutes over six weeks.

Therapy was delivered by school counsellors and intern counselling psychologists, who had received relevant training.

The study found that those receiving IPT-A-IN had better outcomes than those receiving treatment as usual, in terms of reduced suicidal ideation as well as depression, anxiety and hopelessness. There was no dropout from treatment. The fact that the two therapies had different total numbers of sessions and the difficulties that researchers had in involving families in treatment are limitations of study.

Take home messages

This study demonstrates how psychological therapies that are usually delivered in clinical settings can also be effectively delivered in educational settings. Furthermore, this study showed that, compared to a control treatment, interpersonal therapy was effective in reducing suicidal thoughts. The challenge of involving families is one area that could be addressed in future research. The fact that intern school counsellors were able to be effectively trained in a treatment that impacts on suicidal thoughts is a promising outcome.

Guille C, Zhao Z, Krystal J, Nichols B, Brady K, Sen S. **Web-based cognitive behavioral therapy intervention for the prevention of suicidal ideation in medical interns: a randomized clinical trial.** *JAMA psychiatry. 2015;72(12):1192-1198.*

This study[13] extends our look at suicide prevention interventions in educational settings to tertiary institutions and targets a particularly high risk group of young people, first year medical interns. Doctors are more than 1.5 times likely to die by suicide than the general population and rates are higher for young medical students completing their intern year.[14] The intervention is also of interest as an example of a web-based behavioural therapy intervention.

The MoodGym intervention consisted of four online interactive modules stepping through CBT based cognitive restructuring skills for managing negative thoughts and mood, as well as problem solving.

This was compared with a control condition of four weekly emails containing information on depression, suicidal thinking and local mental health supports designed to engage participants' time and attention but not expected to have a large treatment effect, as it did not contain interactive CBT skill tools. This was important to rule out any placebo effects on participants' mental health that might be associated with being engaged in a research study.

One hundred and ninety-nine students were randomised to the intervention or control group, they were followed up at three monthly intervals for a year following the intervention. Those who received the MoodGym intervention were significantly less likely to report suicidal ideation than those who received the control condition.

Take home messages

Educational settings extend beyond schools, and include tertiary institutions such as universities. Interventions for preventing suicide are not only face to face. Web based interventions also show promise in their potential to engage young people and help reduce suicidal ideation. Given their accessibility and low cost they offer great potential for large scale dissemination.

Where to from here?

Summary of the evidence

Existing research has investigated a number of different approaches to youth suicide prevention that are based in educational settings. There are a number of promising approaches including screening, education and awareness, individual therapy and online interventions.

Perhaps the most promising approach emerging from the evidence is of multi-component interventions that target a broad range of youth and offer a number of different educational and therapeutic responses. There is also evidence building that a small preventive effect can be found following interventions combining screening with psycho-education, and that relatively low intensity delivery methods can work – such as via teachers who have received one-day training or using online platforms. Such interventions meet young people where they are, and are potentially low cost to scale up. This is encouraging in the Australian context where current barriers to reaching at-risk young people include distance, engagement and lack of financial resources.

Perhaps the most promising approach emerging from the evidence is of multi-component interventions

What does this mean for suicide prevention in educational settings?

The volume of research being published is accelerating, with more than double the research on youth suicide prevention published in the past decade compared with the previous one.[9] Yet, the evidence base is still emerging, and caution is required in identifying what approaches might be useful. Nevertheless, existing research suggests that the benefits of intervening outweigh any risks.[15]

Within educational settings the following implications could be drawn:

- Psychoeducation interventions, including those combined with a screening component, have the potential to be effective.
- Both universal interventions that capture all students, and selective / indicated approaches that identify and target 'at-risk' students can have a preventive effects.
- There is some indication that engagement in interventions may vary with degree of risk, and further investigation is required to understand whether different approaches are suited to different levels of risk.
- Interventions may be effectively delivered by a range of professionals using various modalities – for example face to face by mental health clinicians, teacher-led multi-media, web-based CBT self-guided interventions.
- Online and app based interventions are highly acceptable to young people, and show some evidence of effectiveness in reducing suicidal thoughts[16]
- There is some evidence that interventions, like individual psychological therapy, which have been primarily studied in clinical settings, may also have positive impacts in educational settings. Their potential for should not be overlooked, but more research is needed before we can be confident of their usefulness across settings.
- Beyond educational settings, it is important to ensure that high risk youth are receiving the care they need in clinical and community based services.

Questions for future research

There are a number of challenges in suicide research, including ethical issues, and statistical power related challenges associated with suicide being a rare event. Despite these challenges, there are a number of clear paths forward for future research.

- Further studies are needed with under-researched groups that are at increased risk including indigenous youth and same sex attracted and gender diverse youth
- Most educational settings studied are schools, research should also trial interventions in universities and other tertiary settings such as TAFEs.
- There is a need for more co-development and trialling of youth specific interventions – most studies of suicide prevention with young people to date trial interventions developed for adult populations. This fails to take account of different developmental context and does not capitalize on the way young people interact with the health system.
- In multi-component interventions, further work is required to identify parts of the interventions are the 'active ingredients' that are driving effect on suicidal thoughts and behaviours in young people.
- There is a lack of clarity around whether sub-groups of youth might benefit from different types of interventions and whether targeting interventions might yield larger effect sizes.

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Research bulletins are designed so that clinicians and researchers can access an overview of recent research on a specific topic without having to source the primary articles. The implications of the research for clinical practice and opportunities for future research to advance knowledge in the particular topic area are also canvassed.

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