



NATIONAL MENTAL HEALTH RESEARCH STRATEGY

BACKGROUND PAPER: Prevention research (Session 1C)

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Background

Anxiety, depression, suicide and substance misuse are substantial societal health challenges that frequently co-occur, share common risk factors and interact.^{1,2} Almost half of all Australians will experience a diagnosable mental disorder in their lifetime³ with the majority of mental disorders emerging during adolescence.^{4,5} It is estimated that approximately one quarter of Australians aged 15-19 years will currently be experiencing psychological distress.⁶ Suicide rates among young people are at their highest in over a decade, accounting for over one third of all deaths in Australians aged 15-44 years.⁷

The burden of disease of mental disorders is widespread and increasing, interfering with the productivity, ability and development of the individual across social, emotional and cognitive domains.⁸ The burden of substance use and mental disorders now accounts for 1 in every 10 lost years of health globally⁹ and among young people, substance use and mental disorders are the leading causes of disability worldwide.¹⁰ Every year substance and mental disorders conservatively cost the Australian community over \$43 billion.¹¹ This includes \$33.6 billion for mental disorders and \$9.9 billion for substance use disorders.

Despite increases in government spending on mental health in recent years, fewer than 1 in 4 Australians will ever access treatment for their problem¹² and we have not seen the expected gains in mental health at a population level. Effective prevention can significantly reduce disease burden by delaying first onset, halting the development of a disorder, and preventing the onset of co-occurring disorders. Although preventive interventions can be effective and cost-effective,¹³ currently only 1.7% of total health expenditure in Australia is spent on prevention, less than two thirds of all other OECD countries.¹⁴

The case for prevention

For decades, public mental health policies have focussed on protecting, treating, and rehabilitating people already experiencing substance use and mental disorders, with prevention efforts focussed at the tertiary end of the spectrum. Current substance use and mental health treatment is often difficult to access and may be perceived by many to be irrelevant and stigmatising.⁶ Amongst young people, fewer than one in four of those at risk of substance use or mental disorders seek help,^{12,15} and there are unacceptably long delays to seeking treatment, so that by the time a person does reach treatment, their disorder is often well entrenched.¹⁶ In the case of alcohol use disorders, our research has found that in Australia there is a delay of 18 years from first onset of the disorder to seeking treatment.¹⁷ Our research has also estimated that even with the most optimal care delivered, tertiary prevention and treatment efforts would avert <30% of the disease burden.¹⁸ It is therefore imperative that our research efforts focus on improving prevention for these conditions.

Effectiveness of prevention for substance use and mental disorders

The fields of mental health and addiction have faced increasing pressure to evolve, to ensure that policies, practices, and research focus on whole-of-population and whole-of-life approaches, and to involve primary and secondary preventive efforts. The focus, therefore, is being able to stop the onset and progression of mental health conditions as they emerge. Adolescence represents a critical window to equip young people with the skills they need to lead healthy lives and to reduce risk factors and strengthen protective factors for mental and substance use disorders. Multiple risk factors for mental and substance use disorders have been identified, including genetic, individual, family, school, and community factors.^{19,20} As such, prevention strategies are diverse in the risk factors that they aim to address and in the settings in which they are delivered, including family, media, community and school settings.^{19,21}

Schools are an opportune setting in which to implement prevention activities as they provide both the infrastructure to deliver education and the appropriate social and learning environment to attenuate risks. Outside of the family environment, the school is the primary setting within which the development of young people can be shaped. Preventative interventions delivered in schools have the potential to prevent, delay onset, reduce prevalence and reduce the impact of substance use, depression and anxiety at a population level. Recent systematic reviews indicate that universal school-based programs, delivered to all adolescents, regardless of the level of risk, can produce small to moderate reductions in substance use,^{22,23,24} and mental health problems.^{25,26} Specifically, a 2017 review²⁵ found school-based prevention programs to have a small beneficial effect on depressive and anxiety symptoms. However, despite the increase in the number of school-based prevention programs developed over the past two decades, many continue to show modest or no effects, and the uptake of these programs remains low.^{27,28} It is therefore critical that we focus on improving the effectiveness and implementation of prevention programs by recognising the gaps in the current knowledge base.

Gaps and uncertainties

Lack of integrated prevention models

It is well known that anxiety, depression, suicide and substance use frequently co-occur, share common risk factors and interact.^{1,2} This has led to the development of modern dimensional approaches to psychopathology, where an individual's propensity to develop all forms of psychopathology has been summarised in terms of a unidimensional 'p-factor'. The identification of the p-factor offers new conceptualisations for prevention,²⁹ particularly in childhood and early adolescence when causal risks are transdiagnostic and disorders have not yet emerged.³⁰ Despite this, prevention efforts have traditionally focused on single disorders and more research should be done to determine the effect of targeting multiple disorders at a time, including targeting underlying risk. Recent research published in 2020 found a prevention program which targeted multiple disorders (anxiety, depression, and substance use) showed promising results in terms of maximising prevention effects for both mental health and substance use outcomes.³¹

Few programs that meet the needs of remote communities

Those living in regional and remote areas experience unique challenges to receiving care such as poor access, distance from services, cost and cultural barriers. Prevention is even more critical in the context of poor access to treatment. In addition, the risk of suicide rises as distance from a major city increases, with Australians living in remote and very remote areas approximately twice as likely to die from suicide when compared with Australia overall.³² Similarly, rates of daily smoking and alcohol use are higher in regional and remote areas than in major cities, as are rates of methamphetamine use.³³ More often than not, health

prevention and promotion programs do not cater for the unique experiences of young people living in regional areas e.g. greater exposure to risks such as long-distance driving and higher rates of social isolation.

Lack of replication and implementation barriers

Whilst it is clear that prevention can be effective, few programs have demonstrated replicable effects, a critical step prior to widespread dissemination. Replication trials are critical to rule out the possibility that past findings are a result of chance and to determine the generalisability of intervention effects.³⁴ Replication strengthens the empirical foundation of an intervention and is a key criterion for effectiveness in prevention research.^{34,35} Recent attention to the value of replication amidst the 'replication crisis'³⁶ has led to the development of Standards of Evidence, which postulate that prior to broad dissemination, positive findings should be replicated, ideally more than twice.^{34,37} Replication in prevention research serves two main purposes: to rule out the possibility that past findings were a result of chance and to determine the generalisability of intervention effects.³⁴ Despite the clear need for replication in prevention science, few replications have been conducted, particularly when assessing prevention programs for mental health and substance use.³⁸

In addition, due to poor implementation fidelity, programs that prove efficacious in carefully controlled trials are often ineffective when taken to scale.³⁹ Implementation challenges include adaptation of program content and delivery, which can result in the intervention losing its effective components^{39,40,41} and competing resources or priorities.⁴² In the context of school-based prevention, limited resources in terms of time, money and training mean that many schools are often unable to implement evidence-based prevention programs,⁴³ especially those in geographically isolated or low socio-economic areas. Although not a problem only faced in school settings, limited resources can also have implications for the ongoing and sustainable implementation of substance use prevention programs, which can be costly and unachievable for many schools.⁴⁴ Indeed, one of the most significant challenges for the prevention science field is finding efficient methods to facilitate the widespread uptake of evidence-based programs, and ensuring that implementation efforts are sustained over time.^{44,45} Greater emphasis is needed on scale-up efforts that aim to achieve population impacts on important prevention outcomes through high-quality implementation of evidence-based interventions.⁴⁶

Lack of programs that engage parents as well as young people

To increase the efficacy of prevention for mental and substance use disorders, it has been suggested that prevention programs should acknowledge the critical role parents play in healthy adolescent development. One means of achieving this has been to target parents alongside young people, to address risk factors associated with peer, social and family influence.¹⁹ Research has consistently shown that parenting factors play an important role in the development of adolescent mental health⁴⁷ and that parents are key agents of socialisation, especially around initiation of substance use.^{48,49} Despite what many parents think, research also suggests that parents can continue to exert influence over the developmental course of the adolescent years, even when the strong impact of peer influence begins to emerge.⁵⁰ This research suggests that including parent- based components in mental health and substance use prevention is a logical next step in increasing program efficacy.

Challenges

There are a number of challenges and barriers faced by those undertaking research in the field of mental health and substance use prevention among youth. Research conducted within school settings pose several unique challenges as schools are busy environments with competing priorities and often limited resources

as outlined above. In addition, due to the sensitive nature of mental health and substance use prevention, a number of important ethical considerations arise which can be challenging for researchers. These include:

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Informed consent

According to the Australian National Health and Medical Research Council's (NHMRC) *National Statement on Ethical Conduct in Human Research*, a person's consent should "be voluntary, and based on sufficient information and adequate understanding of both the proposed research and the implications of participation in it".⁵¹ Gaining informed consent from young people is challenging, as they may have - as compared to adults - a limited capacity to weigh up the benefits and risks that participation entails, and the risk of coercion from others (such as peers or researchers) may be greater. Generally, for these reasons, ethics committees will require that consent is provided by the child's parent or guardian, with the young person providing additional *assent* or agreement, at the time of data collection

The requirements for obtaining parental consent are ultimately up to the ethics body and/or education boards governing the research and differs depending on the nature of the project and the degree of risk it poses to participants. According to the NHMRC's National Statement,⁵¹ research is classified as '*low risk*' "where the only foreseeable risk is one of discomfort" and as '*negligible risk*' "where there is no foreseeable risk of harm or discomfort; and any foreseeable risk is no more than inconvenience." When research is deemed to be low-risk, *opt-out parental consent* procedures are typically employed. Where there is risk, even if unlikely, that participants will experience more than discomfort (i.e. not low-risk), *opt-in* parental consent procedures are required.

Opt-out consent can protect the interests of the young people involved in research by ensuring that their parent/guardian is aware of the nature and requirements of a research study and is given the opportunity to withdraw their child from the study if they are in anyway uncomfortable with their participation. An opt-out parent consent process is also considered more efficient by schools and reflects pragmatic considerations regarding lack of time and resources to disseminate, collect, and ethically store active consent forms from parents. In contrast, opt-in consent processes typically result in dramatically reduced participation rates and can be detrimental for data collection and meeting study objectives. Furthermore, research indicates that opt-in consent procedures can result in the exclusion of certain demographic and high-risk groups and has the potential to introduce a degree of selection bias into studies of adolescents' substance use and mental health.^{52,53} Finally, although a variety of strategies can be implemented to increase parental consent rates when opt-in consent is required, such as presentation nights and phone calls to seek verbal consent, these activities place greater burden on teachers, school administrators and the researchers.

Assessment and outcome measures

Youth self-report is a commonly used assessment method when conducting research on mental health and substance use in youth samples, due to high feasibility, low cost and good validity.

While there is a common misconception that asking young people about their substance use and mental health may cause harm, there is actually no evidence to support this. On the contrary, previous research suggests that asking participants questions about their alcohol use can result in reduced alcohol consumption, reduced levels of risky drinking and increased risk-reduction behaviours over time.^{54,55}

Similarly, previous research has found no evidence that asking questions about mental health increases distress to participants, instead the evidence suggests that asking these questions can lead to *beneficial* outcomes for participant's mental health.^{56,57}

Opportunities

To prevent substance use and mental illness, a cohesive and integrated approach to is critical; one that; (1) increases the scientific evidence for knowledge of causes and risks of substance use and mental disorders; (2) improves the evidence base for effective prevention by addressing current gaps in knowledge (as outlined above); and (3) effectively and efficiently disseminates effective prevention into practice.

Improving knowledge of causes and risks

Epidemiology is critical to inform an evidence-based approach to prevention, which crosses diagnostic boundaries to improve our understanding of the prevalence and consequences of substance use and mental disorders. To maximise prevention outcomes, it is important that we investigate new models of cause and risk using advances in our understanding of the epidemiology of the onset and development of substance use and mental disorders. These include structured cohort and natural history studies to test hypotheses about which mechanisms or risk factors are most important in the emergence of (or resistance to) risky health behaviours.

Improving the prevention evidence-base

Prevention programs for substance use, depression, and anxiety do exist and their efficacy (and in some cases cost-effectiveness), has been demonstrated in well-designed randomised controlled trials. Despite this and as outlined above, gaps in the knowledge base do exist, and highlight opportunities for the future prevention focused research. These include:

- *Developing integrated prevention models:* As outlined above, existing prevention programs typically target single disorders at one time rather than incorporating a combined approach across disorders. This is despite knowledge that mental health and substance use problems, frequently involve the same risk factors, and often co-occur and interact.¹ To improve efficiency and effectiveness of prevention, there is need for the development and evaluation of integrated approaches which target multiple disorders and shared underlying risk factors to the prevention of anxiety, depression, suicide and substance use in young people.
- *Addressing challenges of rural and remote communities:* People living in rural and remote communities are often faced with unique challenges to receiving care such as poor access to services, distance to services, increased costs and cultural barriers. It is therefore important that future research address the critical need for accessible, evidence-based prevention approaches for mental health and substance use disorders, tailored to the unique needs of young people living outside of major cities.
- *Addressing the need for replication and improved implementation:* Amidst a 'replication crisis' in prevention science, replication trials are critical to rule out the possibility that past findings are a result of chance and to determine the generalisability of intervention effects.³⁴ Future research must address the need for replication trials prior to widespread dissemination of programs that have shown promising effects. In addition, once programs and initiatives have demonstrated effectiveness across multiple evaluations, it is important to focus attention on broad dissemination and sustainable implementation over time. Focusing on innovative, sustainable prevention using new technologies can overcome some of the barriers encountered when implementing traditional or face-to-face

prevention programs. Incorporating eHealth (i.e. internet, computers, tablets, mobile technology, and tele-health) in prevention science affords several advantages, including enhanced engagement, increased anonymity and greater self-disclosure, reduced costs and increased implementation fidelity. Furthermore, prevention activities delivered via eHealth have the potential to enhance translational outcomes and facilitate broad dissemination by improving accessibility, sustainability and scalability.⁵⁸ Importantly, recent systematic reviews suggest that eHealth prevention programs can be effective in reducing substance use^{59,60} and mental health problems,^{61,62} however further research is needed.

- *Engaging parents in evidence-based prevention:* Parents play a critical role in healthy adolescent development, even during the time when the strong impact of peer influence emerges. As such, it is important to acknowledge the influential role parents have on the mental health and life choices of their adolescent. Targeting parents alongside young people has the potential to improve the positive outcomes prevention programs can have in improving one's mental health and reducing the uptake of substances. Future research is needed to address this critical need.

Promote effective transfer of research outcomes into health policy and/or practice

In spite of the available knowledge and access to evidence-based prevention, there is a serious “know-do” gap between what we know works and what is scaled-up and invested in. Prevention programs are notorious for their failed implementation.⁶³ Barriers that hinder the widespread dissemination of interventions include restricted government financing for prevention, lack of training in professional communities, and restricted knowledge of, or support for, prevention in the general public and policy arenas.⁶³ For example, when it comes to school-based prevention, schools themselves decide between available mental health programs, of which there are many, but government funding can significantly influence this decision. The Australian government and many state governments have continued to invest heavily in private programs, in spite of no evidence of positive impact.¹⁸ Lack of proper funding for programs that have been shown to work means that schools may be swayed to make decisions on price more than on effectiveness.

If we have a genuine intent to reduce the significant burden of disease, injury and social costs associated with mental and substance use disorders, it is absolutely imperative that policy makers make the tough decisions to invest in, and up-scale, only those prevention initiatives with a strong evidence base. Initiatives such as the *Positive Choices* portal for drug education and the *BeYou* portal for mental health promotion, provide platforms for educators and practitioners to access up-to-date evidence-based information and resources for the prevention of mental and substance use disorders. Continued investment in, and upkeep of, these portals is critical to ensuring successful translation of effective prevention.

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