WHAT WORKS FOR MENTAL HEALTH IN SPORTING TEAMS?

2ND EDITION

An evidence guide for best practice in mental health promotion and early intervention

orygen

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Disclosure and disclaimer

Orygen acknowledges the Traditional Owners of the lands we are on and pays respect to their Elders past and present. Orygen recognises and respects their cultural heritage, beliefs and relationships to Country, which continue to be important to Aboriginal and Torres Strait Islander people living today.

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EXECUTIVE SUMMARY

Mental health in elite and community sport is being increasingly recognised as important, and something that sporting clubs and organisations need to be aware of and responsive to. Over recent years, there has been a proliferation in the number of programs that aim to support mental health among sportspeople, which creates challenges when determining which program(s) to implement in a given sports setting. In light of this, in 2020, the Australian Football League (AFL) commissioned mental health researchers from Orygen and the University of Melbourne to develop an evidence guide that reviewed available evidence regarding programs designed to support mental health in team-based sports. A comprehensive guide was developed by Orygen's Elite Sport and Mental Health team and provided to the AFL. In 2022, the AFL requested an updated version of the evidence guide, given the rapid increase in research surrounding mental health in sport and development of programs for supporting mental health in sport.

This guide is an updated version of the 2020 evidence guide. It is based on research evidence available on 14th September 2022 (when the updated search was conducted). The guide has been designed to help sporting teams, clubs, and organisations make informed choices about the implementation of mental health programs, based on available evidence about the effectiveness and safety of existing programs.

Throughout this evidence guide, a star rating system has been developed so readers can quickly identify the level of evidence for each program, as supported by currently available research. Programs that are awarded three gold stars have sufficient evidence to be recommended for use. Summaries of each program's aims, design, and research findings are also provided.

Program types included in the evidence guide

Mental health promotion programs can be categorised into either 'prevention programs' or 'intervention programs', based on their targeted outcomes. Prevention programs aim to prevent or reduce the likelihood of developing mental health issues before they arise. Intervention programs try to reduce the level or severity of mental ill health currently being experienced by individuals.

For ease of interpretation, the programs included in this guide have been grouped into meaningful groups based on similar aims, such as mindfulness-based interventions (which aim to strengthen specific mindfulness-related skills, such as grounding and paying attention to the present moment) or Australian mental health awareness programs (which aim to increase knowledge about common mental health issues and reduce mental health stigma).

We note that some programs have been designed for specific members of sporting environments, such as programs intended to be delivered to players (including those specific to junior players) and programs intended to be delivered to coaches. It is also worth acknowledging that – while some programs are suitable for all levels of performance – some programs are designed specifically for elite-level sports, while others have been designed for use in semi-professional and/or community sports.

Summary of research findings

Reviewing available research resulted in identifying three broad categories of mental health support programs in team-based sports: programs for preventing mental health problems, early interventions for mental health symptoms, and programs for coaches who work with junior athletes.

Programs to prevent mental health problems:

The programs aiming to prevent mental health problems that have been included in this review had a range of target outcomes, including increasing awareness about mental ill health and reducing mental health stigma, reducing problematic alcohol consumption, preventing (and/or reducing) problematic gambling behaviour, preventing (and/or reducing) body image disturbance and disordered eating, and preventing post-traumatic stress following trauma exposure.

Only one of the prevention programs included in this rapid evidence review (Ahead of the Game) received a three-star rating (the highest level of evidence). Most of the prevention programs in this review received one star rating, and several had not yet received any scientific evaluation.

Early interventions for mental health symptoms:

This evidence review includes a broad range of early intervention programs for targeting mental health symptoms. Examples of intervention types include cognitive-behaviour therapy-based programs, mindfulness-based interventions, sleep interventions, yoga, and reflective diaries.

At the time of this review, only two approaches – cognitive behavioural therapy and mindfulness-based interventions – have received enough research (in team sport settings) to achieve a three-star rating. The other intervention types included in this review have received little or no research attention in team-based sports.

Programs for coaches who work with junior athletes:

Several studies have reported on programs designed for coaches who work with junior athletes, where these programs aim to develop effective coaching behaviours to support the athletes' mental health and wellbeing. While a small number of studies suggest positive outcomes associated with these programs, additional evaluation studies are needed to strengthen this evidence-base.

Although a growing number of programs are available for supporting mental health in team-based sports, high-quality evidence is only available for a relatively small number of programs. For this reason, it is difficult to determine whether many programs that are currently available are effective in achieving their intended outcomes.

Overall, continued evaluation of mental health programs for team-based sports is required. Based on currently available evidence, future research directions include the need for:

i. Conducting more evaluation studies for programs aiming to prevent mental ill-health among people in team-based sports

ii. More evaluation studies surrounding effective responding to mental ill-health, when this is experienced by individuals in team-based sport settings

iii. Considering how best to implement mental health programs within specific sports contexts, considering possible differences between community, professional, and elite sports, as well as considerations based on gender and cultural factors

iv. Evaluating the mental health programs and interventions that already exist using higher-quality studies.

Conclusion

This evidence guide has been developed in response to the increasing need for sporting clubs and organisations to understand mental health and mental health needs, and provide appropriate mental health supports to athletes and others in the daily training environment. This guide is intended to provide insight into the various different types of mental health programs available, the amount of research available for currently available programs, and the level of the evidence surrounding each program's safety and efficacy in achieving outcomes. While the evidence-base surrounding mental health programs for team-based sports continues to develop, more research remains needed.

ABOUT THIS GUIDE

Mental health challenges are common in our community. If left untreated, mental ill-health may be a significant cause of distress for individuals, families, and communities. Notwithstanding the changes needed in the Australian healthcare system to meet the growing demand for mental health services, sport has an unparalleled influence on the health and wellbeing of individuals and communities.

The importance of mental health in sport is increasingly recognised and understood. This updated rapid evidence guide has been designed to help sporting teams and bodies make **informed choices about the effectiveness and safety of** programs that are designed to promote mental health or to respond to mental health symptoms in team sports. Throughout this guide, available scientific evidence for a range of programs has been appraised and provided with an overall 'level of evidence' rating. The purpose of the guide is to highlight programs that can be used at the whole of team, club or league level (rather than treatments or interventions for individual athletes) to support mental health and wellbeing.

Responding to mental ill-health in elite and community sport – like other areas of health – should be based on the **best-available evidence** to maximise the efficient use of limited resources and to uphold the league or club's duty of care to its members and participants.

This evidence guide aims to assist sporting teams to adopt best-practice in supporting mental health, ultimately leading to better mental health outcomes for athletes and teams.

In preparing this guide, researchers from Orygen and the University of Melbourne systematically searched the available literature to provide the most comprehensive review of programs that (i) promote mental health, (ii) prevent mental ill-health or (iii) provide early intervention for mental health symptoms in groups of athletes (and in some cases, coaches), from the community through to elite and professional sports levels. While each program or intervention may have advocates or supporters, the amount of evidence supporting the effectiveness of the program or intervention can vary greatly. The lead authors (Professor Rosemary Purcell & A/Professor Simon Rice), who are experts in mental health in elite sports, systematically rated the level and quality of the evidence for each program or intervention and provided an overall recommendation, in a rapid-review format.

Note: this guide was commissioned by the AFL to inform its leagues and clubs, however the literature included comes from a range of sports. This guide is therefore applicable to all team-based sports.

WHAT IS 'MENTAL HEALTH'?

Mental health is a state of mental wellbeing that is shaped by our psychological, social and emotional experiences. Our mental health affects how we think, feel, and act. It also helps determine how we respond to stress and adversity, reach our potential, relate to others, and contribute to our communities. Positive mental health and wellbeing encompasses quality of life and the ability of people and communities to thrive, while contributing to the world with a sense of purpose and meaning.

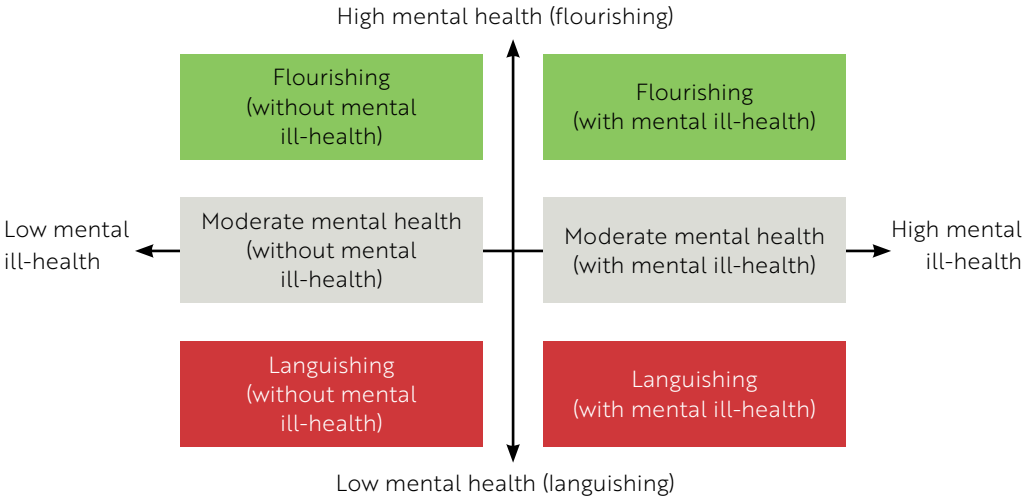
Our mental health is influenced by a range of factors, such as genetics, life experiences, social relationships and how we process or interpret our thoughts and feelings.

In general, 'good' mental health is a state of mind that enables us to be able to cope with the ups and downs of life. Emotions such as sadness, anger, irritability, worry, and anxiety are all normal parts of the human experience. It is when these negative emotions or 'symptoms' persist for weeks or months or have an impact on our day-to-day functioning (e.g., the ability to play sport or to connect with others), that they may be a sign of a mental health condition.

Mental health continuum

Mental health exists on a continuum. A person can be 'mentally fit' and healthy, or may be experiencing a mental health condition, or may be somewhere in between.[1] It is helpful to conceptualise mental health by considering both an individual's *subjective wellbeing and presence/absence of mental health conditions*.[2] A person may experience 'good' subjective mental health (i.e., overall positive mood, life satisfaction, social connection and daily functioning) while living with a mental health condition, or vice versa, they may experience 'poor' subjective mental health (i.e., low mood, poor life satisfaction or difficulty maintaining daily tasks) but not be experiencing a diagnosable mental health disorder.

Figure 1. Continuum of mental health, including subjective mental health and wellbeing (shown on the vertical axis) and the presence/absence of mental health conditions (horizontal axis)

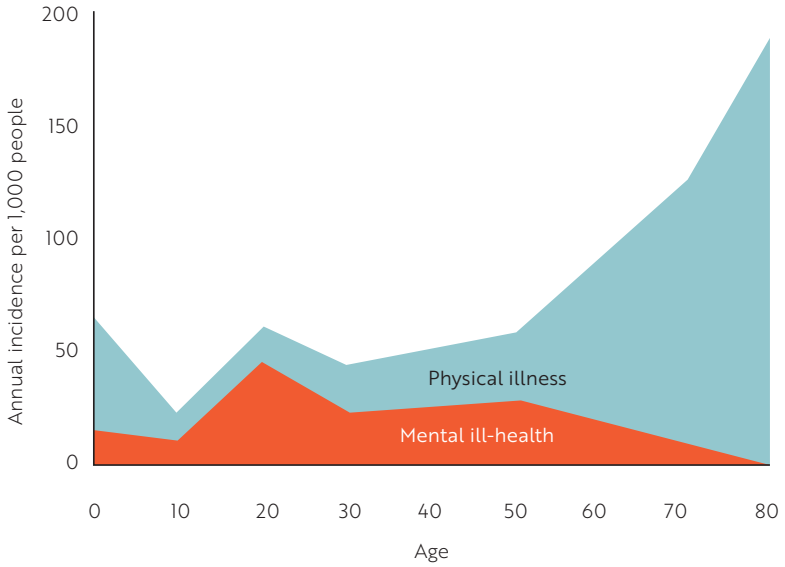


How common are mental health conditions?

Most mental health conditions (around 75%) begin before the age of 25 with anxiety, depression, and problematic substance use (alcohol or other drugs) the most common forms of mental ill-health.

As Figure 1 indicates, the onset of mental health conditions peaks in adolescence and early adulthood and is the most common illness affecting young people (compared to all forms of physical illness, such as cardiovascular disease, cancer, diabetes, etc).

Figure 2. Annual incidence of physical illness and mental ill-health across the lifespan



One in four young Australians (24%) will experience mental ill-health in any year, and almost half the population (45%) will experience a mental health condition in their lifetime.[3]

This means that within community sporting clubs and environments, 1 in 4 people aged 25 years or less – such as players, coaches, and staff/volunteers – will experience mental ill-health.

What are the rates of mental ill-health in elite athletes?

Research summarised by an International Olympic Committee expert panel in mental health shows that currently competing elite athletes report a range of mental health symptoms, including psychological distress, anxiety/depression, performance anxiety, disordered eating, and trouble managing their emotions. The rates of these symptoms vary according to the type of sport and the gender of athletes, but overall, they range from 19% for psychological distress and/or alcohol misuse, through to 34% for anxiety/depression.[4]

Therefore around 1 in 3 professional or elite sportspeople will experience mental health symptoms during their career, even if they haven't spoken about them.5

Less is known about the rates of clinically diagnosed mental health conditions in athletes, but where research does exist (e.g. for generalised anxiety disorder), the rate in elite sports (6%) is double that of the general population (3%).[5]

What are common mental health symptoms or signs?

There are a broad range of mental health conditions, which means that there are also a variety of symptoms of mental ill-health.[6] These signs include:

- Changes in 'typical' mood or personality, such as being more irritable, sad, angry or worried than usual
- Losing interest or pleasure in sport and other things that are usually enjoyed
- Low self-esteem or having a poor self-view
- A drop in performance in sport, including difficulties concentrating or paying attention
- Withdrawing from others, not making contact or going out as much
- Changes in appetite and weight, including weight loss or gain
- Difficulty with sleep (not getting enough or sleeping too much)
- Changes in appearance, such as poor grooming or hygiene (e.g. not showering or shaving)
- Reporting unusual, distressing or troubling thoughts
- Expressing feelings that life is hopeless, or even not worth living.

Some symptoms of mental health conditions cannot be seen (that is, they are not observable). Changes in a person's behaviour or mood over a number of weeks are often key signs that a person is struggling with their mental health.

What's the difference between a mental health symptom and a disorder?

Mental health *symptoms*, such as feeling anxious or down, can be thought of as feelings that many people can experience from time to time. A 'symptom' refers to one feeling (or thought or behaviour). Symptoms tend not to last long (e.g., only a few days) and don't necessarily interfere with your life, even though they may be unpleasant. Mental health symptoms can be self-reported or assessed using things like checklists.

The term 'mental health *conditions*' is used to describe clusters of mental health symptoms that are pervasive and persist despite many efforts to alleviate them. They include symptoms such as sleep disruption, cognitive changes and mood disruption that are experienced for longer periods of time and interfere with your sport/work, relationships and day-to-day living and other areas of functioning. **Mental health disorders can only be diagnosed by a mental health or medical professional**, such as a psychiatrist, psychologist, or a GP, who conducts an interview (or clinical assessment) to understand your symptoms, how severe they are, and what else is going on in your life that may be contributing to your experiences.

Mental health in sport

Professional and elite athletes can experience a range of stressors that may increase the likelihood of their experiencing mental ill-health.[4] These include **sport-related stressors** such as:

- serious physical injury (e.g. concussion, musculoskeletal or limb injury) or multiple injures
- poor performance
- unhelpful perfectionism (e.g. setting unrealistic standards or always needing to be in control)
- competition for selection (and being de-selected or de-listed),
- media scrutiny
- frequent travel

Some sport-related stressors also include the loss of protective factors for mental wellbeing, such as being away from primary support networks during competition times.

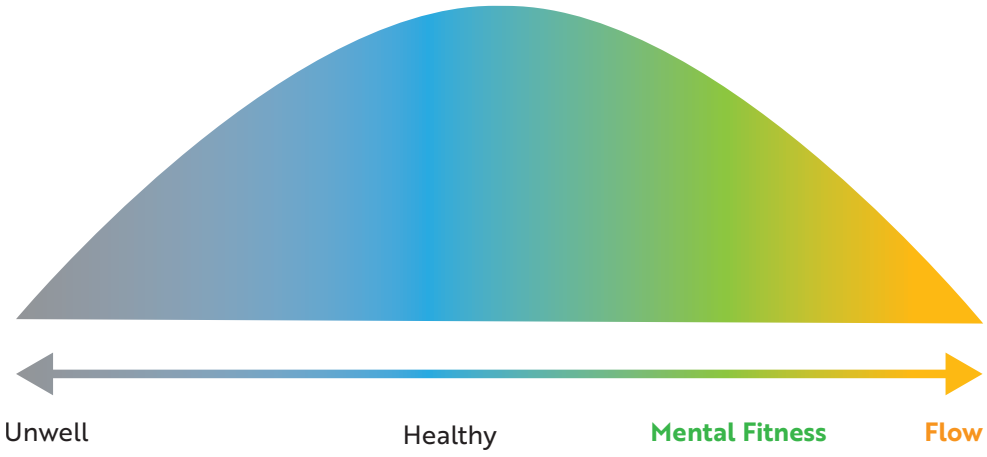
General life stressors (that are not specific to sport) can also affect the mental health of sportspeople, including:

- experiencing stressful or adverse life events, such as illness or death of a loved one, family violence, relationship breakdown, financial pressures
- not having adequate social support
- life transitions (such as changing teams, retirement, birth of a child)
- experiencing discrimination, such as racism, sexism
- experiencing cyber abuse

Mental health, sport, and performance

Mental health and performance can also be thought of as a continuum, with mental health conditions at one end affecting life balance and performance, and optimal mental fitness being associated with 'flow' states (that is, being fully focused on the task at hand, or in 'the zone') states at the other. When athletes can manage life balance and use effective mental strategies to control stress, their chances of reaching their full potential are optimised.

Figure 3. A mental fitness continuum in sport

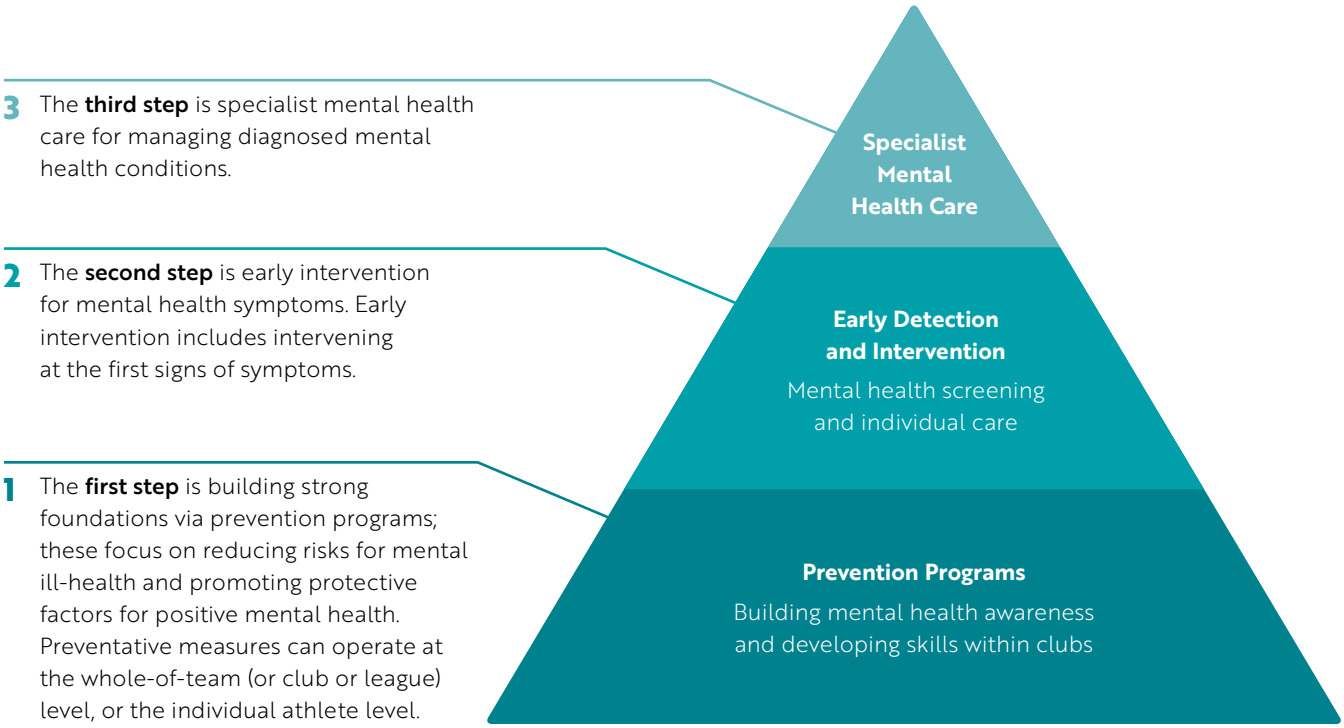


A stepped care approach to mental health interventions

Contemporary approaches to mental health promotion and treatment are commonly framed within a 'stepped care model'. The mental health pyramid is a common representation of the 'stepped' care approach to mental health interventions.

For more details, see each step within Figure 4.

Figure 4. Stepped care approach to mental health interventions



It is worth noting that stepped-care approaches are used in all areas of health, including sports medicine, such as managing knee injuries. In this instance:

- prevention programs seek to reduce injuries via strength and conditioning,
- early detection and intervention seek to identify knee pain or strain as early as possible and respond using rest or physiotherapy, and
- specialist care can involve surgery on a torn ACL

Mental health prevention programs aim to reduce the risk of a community or person experiencing mental ill-health. Prevention involves identifying risks to mental health across all levels of a sport and implementing changes to reduce these risks.

Prevention can take different forms:

Universal prevention	Selective prevention	Indicated prevention
focuses on reducing risk in a 'whole population', such as an entire team or even sports league. Prevention strategies can vary, but examples include ensuring appropriate social media policies to prevent and/or respond to online bullying or harassment, avoiding unnecessarily harsh performance criticism, ensuring schedules meet team members' needs, and/or encouragement to engage meaningfully in non-athletic activities. Prevention programs usually focus on systemic changes that are delivered to everyone, rather than to specific people or groups. Examples include strengthening positive team cultures that promote celebrating successes and strong peer support, and ensuring that risk factors (such as 'win at all costs' mentalities) are reduced.	focuses on targeting people who have 'risk factors' for a mental health condition, but do not yet display symptoms of a mental health condition; for example, athletes who have experienced stressful life events, are having performance problems, or a serious injury. An example of individual-level athlete protective factors include developing adaptive coping strategies that can be used during times of stress or hardship.	focuses on people who not only have risk factors for a mental health condition, but who are also already experiencing symptoms; for example, an athlete who is withdrawing from friends and family and becoming more anxious or irritable than usual, and less able to control their emotions.

A note on prevention programs

It is important to understand that prevention programs are designed to reduce risks and promote protective factors for mental health. They seek to prevent the onset of mental health issues or prevent the worsening of very early signs of mental health symptoms. They are not the same as treatments for mental health conditions.

An example is relaxation or mindfulness techniques: these can be used with a whole team to help players manage performance anxiety. But they are not appropriate as a standalone treatment for an athlete with an anxiety disorder, such as social anxiety disorder, panic disorder, obsessive compulsive disorder or post-traumatic stress disorder. Clinical conditions such as these need a comprehensive (often multidisciplinary) approach that provides effective treatment for the athlete.

Early detection and intervention programs aim to stop mental health symptomsfrom developing into mental health conditions, or to reduce the severity or intensity of symptoms. The key stages are:

Early detection	Early intervention
focuses on identifying as early as possible athletes (or coaches/staff) who are affected by mental health symptoms, so they can be provided with appropriate help as soon as possible. An example is a strength and conditioning coach, or a physiotherapist, who 'detects' that an athlete is suffering from symptoms of an anxiety condition (sleep disruption, muscle tension, anxious thinking, social withdrawal) and refers them to their GP for a mental health care plan or club doctor or mental health professional for assessment.	focuses on providing the most *comprehensive care* when the athlete (or coach/staff) is first diagnosed with a mental health condition. Providing effective, early treatment is likely to prevent worsening of the condition, additional psychosocial harms or comorbid conditions, further episodes of the condition, and can provide 'scaffolding' (support systems) to ensure that the athlete can continue to function in their sport and day-to-day life, while working towards full recovery.

WHO IS BEST EQUIPPED TO DELIVER MENTAL HEALTH PREVENTION OR EARLY INTERVENTION IN SPORT?

The stepped-care approach means that different skill sets, training, experience and qualifications are needed to respond safely and effectively at each level.

Mental health prevention programs

These programs or interventions usually focus on (i) building *protective* factors for optimal mental health and (ii) reducing *risk* factors. Many mental health prevention programs focus on recognising and understanding mental health symptoms and disorders, reducing the stigma associated with mental ill-health and promoting the benefits of seeking help and support. The programs are often referred to as 'mental health awareness' sessions or workshops. The content in these awareness programs should be developed and delivered by people (or organisations) who are appropriately qualified or accredited; for example, qualified mental health professionals, or people who have undergone certified training to deliver mental health first aid, or similar programs.

Former athletes with their own experience of mental health challenges are important to contribute to the understanding of a lived perspective of mental health challenges for athletes or sportspeople. For example, by discussing their personal experiences, former athletes can provide genuine insight into their journey and lived experience of mental health and the contributing factors that are unique to the sporting industry. They also act as powerful role models to destigmatise mental health conditions and promote seeking help. It is important for athletes sharing their lived experience of mental ill-health follow safe storytelling principles (see the **AFL's Safe Storytelling Guide**).

Ideally, mental health prevention programs should be co-delivered by a mental health professional and someone with a lived experience.

Unless a past athlete has obtained accreditation as a mental health professional, it may cause harm if they give advice on how to manage or treat mental health conditions. Mental health conditions are complex, have many causes and require individualised treatments. Advice from someone who is not a health professional may result in worsened symptoms and have other harmful consequences.

Early detection and intervention programs

These programs seek to reduce emerging or existing mental health symptoms or disorders. Since this involves working with athletes who are experiencing mental health symptoms, these programs should be delivered by credentialed and qualified mental health professionals. This can include psychiatrists and psychologists, as well as mental health trained nurses, occupational therapists or social workers. Sports medicine professionals, such as sports physicians, general practitioners, physiotherapists or nutritionists, also have an important role to play in detecting emerging mental health problems and referring players experiencing these problems to mental health professionals.

To be a registered health professional or credentialed mental health provider means meeting standards of education, training, supervised practice, professional development, and ethical and professional conduct. In Australia, most health professionals are registered with the Australian Health Practitioner Registration Agency (AHPRA). You can search for the qualifications of registered Australian health professionals using **AHPRA's online register**.

While social workers are not part of AHPRA, if they qualify for the Australian Association of Social Workers membership and have demonstrated experience in the field of mental health, this is viewed as the gold standard for the profession.

A note on mental health literacy and mental health awareness programs

Mental health *awareness* typically refers to the level of understanding about the prevalence of mental health challenges, and aims to reduce stigma about mental ill-health.

Mental health *literacy* refers to peoples' level of knowledge, understanding, and skills surrounding mental health, which can promote mental health help-seeking and reduce the negative impacts of mental ill-health. Mental health literacy programs often aim to improve peoples' recognition and management of mental health symptoms when these are experienced.

Specialist mental health care

Only a minority of members in the general community, and athletes, are likely to need specialist mental health care to manage mental health conditions. Specialist care should be provided by a multidisciplinary team and may include a psychiatrist, clinical psychologist, addiction specialist, or family therapist, including experts within these fields (such as those who specialise in working with bipolar disorder, schizophrenia, or eating disorders, for example).

An important note on 'wellbeing consultants', 'wellness coaches' 'counsellors', 'mindset experts' and others...

It's important to understand that anyone can call themselves the following without appropriate accreditation or mental health training:

- a counsellor,
- a mental wellbeing, or mental health consultant,
- a wellness or mental wellness coach or consultant,
- a psychotherapist or a neuro-psychotherapist
- a healer,
- a mindset coach or consultant,
- or any other type of 'expert' or 'specialist' in athlete mental health and/or wellbeing

Always ask for the following information from someone providing mental health workshops or programs:

1. What are your qualifications in relation to mental health and/or wellbeing? (for example, what degree or course did they complete and what institution was the provider? The **Tertiary Education Quality and Standards Agency website** provides details of the standards of all Australian tertiary education providers)
2. Are you registered with the Australian Health Practitioner Regulation Agency (AHPRA) or a professional society? If yes, which one? (you should be able to search for the person and their qualifications on the **AHPRA website**);
3. What professional training do you have in mental health and/or wellbeing? Ask for specific details on the course, including who provided it, how long it was (e.g., 1 hour or 1,500 hours) and how the course was assessed.

A note on cultural healers and social and emotional wellbeing workers

Cultural healers and social and emotional wellbeing workers are individuals with expertise in healing practices and important factors that contribute to Aboriginal and Torres Strait Islander peoples' mental health and wellbeing.

These individuals provide important cultural wisdom regarding protective factors for mental health and social and emotional wellbeing that is often not readily adopted in western healthcare frameworks (e.g., promoting connection to Country, community, and elders).

While cultural healers and social and emotional wellbeing workers may not hold the same qualifications as outlined above (e.g., AHPRA registration), their cultural competence and expertise is invaluable, particularly for Aboriginal and Torres Strait Islander peoples.

A note on neuroscience

It's important to critically appraise the evidence on which mental health prevention and treatment programs are based. For example, some programs may indicate that they are based on neuroscience. This refers to the specific study of the structure and/or the function of the nervous system and the brain and can involve studies that have used a range of cognitive tests or brain imaging techniques.

Programs that refer to the use of neuroscience should be able to demonstrate the scientific basis for the claim, such as research papers that have been published in peer-reviewed journals. Programs that cannot demonstrate their neuroscientific basis should be approached with caution, as the term may be being used to convey a highly scientific, innovative or cutting-edge approach that is not supported by evidence. This may increase the risk of the program being ineffective or worse, harmful to participants.

As with any mental health intervention, ask questions to establish the evidence-base for claims regarding neuroscience. If high-quality evidence can't be provided (i.e., evidence that has been reviewed, not expert opinion), then this should be a warning that it may be more pseudo-science than neuroscience.

THE CURRENT EVIDENCE GUIDE

HOW WAS THIS EVIDENCE GUIDE DEVELOPED?

How was the literature searched?

The evidence used to create this guide includes both peer-reviewed literature and 'grey' literature. Peer-reviewed articles are written by researchers who have conducted a study, and then reviewed by other experts in the field before the article is accepted for publication to ensure their quality and scientific rigour. In order to find relevant peer-reviewed literature we searched multiple databases, including the Cochrane Library, PubMed, PsycINFO, SPORTDiscus and Web of Science.

'Grey' literature is less formal and is not subjected to peer review. It includes documents like unpublished theses/ dissertations, conference presentations, government reports, magazine articles, and websites. We used a variety of methods to collect relevant grey literature. Firstly, we searched the database OpenGrey. Then we conducted a targeted search of the websites of a range of sporting bodies within Australia and overseas. Finally, we searched the websites of known programs that are provided for sportspeople in Australia. All Australian programs were approached to provide findings regarding evaluations of their programs.

Studies that are peer-reviewed, or evaluations that are conducted independently are considered to be of higher quality evidence than evaluations that have been conducted by the organisation who developed or is running the program, since they have a vested interest in the program that may run the risk of bias.

What type of programs and studies were included?

Studies were included as evidence for this guide if they included a description of a program that has been implemented with the aim of improving the mental health awareness or mental wellbeing of athletes or sports personnel (e.g. coaches, other staff or officials). We excluded proposed intervention programs that have never been put into practice.

Since the purpose of this guide is to highlight programs that lead to sustained and generalised mental health benefits, we excluded studies that focused exclusively on athletes' emotional states during sporting events (e.g., performance or 'state' anxiety). Furthermore, we only reviewed programs that have been implemented in groups of athletes or players, or in team settings, rather than interventions that are delivered to an individual (or one-on-one). We used this approach, given the focus here is on prevention and early intervention programs to be implemented in clubs or leagues (rather than specialist mental health interventions for individuals).

The review included both Australian and international research and literature. However, we only included papers that were available in English. No restrictions were imposed with regards to when the research was conducted and published, or the age of the athletes who took part in the study.

How has the evidence been listed?

Programs have been listed according to the level of evidence for their effectiveness, presenting the 'high quality' studies first, then the rest in alphabetical order. Research evidence can be grouped into levels that reflect its strength or trustworthiness. Research that involves a 'randomised controlled trial' (RCT) is generally considered to be high quality, because the participants have been randomly assigned to either the intervention group or a control group that does not receive the intervention. Random assignment means that the chance of introducing any bias into the groups is minimised: for example, if all athletes with high performance were assigned to one group, and all the athletes with poor performance to the other group, this would likely end up influencing the results. Randomly assigning people to groups helps to lessen this risk.

Other types of research include 'pre-post studies', where all the participants complete measures on their mental health before and after an intervention, and the results are compared. These types of studies do not involve a control group, so it's not possible to conclude whether the same results might have been found without the intervention. This is considered a lower quality study. Similarly, research that involves 'case studies' examine several people who have the same mental health conditions and receive the same intervention. This type of research is also considered lower quality because the findings might not 'translate' beyond the few people included in the study.

How were the reviews for each program/intervention written?

Each review was written by one of the authors who evaluated the research evidence. Where high levels of evidence for the program or intervention were available (e.g. an RCT), these were included in the review and lower-levels of evidence were not included. When an RCT wasn't available, the next level of evidence was used (such as an intervention and control group study without random allocation, or a pre-post study). The authors all agreed (or reached consensus on) the rating provided for each intervention.

What's new in the 2nd Edition update?

Since the resource was originally prepared in 2020, there has been significant growth in mental health awareness programs (see **Australian Mental Health Awareness Programs** section). The primary aims of these programs are to develop better recognition of common mental health symptoms (e.g., depression and anxiety symptoms), highlight avenues for help-seeking and reduce mental health stigma. While the investment into these programs is encouraging, it is important to recognise that mental health awareness is usually one part of a broader mental health strategy. It is crucial that – in addition to focusing on mental health knowledge and awareness – sports organisations also seek to actively prevent mental ill-health among players and others within their sport settings, for example, by seeking to remove risk factors for mental ill-health, such as harassment, abuse or discrimination, and actively promoting protective factors, such positive communication styles and respectful relationships.

Many of the mental health awareness programs designed to be used in team sports have not yet been evaluated. Where evaluations do exist, many have used weak designs (such as not including a control group). Developing more mental health awareness programs in sport isn't currently warranted. Instead, there should be greater focus and effort spent on evaluating existing programs, using best-practice approaches of randomly assigning participants to a 'control' or 'intervention' condition, and comparing groups across timepoints to assess immediate and longer-term impacts of the programs.

In this 2nd Edition, the increasing investment into, and focus on mindfulness programs in sports settings is apparent. Most of this research has focused on managing stress, anxiety and 'flow', with mostly positive (though some mixed) results. It's important for sports organisations to consider which mental health symptoms they are seeking to target or manage when considering which programs to implement. Mindfulness is a helpful strategy for sports seeking to reduce players' stress and anxiety, but there is limited evidence that it's effective for managing other forms of anxiety such as PTSD or OCD in sporting contexts.

Based on the updated evidence base, future directions for programs/interventions to support mental health in team-based settings include:

- **conducting more evaluation studies for programs aiming to prevent mental ill-health among people in team-based sports**
- **more evaluation studies surrounding effective responding to mental ill-health, when this is experienced by individuals in team-based sport settings considering how best to implement programs/interventions within specific sports contexts (including differences between community and professional sports, gender differences or cultural differences)**
- **evaluating the mental health programs and interventions that already exist using higher-quality studies**

HOW TO USE THIS GUIDE

This rapid evidence guide summarises available evidence for a wide range of programs and interventions that have been developed for – or used in – groups of athletes (or coaches) for supporting mental health. The reviews in this guide have been listed according to the **stepped care pyramid**, starting with prevention programs, then early intervention programs. Brief descriptions of the programs/interventions have been provided, with an overall 'evidence rating' based on the level and quality of evidence available at the time of this review (December 2022). Within each section, the interventions are presented in order of the strongest to weakest level of evidence.

What is 'best available evidence'? How do I know what to trust when there's so much information out there?

The best evidence comes from research studies that use a scientific – or step-by-step – approach to establishing facts and reaching conclusions. An example is research that (a) collects 'baseline' information on mental health symptoms (that is, before trying an intervention), (b) then provides a program, treatment, or intervention, and then (c) assesses the symptoms again at the end of the intervention to evaluate change and the potential impact of the program. The 'best evidence' usually involves:

- a large sample of athletes, because you don't want to draw conclusions based on only a couple of people, especially if they don't represent the whole group or team;
- valid measurements for the outcomes that you're interested in, because you don't want to draw conclusions when you can't be sure that the outcome – such as levels of anxiety or depression – has been measured properly. For example, a measure that has been shown to be reliable in detecting anxiety symptoms is better than just asking athletes how they feel, because many may not know what the symptoms of anxiety are;
- the use of both a 'treatment/intervention' group and a control group, because without a control group who don't receive the intervention, you won't be able to tell whether it was the intervention that made a difference or something else. For example, athletes' mental health might have improved simply with time, but you can't tell this without a control (or comparison) group.

All good scientific research sets out to answer a question in a systematic way, which means that anyone else could use the same approach in their own club or sport to answer the same question. Anything that doesn't fulfil this basic definition is typically classified as "expert opinion", testimonials or anecdotal evidence. Using 'expert opinion' or testimonials from influential people as the only basis to make decisions is a problem, because the expert might use techniques that don't have good evidence, or the testimonial might not be independent. Expert opinion and testimonials can often sound very convincing, but you always have to ask "what's the evidence for that?" "how can you prove to me that this works?".

Guiding questions

This guide is intended to be used flexibly. There are no definitive answers about a 'right' or single program/intervention that will be the most appropriate choice for *every* team, club and/or sport. It is important to note that these programs/interventions should represent *part* of a team, club, or league's broader mental health strategy, in addition to other strategies, such as offering pathways to mental health clinicians, wellbeing support workers or volunteers embedded within the sport setting, encouraging open conversations about mental health, and more.

Decisions about which programs/interventions to implement should be made based on a range of considerations and contextual factors. Different sporting clubs are likely to have different mental health program needs, given differences in club cultures, histories, relationships, and demographics of club members.

When determining which programs/interventions may be suitable for a particular sports setting, readers are encouraged to consider the following questions:

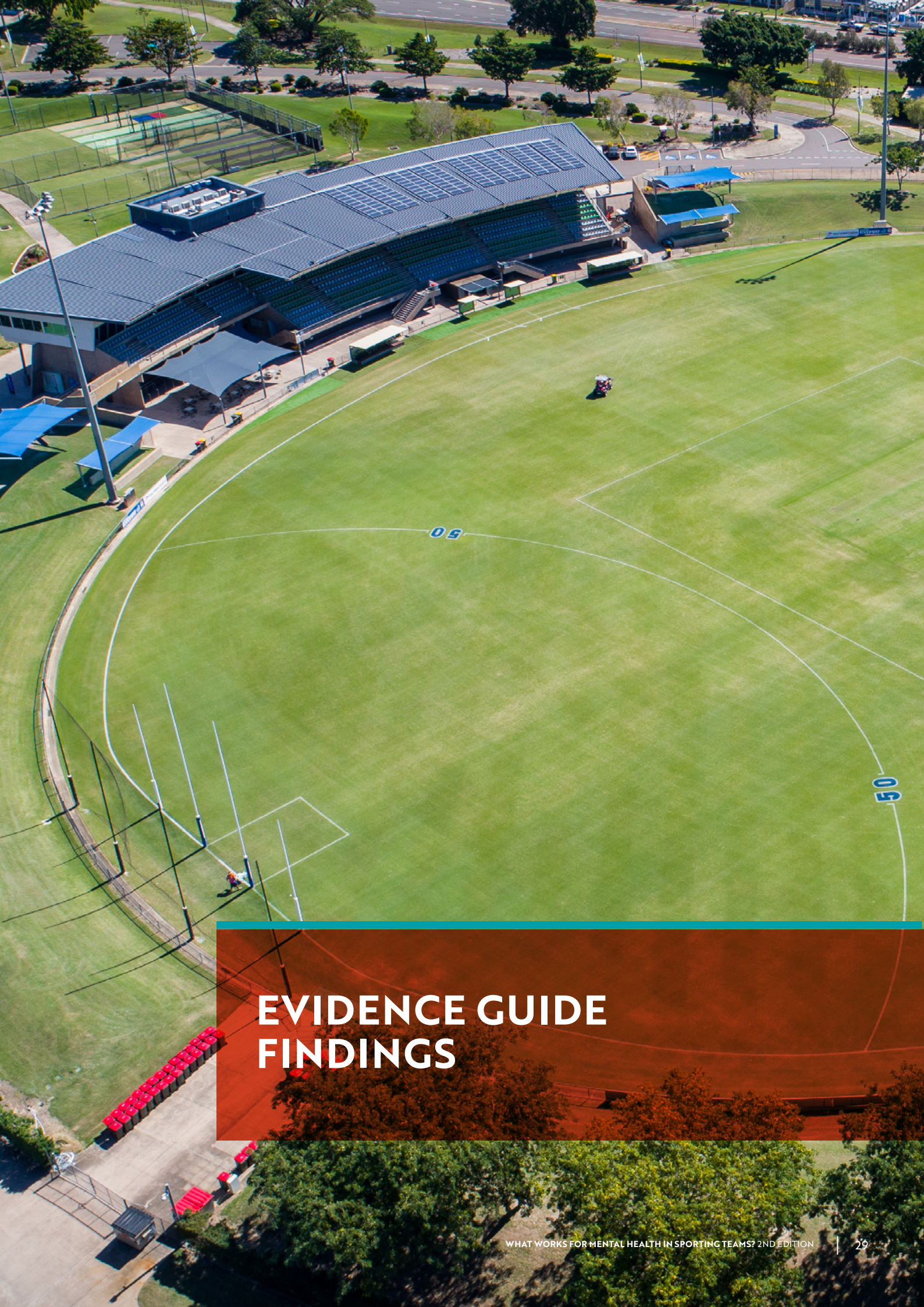
Broad questions	Guiding questions	Specific questions and considerations
WHAT?	What are the intended outcomes of the program/intervention?	What do you hope will change as a result of delivering the program/intervention? Intended outcomes may include increasing awareness of common mental health symptoms and where/how to seek help, reducing mental health stigma, or reducing the rates or severity of specific mental health symptoms, such as depression, anxiety, disordered eating. Considering the current mental health issues among individuals within your sports setting, as well as important cultural factors, may be helpful when considering which outcomes would be most helpful to target.
	What mental health strategies have been implemented previously in our sports setting?	What – if anything - have players, coaches and others already received in terms of mental health promotion material? Will programs be repeating similar information or presenting new information? How have people responded to other mental health programs/interventions that have been previously delivered?
WHY?	Why have we selected this program?	Why is this the right option for our sports setting? What does this program offer that other programs do not? What's the evidence that makes us confident that this is the program we need?
HOW?	How does the program/intervention support mental health outcomes?	How does the program/intervention work? For example, some programs aim to target mental health awareness and promote early help-seeking if/when mental health problems arise, while others aim to promote protective factors such as resilience or mental toughness. It can be helpful to consider exactly what this program will deliver to decide it's likelihood of working.
	How much resourcing will be required to deliver the program/intervention?	Considering resourcing demands includes being aware of the program's delivery format, how long it takes for the program to be delivered, specific requirements (e.g., equipment, venue space), the number of people who will receive the program/intervention and the program cost.
	How will you know whether the program has been successful?	What information do you need to collect to understand whether the program/intervention was useful and achieved your aims? This could involve debriefing discussions within your sports setting or data collection in the form of pre and post program surveys or interviews. Surveys can assess relevant outcomes (e.g., mental health knowledge or mental health symptoms) and/or evaluation information, such as satisfaction with the program content, and perceptions about the program facilitators, etc.

Broad questions	Guiding questions	Specific questions and considerations
WHEN?	When is a suitable time to deliver the program?	How long will it take to deliver the program/intervention? Are there any competing demands to consider during the program delivery period, and will these demands affect everyone who receives the program in the same way (will some people miss out due to travel, or injury rehabilitation)? Have people within the sports setting recently received similar programs/interventions?
WHERE?	Will participants be able to attend the program/ intervention face-to-face or will online/remote delivery be required?	It is worth considering that programs delivered online/ remotely can present challenges with engagement, particularly if group discussion and interaction is required. In some cases, remote delivery may not be appropriate (e.g., if the program addresses issues related to shared traumatic experiences within the sports setting). This should be determined on a case-by-case basis.
	Is there an appropriate space to facilitate the program/intervention?	Are there any requirements in terms of ensuring appropriate venue space, including any accessibility requirements?
WHO?	Who will deliver the program?	Sporting organisations must consider the credentials and experience of the individual(s) delivering the program/ intervention. The person delivering a program/intervention can have significant impacts on how the content is delivered, the effectiveness of the program/intervention and participants' engagement with the content. Ideally, individuals delivering mental health programs in sports settings are: • well-suited to the sporting context and the goals of the program/intervention (e.g. for programs/interventions focusing on cultural safety and wellbeing, facilitators should ideally hold cultural legitimacy and be informed by their own lived experience) • have appropriate skills and experience as facilitators and have experience in safely discussing mental ill-health and managing psychological distress (where possible, this can be supported by using facilitators who are trained as mental health professionals, such as registered psychologists, clinical psychologists, mental health social workers, sports psychologists, etc.) • have sufficient knowledge about sporting environments, including the pressures experienced by sportspeople and the complexities that can be associated with discussing mental health in sports settings (e.g., concerns about impacts on selection, confidentiality concerns). If these details are not readily available at first glance, it's helpful to ask for this information (also see **who is best equipped to deliver mental health prevention or early intervention in sport?**)
	Who will receive the program?	It may be useful to consider the context of your sports setting – for example, what do the demographics of the players look like (e.g., gender, age, levels of experience within sport, cultural backgrounds). Are there particular groups for whom this program has more or less relevance, or any particular groups you are aware of who have increased mental health needs? You may also wish to consider whether there are any specific issues within your team, club or even the sport more broadly that are worth considering (for example, relationship issues within your setting, experiences of racism or discrimination).

By considering the list above, it should become clear that decisions about implementing mental health programs/ interventions involve considering not only which program(s) are suitable to your specific setting but also the importance of considering how the program(s) will be delivered.

Rating system for included programs and interventions

★★★	There is evidence from at least 2 high-quality studies that the intervention works in team-based sports and can be recommended for use.
★	There is evidence from at least one good quality study that the program/intervention has promise in sports. Based on early evidence, the program/intervention can be tentatively recommended but more research is needed to support these research findings.
☆	There is emerging, but low quality, evidence for the effectiveness of this program/intervention in team-based sports. More research is needed for the program/intervention to be recommended.
?	There is no evidence that this intervention works in sports. Based on the lack of available evidence, the program/intervention can not yet be recommended for use.
✕	There is evidence that this intervention does not work in sports. Based on currently available evidence, the program/intervention cannot be recommended.
✓	There is evidence the intervention works in the general community (i.e. in studies from non-sporting contexts). Note: where applicable, this rating is shown alongside a rating for the level of evidence based on studies from team-based sports.
⚠	The treatment has the potential to cause psychological injury, or has potential risks or side-effects. The program/intervention is not recommended for use in team-based sports.

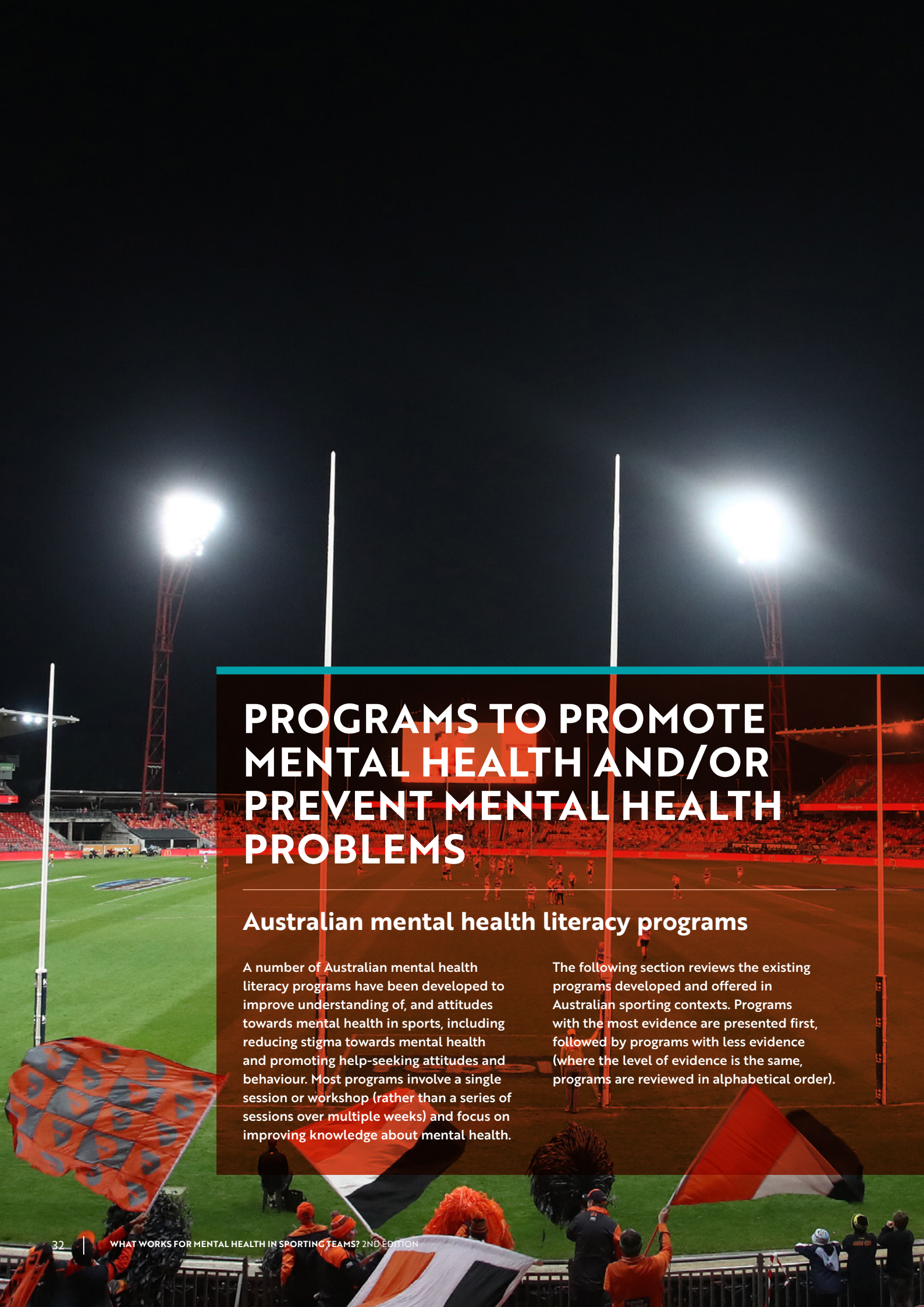


EVIDENCE GUIDE FINDINGS

A SUMMARY OF WHAT WORKS FOR RESPONDING TO MENTAL HEALTH IN TEAM-BASED SPORTS

PROGRAMS TO PREVENT MENTAL HEALTH PROBLEMS			
	Rating		Rating
Australian mental health literacy programs			
Ahead of the Game	★★★	Changing Rooms	?
Mental Health in Sport	★	Growing with Gratitude	?
Read the Play	★	Hard Cuddles	?
Tackle Your Feelings	★	Love Me Love You	?
Alive and Kicking Goals	☆	Navigating Mental Health in Sport	?
Mental Health First Aid	☆	Play By The Rules	?
Outside the Locker Room	☆	The Resilience Project	?
RISE	☆	Sport and Life Training	?
Bouncing Back	?	State of Mind Sport	?
International Prevention Programs			
Flourishing Footballers			☆
Psychoeducation			★
Leadership programs			★
Programs for preventing/reducing problematic alcohol consumption			
The Good Sports Program	★	Individual-level alcohol reduction programs	☆
Other club-level alcohol reduction programs	☆		

Programs for preventing problematic eating habits or body image disturbance			
Structured peer-led psychoeducation programs	★		
Programs for preventing/reducing problematic gambling	★		
Programs for preventing posttraumatic stress disorder	☆		
EARLY INTERVENTIONS FOR MENTAL HEALTH SYMPTOMS			
	Rating		Rating
Cognitive behaviour therapy	★★★	Yoga	★
Mindfulness-based interventions	★★★	Audio-visual stimulation training	☆
Acupuncture	★	Autogenic training	☆
Psychological skills training	★	Positive psychology interventions	☆
Recovery garments	★	Reflective diaries	☆
Sleep interventions	★	Person-centred psychotherapy	✕
PROGRAMS FOR COACHES WHO WORK WITH JUNIOR ATHLETES			
Communication-based interventions	★	Stress-inoculation training	☆
Self-determination theory-based interventions	★		
PROGRAMS FOR INCREASING MENTAL TOUGHNESS			
Non-pressurised mental toughness training	★	Pressurised mental toughness training	⚠
PROGRAMS FOR SUPPORTING ATHLETE MENTAL HEALTH DURING MAJOR CAREER TRANSITIONS			
Programs for retiring athletes to manage the mental health impacts of transition out of sport	?	Programs for youth athletes to manage the mental health impacts of transitioning into elite sport	★



PROGRAMS TO PROMOTE MENTAL HEALTH AND/OR PREVENT MENTAL HEALTH PROBLEMS

Australian mental health literacy programs

A number of Australian mental health literacy programs have been developed to improve understanding of, and attitudes towards mental health in sports, including reducing stigma towards mental health and promoting help-seeking attitudes and behaviour. Most programs involve a single session or workshop (rather than a series of sessions over multiple weeks) and focus on improving knowledge about mental health.

The following section reviews the existing programs developed and offered in Australian sporting contexts. Programs with the most evidence are presented first, followed by programs with less evidence (where the level of evidence is the same, programs are reviewed in alphabetical order).

Evidence in sport

★★★

Ahead of the Game

Ahead of the Game focuses on enhancing mental health literacy and encouraging athletes, parents and coaches to talk about mental health.[7] Program facilitators work alongside sports organisations to improve the mental health and resilience of adolescent players. Several single session workshops (approximately one hour) are offered, where programs are tailored to players, parents and coaches. Ahead of the Game programs are delivered at sports clubs before or after regular training sessions and delivered within teams.

Programs for players include a 1-hour educational workshop called 'Help Out a Mate' and 'Your Path to Success in Sport' or 'The Challenge'. The 'Help Out a Mate' program focuses on increasing understanding of common mental health issues, recognising signs that a friend or teammate could be struggling with mental ill-health, and building skills to initiate a conversation to help a friend access appropriate support. 'Your Path to Success in Sport' (and a subsequent version 'The Challenge') is tailored to younger players and is based on sport psychology principles. The 1-hour workshop is designed to teach coping strategies and increase resilience and is followed by self-directed online modules.

The program for coaches, 'Got Your Back', focuses on developing greater understanding of players' mental health among coaches, with an emphasis on upskilling coaches in recognising and responding to players' mental ill-health.

The program for parents of young players ('Number 1 Supporter') is a 1-hour workshop on adolescent mental health, including recognising warning signs for mental health conditions, talking about mental health with their child and appropriate sources of support and professional care.

Is there evidence it works?

At least three high-quality studies have examined the effectiveness of Ahead of the Game programs.

The first study[8] randomly assigned nine junior soccer teams (102 male adolescent players) to either the Help Out a Mate (HOAM) program or to 'waitlist control' group (where the players were provided the program at the end of the study). The 45-minute 'Help Out a Mate' workshop was delivered by volunteer student facilitators. Compared to the control group, immediately after the workshop, the HOAM group reported increased knowledge about depression and anxiety symptoms, decreased stigma, and greater intentions to provide help to a friend who may be experiencing mental health difficulties (but the program did not improve participants' *personal* help-seeking intentions or levels of psychological distress). However, one month after the workshop, only decreased mental health stigma and improvements in knowledge about anxiety were maintained.

The data from this study was subsequently re-analysed [9] and found that signs of mental health stigma in the HOAM group improved following the workshop and were maintained at one-month follow-up. However, this study also found no evidence for improvements in help-seeking attitudes or intentions in the HOAM group, compared to the control group.

Another study[10] compared 350 adolescent male athletes who received the HOAM and 'Your Path to Success in Sport' programs to a control group of 466 young male athletes who did not receive the programs. All young athletes played within community-based, organised sporting clubs, including soccer, Australian Rules football, tennis, rugby, basketball and other sports. The results showed that athletes in the intervention group reported an increase in their mental health literacy, help-seeking intentions and resilience one-month after the programs were delivered compared to the control group. However, there were no differences between the groups in relation to stigmatising attitudes to mental health, perceptions of family support, or psychological distress. While this study had a large sample size, the participants were not randomly allocated to the groups, which reduces the quality of this study.

Another study compared AOTG delivered to 343 males aged 12-17 from a range of community-based sports to 273 males who attended their usual sport practices[11]. Thirteen outcomes were assessed in 5 domains: mental health (e.g., psychological distress), resilience and protective factors (e.g., perceived familiar support), mental health literacy (e.g., depression literacy,

anxiety literacy), help-seeking intentions (e.g., intentions to seek informal and formal support) and sport-based mental health (e.g., athlete burnout). Results showed that the AOTG group reported significant improvements in all five domains, including 10 of 13 outcomes (wellbeing, resilience, adaptive beliefs for dealing with problems, familial support, social distance, confidence seeking mental health information, depression literacy, anxiety literacy, intention to seek formal help, and athlete burnout).

The experiences of parents who attended the AOTG program for parents was examined in another, lower-quality study.[12] In this qualitative study, 17 parents (13 mothers, 4 fathers) participated in semi-structured interviews one month after the workshop was delivered. Participants reported that the program had improved their knowledge about mental health and help-seeking options, as well as fostering greater confidence and preparedness to communicate with their child about mental health and to assist if their child experienced mental ill-health. This is a lower-quality study since participants self-selected to take part (rather than being randomly selected) and therefore their responses may be biased.

Are there any risks?

No potential risks have been identified.

Summary

There is increasing evidence that the programs provided by Ahead of the Game are effective for improving mental health awareness and attitudes in young male players. Studies conducted to date suggest that Ahead of the Game programs may be effective for some outcomes (e.g., reducing mental health stigma), **although findings have been mixed regarding the program's impacts on help-seeking intentions and behaviours**. However the effectiveness of the programs in adolescent *female* players remains unknown. More high-quality research is also needed to increase confidence in the effectiveness of 'Your Path to Success in Sport' and 'The Challenge'.

Evidence in sport

★

Mental Health in Sport

Mental Health in Sport (MHS) is a 4-hour group workshop designed for coaches and other support staff working with elite athletes in Australia. The program aims to increase the participants' mental health literacy and teach them how recognise signs that an athlete may be experiencing mental health challenges. Participants are also taught how to support athletes to access professional help when required. The workshop was developed and is delivered by registered psychologists (including from the Australian Institute of Sport) and consists of lectures, videos, facilitated group discussions, case studies and role-plays.

Is there evidence it works?

One good quality study has evaluated the MHS program.[13] The participants were 166 coaches and support staff working with Australian elite athletes. The participants were allocated to the MHS program or to a waitlist control group based on their location (rather than being randomly assigned). Participants completed baseline and post training measures of knowledge of the signs of depression and anxiety, as their levels of confidence in helping someone with a mental health problem. The results showed that the MHS workshop group reported improved knowledge about depression and anxiety, and increased confidence in their ability to support athletes with mental health difficulties, compared to the control group.

Are there any risks?

None that are known.

Summary

There is promising evidence from one study that the MHS program builds mental health awareness and confidence in coaching and high performance/elite sport support staff. However more research is needed to be confident of this result and to determine whether the benefits of the program are sustained (i.e. do participants continue to feel confident in their ability to assist athletes weeks or months after the training) and whether the program actually improves the *level of support provided to athletes* by coaches and other staff.

Evidence in sport

Read the Play

Read the Play (RTP) is a mental health literacy program designed for junior levels of sporting clubs (athletes usually aged between 14-16 years).[14] RTP delivers mental health information to young people using interactive games and discussions that are delivered at their sporting club. RTP is delivered by an accredited mental health professional and the program also involves incorporating a "Player Wellbeing Officer" within each club, whose role involves providing mental health information (e.g., local help-seeking options) and to support those within the club if needed. RTP aims to increase young people's knowledge and understanding of common mental health disorders and to create environments at sporting club that de-stigmatise mental ill-health and promote help-seeking behaviours.

Is there evidence it works?

One study examined RTP[15] in 330 youth (mean age = 13.7 years, 58% male and 42% female) across 12 football and netball clubs in Victoria. Between April 2018 to November 2019, ten clubs (272 players) received the RTP program, and two clubs (58 players) were a waitlist control (who subsequently received the program). Mental health literacy and help-seeking intentions were measured before, immediately after and 2-8 weeks after the workshop. Participants were also asked about help-seeking *behaviours* at each time point, or whether they had sought help/advice for a mental health problem from a range of sources (e.g., mental health professionals, teachers, parents, coaches, etc). The results showed significant improvements for mental health literacy, help-seeking intentions, informal help-seeking and sport-related help-seeking intentions, but only among participants who had low scores on these measures before the program was delivered (e.g. low 'pre' scores). The results suggested these improvements were maintained 2-8 weeks following the RTP intervention. There were no significant changes in the proportion of participants reporting formal help-seeking (e.g. trained counsellors), but there was a significantly *lower* proportion of help-seeking from a parent/guardian in the RTP group following the intervention.

Two smaller studies have also examined RTP using pre-post survey designs.[10,11] In one study, 49 young participants (aged 14-16 years) completed the baseline survey and 30 the follow-up.[10] Scores on the measures of mental health literacy and comfort in speaking about mental health did not significantly differ between baseline and follow-up, however overall understanding of mental health problems and confidence in seeking help significant improved. A previous, different version of the RTP program was evaluated in the other study[16], which involved 40 volunteers from netball and football clubs, including players, coaches and parents. The results showed that knowledge, attitudes, and confidence all significantly improved at the end of the training. Since the volunteers in this study were motivated to take part in the training (rather than being randomly assigned to the training), this may have influenced the results.

Finally, a one-page 2022 evaluation report[17] on the Read the Play website emphasises the positive impacts of RTP on mental health literacy, but the details of how this was determined (e.g. the evaluation methods used and sample characteristics) were not reported and this report was not peer-reviewed.

Are there any risks?

The reported decrease in help-seeking from parents from pre- to post- intervention in one study is a potential concern, although the short timeframe between pre- to post-intervention may have contributed to this result (i.e. it is possible that participants did not seek help from parents because their mental health was relatively stable and they did not *need* help during this period). Additional studies are needed to determine the effects of the program on actual help-seeking behaviour over a longer time span.

Summary

Read the Play has promise as an effective mental health literacy training program for young players, especially for those that have a lower understanding of mental health literacy and help-seeking intentions. However further high-quality evaluations using randomised groups and longer-term follow-up will help to understand any changes to actual help-seeking behaviours.

Evidence in sport

Tackle Your Feelings

Tackle Your Feelings is a training program designed for coaches at community football clubs.[18] The program aims to increase the mental health awareness of coaches and teach them how to create a coaching environment that supports the emotional wellbeing of their players. The training consists of a 60 minute face-to-face training session, along with three online modules. Tackle Your Feelings is facilitated by accredited psychologists, in partnership with the Australian Psychological Association.

Is there evidence it works?

A high quality evaluation involving 25 community Australian Rules Football clubs from metropolitan and regional centres has shown that participants who received the Tackle Your Feelings program reported improved outcomes compared to control participants (who did not receive the program) in terms of leader confidence to support those experiencing mental health challenges and refer to mental health supports, knowledge of resources to support mental health, general help-seeking and stigmatizing attitudes of social distance.[19] Stigma towards individuals experiencing mental health conditions (e.g. willingness to socialise with a person experiencing a mental health condition, willingness to rely on a teammate experiencing a mental health condition) were not impacted by the program. At 9 month follow up, there was some decay in scores over time. Overall, the trial suggests that Tackle Your Feelings can be effective at improving coach mental health literacy in community sporting club contexts.

Are there any risks?

None that are known.

Summary

One study suggests that the Tackle Your Feelings program can be effective at improving coach mental health literacy in community-level sport. However, there is no evidence to determine whether these changes in coach literacy have an impact on player mental health outcomes (e.g. help-seeking for mental ill-health, severity of mental health symptoms). While one study shows promise for Tackle Your Feelings, future evaluation studies will be important in determining its effectiveness and whether the program can be recommended at large-scale.

Evidence in sport

Alive and Kicking Goals

Alive and Kicking Goals is a peer education program that aims to reduce rates of suicide among young Aboriginal and Torres Strait Islander men in the Kimberley region.[20] The program aims to show people that seeking help does not reflect weakness and to provide hope for the future. The training is provided in partnership with a men's outreach service and members of the local football team. The peer educators learn how to recognise risk factors and warning signs of suicide, as well as healthy coping skills and strategies for helping people who may be at risk. The peer educators then deliver workshops about suicide prevention in their community setting. Training occurs every week after football training sessions for a period of 12 months. The program also involves culturally appropriate educational DVDs, one-on-one mentoring and professional counselling.

Is there evidence it works?

Learnings from a pilot program for Alive and Kicking Goals,[20] in which 16 young men became peer educators, showed that the program helped them to develop practical skills for recognising people at risk of suicide. It also demonstrated engagement of the community with the program, especially amongst young men. The program was regarded as helping to dismantle stigma towards suicide in the community and to promote help-seeking. The pilot program was not designed to be a research evaluation, and therefore data on the program's effectiveness was not collected.

Are there any risks?

There are no known risks.

Summary

Alive and Kicking Goals is a culturally appropriate program for suicide prevention in Aboriginal and Torres Strait Islander community, especially for young men. However, more culturally appropriate research – and community engagement – is needed to better understand the benefits of the program both to the peer educators and the communities in which program is provided.

Evidence in sport

Evidence in the general community

Mental Health First Aid

Mental health first aid (MHFA) aims to promote early intervention for mental ill-health, reduce mental health stigma and teach skills to respond to those experiencing mental health concerns, including responding to a crisis (for example, suicidal ideation). The program is designed to be delivered to all groups of people. The standard version of the program consists of two 6-hour sessions over two days. Blended format versions are also available (in-person and online), along with specialised courses such as conversations about suicide, which consists of a single 4-hour session.

Is there evidence it works in team-based sports?

Two low-quality evaluations of MHFA in team-based sport settings have been conducted. The first study delivered MHFA to a group of 36 rural AFL club leaders.[21] There were significant improvements from pre- to post-program in the leaders' ability to identify depression and schizophrenia, understand management strategies and increased confidence to help someone with a mental health problem. Qualitative interviews also indicated that participants reported feeling that the MHFA program empowered them to better support mental health, built upon their skills and boosted their perceived social responsibilities. However, no control group was used in this study.

The second study evaluated an online MHFA program conducted with 31 male and female participants from Queensland Rugby Union.[22] The participants comprised players, coaches, managers, medical and support staff. Knowledge of mental health was assessed before and after the program, and participants reported increased knowledge to refer others to get support, increased knowledge of signs and symptoms, and increased knowledge about providing initial help to someone struggling with mental health. Participants reported that the online format was acceptable, and that they enjoyed the interactive elements and learning at their own pace.

Is there evidence it works in non-sporting contexts?

In the community, there have been two meta-analyses (high quality research design) that found MHFA was effective for increasing mental health knowledge and increasing helping behaviours.[23, 24] These effects were also maintained up to 6 months after the program.

Are there any risks?

None identified.

Summary

Mental health first aid is effective at improving mental health literacy and increasing helping behaviours within community samples. However high quality studies using random assignment to MHFA and a control condition are needed before this intervention can specifically be recommended in sports contexts.

Evidence in sport

Outside the Locker Room

Outside the Locker Room (OTLR) is a psychoeducation program that works with sporting clubs to provide players with information and resources on various topics, including mental health, resilience, suicide, drugs/alcohol and gambling.[25] This information is presented through interactive workshops that are delivered at participating clubs. Workshops are typically held after training sessions and last 60 minutes. The program is delivered by facilitators who have undergone a 12-month training program with the Australian Counselling Association.

Sporting clubs that sign up for OTLR are given access to the program over a 12-month period. In addition to workshops, OTLR also offers an app for players from participating clubs that provides additional resources and information about where to seek further support.

Is there evidence it works?

A recent evaluation conducted by Latrobe University assessed whether OTLR is feasible to be delivered and acceptable to participants (e.g., whether the content is relevant and engaging).[26] The evaluation analysed data that OTLR routinely collected after providing workshops. The data showed high satisfaction with the program among those who responded to the questionnaire (the response rate to the survey was not reported). The majority of survey respondents reported they would recommend the program to others (96%), support ongoing OTLR education sessions (98%), and that the program increased their perceived understanding of mental health and depression. This was a low-quality design however, since no pre- or post-measures were used to assess whether the program improvement participants' mental health awareness or help-seeking intentions or behaviours.

Are there any risks?

None that are known.

Summary

Preliminary findings indicate that OTLR is perceived by participants as an acceptable program. However, there is no evidence to date to determine whether the OTLR program is effective in achieving its primary aims. Findings from a study planned to commence in 2023 may help to understand the program's effectiveness. Additional high-quality research is needed before it can be recommended.

Evidence in sport

RISE

The RISE program is an integrated youth rugby development program designed for 12- to 15-year-old Australian Rugby league players. It was developed by the National Rugby League (NRL) in partnership with Griffith University.[27] The program was adapted from Life-Fit-Learning program that was designed to enhance reach and accessibility to mental health support for youth. There are three phases of the Life-Fit-Learning program: (i) assess: exploring young peoples' mental health and wellbeing, (ii) reflect: providing feedback on the assess step and (iii) connect: linking the young person with mental health and wellbeing programs/resources/services.

The RISE values are Respect, Inspire, Selflessness and Excellence. There is a daily action plan that centres on routine, identity, socialising and evolving. Sessions include both rugby-specific skill development and socio-emotional skill development.[27]

Is there evidence it works?

There has been one evaluation of the RISE program to date.[28] This version of the program was developed during the COVID-19 pandemic to respond to challenges in mental health service provision such as travel restrictions, border closures and quarantine protocols. The program was delivered online and via telephone and teleconference. Four 30–40-minute sessions were conducted and covered the following topics: healthy habits, strong minds, keeping cool and staying connected. The evaluation measured changes in anxiety, depression, anger, externalising behaviours and prosocial behaviours in 66 young male players (mean age = 13.6 years) using a pre and post program design. Results found that anxiety scores decreased pre- to post-program, and that prosocial behaviours increased. Depression scores and behavioural problems did not change. All measures were in the "healthy" range before the RISE program was delivered.

Are there any risks?

No risks are known. However delivering mental health programs remotely (online/telephone) may present potential risks if participants experience distress during or after the workshop.

Summary

Preliminary research suggests the RISE program may help to reduce anxiety and increase pro-social behaviour, however higher-quality study designs (including a control group) are required to determine the program's efficacy. Research should also expand to be inclusive of genders other than young males.

Evidence in sport

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Bouncing Back

Bouncing Back is a 4 part mental health awareness training program, developed by Richmond Wellbeing with the Kalamunda Cricket Club.[29] The program aims to promote mental health openness, reduce mental health stigma and support safe club cultures. Sessions can be delivered to players, leaders in the sport setting (coaches, captains and administrators) and parents. Sessions for players focus on having safe conversations about mental health, for people struggling with their personal mental health or for collective issues within the club. Sessions for coaches, captains and administrators aim to reduce mental health stigma and encourage openness about mental health in the club.

Is there evidence it works?

The Bouncing Back program has not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the Bouncing Back program is effective in achieving its aims. The program needs to be evaluated before it can be recommended.

Evidence in sport

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Changing Rooms

The New South Wales Rugby League (NSWRL) Changing Rooms Program is designed to educate and provide support to the NSWRL community in dealing with their Mental Fitness and wellbeing.[30] The Changing Rooms program is facilitated by NSWRL in partnership with industry accredited presenters on Mental Fitness and Wellbeing. The program involves a single-session focusing on mental wellbeing (e.g., information surrounding bullying, depression, eating disorders, substance use and self-harm or suicidality) for 11 to 20 year olds, with sessions running no longer than 30 minutes before training in the club's dressing rooms or classroom.

Is there evidence it works?

The Changing Rooms program has not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the Changing Rooms program are effective in achieving its aim. The program needs to be evaluated before it can be recommended.

Evidence in sport

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Growing with Gratitude

Growing with Gratitude[31] is a program that aims to improve mental health and wellbeing in young people, by promoting wellbeing and resilience. It is based on positive psychology principles, with a focus on practicing gratitude. The program focuses on developing and encouraging 5 skillsets: gratitude practice, random acts of kindness practice, positive reflection (i.e., thinking about good things that happen), being "wellbeing warriors" (engaging in physical activity and mindfulness) and doing acts of service for others (e.g., helping around a classroom, school or sports club). The Growing with Gratitude model is based on the premise that through learning these values and skills, young people will build empathy and resilience, leading to greater mental wellbeing. The program is delivered using interactive tasks, such as games, activities and group discussions.

Growing with Gratitude can be delivered in sports settings, and is also designed to be delivered by athletes to other young people (i.e., school students). When delivered in sports settings, the program aims to help coaches and junior sporting clubs build the mental health of young athletes. The program is structured to allow coaches to incorporate the 5 key skillsets into their regular training sessions and matches. When sports clubs sign up for GWGS, their coaches are provided access to online resources and training materials, and support from a GWGS facilitator to provide additional guidance when required.

Is there evidence it works?

The Growing with Gratitude program has been delivered into a large number of school settings in Australia (800+ schools).[32] However, there is no data available to determine the effectiveness of the program delivered to sporting clubs and athletes.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the Growing with Gratitude program is effective in sports settings. The program needs to be evaluated in team sports before it can be recommended.

Evidence in sport

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Hard Cuddles

Hard Cuddles is an Australian organisation that uses principles of peer-support and lived experience to deliver information about mental health, emotional awareness and community connection.[33] Hard Cuddles have designed two programs, The Full Circle and The Heroes Journey, which are available to junior/senior sporting clubs, primary schools, secondary schools, prison inmates and workplaces across the community. Hard Cuddles seeks to simplify ways of addressing mental health, emotional wellbeing, culture/leadership and emotional connection. Program delivery options vary across 2 hour, half and full day workshops, and a 6–8 week program.

Is there evidence it works?

The Hard Cuddles program has not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the Hard Cuddles program is effective in achieving its aims. The program needs to be evaluated before it can be recommended.

Evidence in sport

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Love Me Love You

Love Me Love You (LMLY) is an organisation that provides sporting clubs with programs to increase awareness of mental health and decrease stigma.[34] The 'Lifetime of Wellbeing' program consists of four 45-minute workshops that teach athletes about common mental health challenges, along with self-help strategies and coping skills. These workshops are tailored to suit a child or adult audience depending on the needs of the club.

The 'Welfare Warrior Training' program teaches sport club personnel how to assist individuals who are experiencing poor mental health. The 2-hour program focuses on instructing participants how to initiate conversations about mental health and where to find extra support and resources.

Is there evidence it works?

The Love Me Love You program has not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the LMLY program is effective in achieving its aims. The program needs to be evaluated before it can be recommended.

Evidence in sport

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Navigating Mental Health in Sport

Navigating Mental Health in Sport is an Australian organisation that provides 2-hour workshops intended to facilitate discussion around mental health issues in sport. It is designed for managers, coaches, and sporting team staff.[35]

Is there evidence it works?

Navigating Mental Health in Sport program has not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether or NHMS program is effective in achieving its aims. The program needs to be evaluated before it can be recommended.

Evidence in sport

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Play By The Rules

Play by the Rules offers online training on a range of subject areas, including safety in sport settings (such as child protection and safeguarding, harassment and discrimination, complaint handling)

Is there evidence it works?

The Play By The Rules program has not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the Play By The Rules program is effective in achieving its aims. The program needs to be evaluated before it can be recommended.

Evidence in sport

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Evidence in school settings

The Resilience Project

The Resilience Project provides a single session presentation (usually 60-90 minutes) to sporting clubs and associations (as well as education and corporate settings).[36] In the sporting context, the program is relevant to players, coaches, club staff, and family or loved ones. The workshop focuses on the principles of empathy, gratitude and mindfulness, as key components to building resilience and assisting participants to live in the moment. Participants are provided with, or can buy, additional materials such as a 21-day wellbeing journal or app that encourages users to record moments of gratitude and to practice mindfulness exercises each day.

Is there evidence it works?

Two good quality evaluations of the Resilience Project have been conducted in large samples of school students (although neither study used a high-quality randomised, control design). To date, there are no studies examining this program in sporting contexts.

A 2019 evaluation conducted by the University of Melbourne compared 6 Victorian primary schools who had received the program (n=544) and 6 that had not yet received the program (n=469).[37] Participants completed surveys before, 1-month after the program and at the end of the school year (approximately 6 months after the program was delivered). Additional data included interviews and focus groups with teachers and parents at the schools. The evaluation examined changes in behaviours, feelings and attitudes related to main outcomes of gratitude, empathy and mindfulness. Students that received the Resilience Project training reported significantly higher use of gratitude strategies than the control/non-intervention group, and positive impacts in terms of their confidence and self-esteem (especially in terms of peer relationships).

The second evaluation conducted by the University of Adelaide compared a large sample of Australian students aged 8-18 years (between 2019, 2020 and 2021) who received the Resilience Project's school-based intervention program (n=83,002) to those that had not (non-intervention/control students n=79,699).[38] Personal wellbeing factors were assessed, including life satisfaction, depressive symptoms, anxiety symptoms, avoidance coping and hope. On the measures of psychological wellbeing, the intervention group were reported to have maintained consistent levels of functioning over the 3 year period, whereas wellbeing tended to decline in the control group (in particular in 2021, coinciding with the pandemic). This included increases in depressive symptoms, anxiety symptoms, and avoidance coping, as well as decreases in hope and life satisfaction in the control group over time, while the intervention group remained more stable.

Are there any risks?

None that are known.

Summary

Emerging research suggests that the Resilience Project is beneficial in improving understanding and articulation of emotions in school students, and may have benefits to mental health outcomes such as anxiety or depressive symptoms. However, more high-quality studies are needed to examine the effectiveness of the program in randomised controlled conditions. The program hasn't been evaluated in sport settings, and so it cannot yet be recommended.

Evidence in sport

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Sport and Life Training (SALT)

Sport and Life Training (SALT) is a psychoeducation program that offers sessions on a range of topics including mental health and wellbeing, alcohol/drugs and peer pressure.[39] The sessions are presented at sporting clubs by trained facilitators from SALT. Sessions are typically held after training and last for 60–90 minutes. SALT offers sessions specifically tailored for players of different ages and genders to recognise the different social challenges they may face. Additionally, SALT provides training for coaches on positive coaching techniques that aims to assist them to build greater motivation and resilience from athletes.

Is there evidence it works?

There is no evaluation data examining the effectiveness of the SALT psychoeducation program to related to mental health in sport.

SALT evaluated their program called Be the Change!, which focused on creating positive sporting cultures and promoting gender equity in sport.[39] The program was evaluated with football and netball clubs in the Eastern Football League and the AFL Yarra Ranges. The report measured outcomes related to gender equity, sexism and violence before the Be the Change! events. They did not measure these outcomes post-event. A feedback form was given to participants and 78 responses were received. Three quarters of responders indicated that the Be the Change! forum provided positive value to their club. Eighty-four percent indicated that the information given by the speakers was useful or extremely useful and 90% reported they were likely or extremely likely to use the information given for future planning.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether SALT is effective in achieving its aims. The program needs to be evaluated (ideally independently) before it can be recommended.

Evidence in sport

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State of Mind Sport

State of Mind is a charity that aims to promote mental health and wellbeing among sportspeople, fans and communities, with a primary focus on suicide prevention.[40] The website lists Mental Fitness sessions and Mental Health First Aid Training. Also has mental health resources available for free (e.g., presentations). Website also outlines program called Rugby League Cares (RL Cares), which offers MH support to current and former players.

Is there evidence it works?

The State of Mind programs have not been evaluated, so there is no information as to whether or not it works.

Are there any risks?

None that are known.

Summary

There is no evidence yet as to whether the State of Mind programs are effective in achieving their aims. The programs need to be evaluated before they can be recommended.

International prevention program

Evidence in sport

Flourishing Footballers

The Flourishing Footballers programme is a psycho-education program aimed at developing resilience and psychological flexibility in United Kingdom Academy Footballers through Acceptance and Commitment Therapy (ACT).

Is there evidence it works in team-based sports?

One low quality study assessed the Flourishing Footballer program, delivered across a season of football to male academy footballers by sport psychologists trained in acceptance and commitment therapy.[41] The Flourishing Footballers program incorporates six core components: 1) using the choice point, 2) strength spotting, 3) emotional awareness, 4) playing in the now, 5) purposeful practice, and 6) empathy. Sessions were delivered weekly both in a classroom and on the pitch for the duration of the pre-season (six weeks) and the season (45 weeks). A typical session would last between 30 and 45 min (for a total of 22- 35 hours of program time). The study provided qualitative findings (rather than survey or other data) summarising that the program allows for individually focused education to happen within each session, making more meaningful change possible, and that ACT appears acceptable within football.

Are there any risks?

No risks were identified in the study.

Summary

Flourishing Footballers may be a promising intervention, however high-quality studies are required before being able to recommend this program. It's relevance to female footballers also needs to be established.

PSYCHOEDUCATION

Evidence in sport

Most of the Australian prevention programs reviewed before are based on principles of psychoeducation. Psychoeducation involves giving people information about a particular mental health condition to help them to better understand that condition, its potential causes and treatments to promote recovery. It can take the form of education sessions (e.g. workshops or webinars), or be provided via fact-sheets and other printed resources or via websites.

By providing accurate information in plain language, psychoeducation can help people to develop better knowledge about their mental health condition and how to manage symptoms. As a result, it may help people to feel less worried or anxious about their mental health. Additional benefits are reducing stigma about mental health problems and promoting help seeking for these issues.

Is there evidence it works in team-based sports?

While various psychoeducation programs have been developed for athletes, coaches and club leaders, these have all taken the form of *mental health awareness programs*; that is, improving knowledge and awareness of mental health conditions in general. Some studies suggest that psychoeducation programs can be effective for particular mental health problems, such as eating disorders (also see section: **programs for preventing or reducing body image disturbance and disordered eating**). There is also evidence from low-quality studies that multiple session psychoeducation programs may improve psychological wellbeing[18] or overall 'wellness'[16] in athletes. However, there are no studies that have demonstrated whether psychoeducation programs in sporting contexts may improve *actual symptoms* of mental health among people experiencing difficulties.

Is there evidence It works in non-sporting contexts?

There is some evidence that psychoeducation may be helpful for people with depression,[42] but it is not as effective as other types of treatment. There are no high-quality studies that have found a relationship between psychoeducation and reduced anxiety symptoms.

Are there any risks?

There is a small risk that providing detailed mental health information could increase anxiety or worry for some people.

Summary

There is no evidence as to whether psychoeducation can improve mental health symptoms in sporting contexts (amongst players, coaches or staff), although preliminary evidence from low-quality studies suggest this may assist general psychological wellbeing. There is evidence from community-based studies that psychoeducation can be a helpful for depression, but it is less effective than other treatments.

Evidence in sport

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LEADERSHIP PROGRAMS

Leadership in team sports is considered a key factor for building cohesion, team functioning and competitive success. Moving away from traditional hierarchical ('top-down') leadership structures towards shared leadership structures that includes coaches and selected athlete leaders may boost team cohesion. Leadership programs can focus on identifying those with leadership qualities in the team, define clear roles for leaders, and continue to develop their leadership skills. Effective leaders ultimately create better social connection within their team, which may have positive effects on mental health and wellbeing amongst players.

Is there evidence it works in team-based sports?

One moderate-quality study[43] assessed the effects of a shared leadership program amongst 96 national-level basketball players (mean age = 25.9), who were split into control and experimental groups. The program consisted of two sessions, with data recorded before and after the program (approximately 5 months apart). The results showed an improvement in an overall "health" outcome, which included an improvement to 'state of mind' in players that completed the program compared to players that did not. Players that completed the program also showed no changes in burnout, whereas players that did not reported increased burnout scores at follow-up.

Are there any risks?

None identified.

Summary

There was some initial evidence that shared leadership programs may have some benefits to 'state of mind', but the impacts on mental health symptoms such as anxiety or depression are unknown. More research is required to assess if leadership programs can influence mental wellbeing.

PROGRAMS TO PREVENT SPECIFIC MENTAL HEALTH PROBLEMS

Programs for reducing problematic alcohol consumption in sporting clubs

Community and professional-level sporting clubs in Australia are often settings where high levels of alcohol are consumed (certainly higher levels than in the general community). High levels of drinking is not only associated with problematic health behaviours, but also has social impacts such as violence and risk-taking behaviour (e.g. drink driving). A number of interventions have been developed to reduce risky (or 'hazardous') levels of drinking and to promote a healthier drinking culture in sporting clubs.

These programs usually include education about the risks of hazardous levels of alcohol consumption, emphasising impacts on both the players (e.g. risk of drink driving and poorer athletic performance) as well as the sport more generally (e.g. reduced club memberships and violence among spectators). These programs also usually discuss strategies to reduce excessive drinking at club level, such as providing non-alcoholic beverage options, ensuring taxi services are available, and increasing monitoring of risky alcohol consumption.

Evidence in sport

The Good Sports program

The Good Sports program is designed to change the culture of alcohol consumption in Australian sporting clubs via a 3 stage (sequential) accreditation program that targets the following policies and strategies:

Stage 1 focuses on clubs complying with state liquor laws, along with the responsible service of alcohol, and only serving alcohol during specified hours;

Stage 2 focuses on clubs serving low and non-alcoholic beverages, providing free tap water, and serving food when the bar is open, and avoiding practices such as 'happy hour' or other drink-related promotions/ competitions;

Stage 3 focuses on clubs having written policies that address responsible service of alcohol, non-alcoholic alternatives and underage drinking (among others).

The program was developed by the **Australian Drug Foundation** and is free to implement.

Is there evidence it works in team-based sports?

The Good Sports program has been evaluated in a series of related high-quality studies. The first study[44] randomly assigned 87 community sporting clubs (Australian Rules football, rugby league and rugby union) to either the Good Sports program or a control (no intervention) condition. The clubs assigned to Good Sports received assistance over 2 years to implement the program, including access to project support officers, printed materials, online training and some accreditation costs. The results showed that the Good Sports clubs had implemented a higher level of responsible alcohol practices than the control group clubs. This study showed that, with support, it's feasible to change drinking practices within community sporting clubs.

In the second study[45], which included an additional sporting club (resulting in 88 clubs in total), the members of the Good Sports clubs reported less risky alcohol consumption than the control clubs (29% vs. 24%). Clubs that had completed all 3 stages of the program had the greatest reduction in risky drinking (from 31% at baseline to 20% after implementing the program). An additional report,[46] using the same sporting clubs, showed that reducing risky levels of drinking increased the active participation of club members, such as helping out more at the club and attending more events.

Are there any risks?

None known.

Summary

There is promising evidence that the Good Sports program can improve the drinking culture within sporting clubs and lead to a reduction in risky or hazardous drinking, which can have additional positive impacts such as increasing member participation. However, the three studies described here used the same sporting clubs (all located in New South Wales), so it is important to examine the effectiveness of the program in a wider range of clubs before *Good Sports* can be given a stronger recommendation. It is also important to examine whether the changes in drinking behaviour and adherence to safe drinking and alcohol provision guidelines are sustained over time.

Evidence in sport

Other club-level alcohol reduction programs

A study in Ireland randomly assigned Gaelic athletic association clubs to receive either a 4-month, multi-faceted intervention to reduce alcohol consumption or to a control condition.[47] The intervention group included 12 clubs who received education for players and coaches, alcohol policy training for club managers, and an awareness campaign about risky drinking. The control group included 27 clubs who received education on sports nutrition (but this did not refer to alcohol). All participants reported baseline and post-intervention levels of alcohol consumption. The results showed that although alcohol consumption decreased during the study, there was no difference between the groups. It is possible that high rates of hazardous drinking in this sample at baseline (almost 75% of participants) and the relatively short intervention (4 months) may have contributed to the findings.

Evidence in sport

Individual-level alcohol reduction programs

A high-quality study in US college athletes tested the impact of providing electronic personalised (i.e. individual) feedback on drinking that was tailored for athletes, including information on how drinking may affect athletic performance, compared to providing education alone, or standard (e.g. non-athlete specific) personalised drinking feedback.[48] 263 college athletes (76% female) were randomly assigned to one of the 3 conditions and completed a baseline survey on their drinking. There were no differences in the reported average number of drinks consumed per week across the 3 groups at 1-month follow-up (post- intervention). At 6-month follow-up, the group that received personalised drinking feedback had a lower peak blood alcohol concentration than the other groups. The results indicated that personalised feedback may have different effects for heavy drinkers and for drinking in-season.

While more research is needed to determine whether personalised feedback on drinking behaviour tailored for athletes is effective for male athletes, the results of this high quality study are promising.

Programs for preventing body image disturbance and disordered eating

Evidence in sport

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Structured peer-led psychoeducation programs

Several programs have been developed to promote healthy nutrition, eating habits and body image in athletes, and reduce harmful activities such as restrictive dieting and the use of steroids or other substances (e.g. laxative abuse). These programs have mostly been tested in the US among young female athletes in gymnastics and other 'aesthetic' sports that emphasise a lean body type (such as diving and synchronized swimming). Examples are the Athletes Targeting Healthy Exercise & Nutrition Alternatives (ATHENA) and the Female Athlete Body (FAB) programs.

These programs mostly involve structured education sessions or workshops that have been developed by mental health and/or nutrition experts. They are delivered by peers (other athletes or coaches) who have received appropriate training by qualified professionals to deliver the programs. Peers often have similar life experiences to the people receiving the program, so they approach the content with relevant background knowledge of the sports setting and understand from first-hand experience the pressures being experienced. They can therefore be a useful resource for the administration of these types of programs.

Is there evidence it works in team-based sports?

There are four high-quality studies of peer-led athlete eating programs, 2 of which tested the ATHENA program[49, 50] and one that tested the FAB program.[51] All studies involved high-school or college athlete programs in the US. Overall, the results of these studies are mixed. One study[49] found that participants randomly assigned to eight, 45 min sessions of the ATHENA program reported less use of diet pills, better nutrition and education knowledge, and less intentions to use restrictive dietary practices compared to participants in a control (no-intervention) group. However, another similar study[50] found that the 8-week program only improved 2 out of 15 outcome measures; otherwise there were no differences between the ATHENA and control groups.

For the study that examined the FAB program, athletes received either three 90-minute education sessions (over 3 weeks) or no intervention.[51] The results compared body shape and weight concerns 18-months after the intervention was provided to assess the longer-term benefits of the FAB program. Participants in the FAB group reported less dietary restraint/restrictive eating, but there were no other group differences for body weight or shape concerns.

The final study[52] compared athletes who received one of two interventions (focused on either body image or healthy weight) that were delivered over 6-weeks in 3 team-based sessions. The results showed that both interventions reduced shape or weight concerns, although neither approach was superior.

While these studies suggest that appropriately trained peers may be suited to delivering eating disorder focused education programs, it's important to note that they haven't compared peers against others, such as mental health professionals, so it's unclear whether the *peer* component is important, or the content of the program that is delivered.

Are there any risks?

There is a risk that peers may over-step the boundaries of their expertise and knowledge, however this is reduced by using structured programs that standardise the content and its delivery.

Summary

There are mixed results for peer-led psychoeducation programs for reducing problematic eating habits and body image disturbance in junior athletes. More research is needed to understand which programs, or program components, are effective for preventing these problems in sports.

Evidence in sport

Professionally-led psychoeducation programs

Research has also examined programs delivered by professionals, such as mental health clinicians, nutritionists, or exercise physiologists to improve healthy nutrition, body image and eating habits.

Is there evidence it works in team-based sports?

Two high-quality studies have examined prevention programs for junior female athletes. One study[53] randomly assigned adolescent females in aesthetic sports (e.g. gymnastics, diving, synchronized swimming) to receive nutrition education from a registered dietician plus targeted help to reduce the intention (or plan) to use restrictive dietary behaviours to lose weight, or nutrition education alone. Each group received three, 60-minute sessions for the interventions. The results showed that knowledge about nutrition improved in both groups, but only the athletes in the targeted intervention reported being less likely to have any intention to use restrictive diets to lose weight.

The other study[54] compared the use of a single session education workshop (BodySense) delivered to young female gymnasts to a no-intervention control group. There were no group differences on the key outcome measures of body esteem, pressure to be thin, eating attitudes and behaviours after the intervention.

Are there any risks?

There is a small risk that providing detailed information about eating disorder symptoms could trigger some people to use unhealthy eating practices.

Summary

The results of two high quality studies have been mixed regarding professionally facilitated psychoeducation programs. It's possible that the number of sessions used in these programs is important, with a single session workshop being less effective than multiple sessions. More research is needed to determine whether professionally-led psychoeducation for eating disorders are effective in sports settings.

Programs for preventing or reducing problematic gambling, including sports betting

Evidence in sport

Problematic gambling occurs when a person has an urge or desire to gamble, despite this behaviour leading to harmful negative consequences such as relationship breakdown, debt or losing more money than can be afforded. There's evidence that problem gambling may be more common among athletes than the general community.[55] Common reasons for gambling in athletes include as a form of entertainment, to make money, a social activity, to relieve boredom, to cope with emotions and for an adrenalin rush/buzz. Male athletes are more likely to report problem gambling behaviour than females, and it's more common in professional sports (where disposable income is usually higher) compared to elite/Olympic sports.[56]

Programs for preventing or reducing problem gambling, including sports betting, are usually focused on *educational* material that provides information about rules that restrict sports betting, along with information about the risks and potential harms of gambling. Many professional sports deliver such education sessions to players and teams as part of their sports' integrity programs, which additionally focus on the serious ramifications of match fixing.

Is there evidence it works in team-based sports?

The National Collegiate Athletic Association (NCAA) produced a video-based gambling education program called **Don't Bet On It**, which was evaluated in a small but high-quality study[57] with 33 players from a college baseball team. All players completed measures of current gambling activities and attitudes towards gambling in sport, and then half were randomly assigned to watch 9 *Don't Bet On It* videos (15-20 mins total education time), while the other half did not (the control group). At the end of the video session, and two weeks later, both groups completed the gambling attitudes measure. The results showed that participants in the video group reported a significant improvement in attitudes towards gambling in sport immediately after the intervention compared to the control group, but that these changes were not sustained at 2-week follow-up.

Other programs not evaluated

The International Rugby Board developed the *Keep Rugby Onside* program. This includes an interactive online learning program on sports integrity and the risks associated with matching fixing, an outreach program for educators to meet with teams, players, coaches, and other rugby stakeholders, and resources available for download.[58] While the program was developed in 2013, there is no available information as to whether the program is effective for preventing or reducing sports betting.

Are there any risks?

None known.

Summary

The results of one study suggest that a brief video education intervention may improve attitudes to gambling in sport in the immediate term, but any gains are not sustained over time and are therefore unlikely to change behaviour. More comprehensive programs, such as *Keep Rugby Onside,* might be more effective, but these do not appear to have been evaluated to date. More research is needed to understand the role of education programs in preventing or reducing problem gambling behaviours.

Programs for preventing posttraumatic stress in athletes exposed to a traumatic event

Evidence in sport

Please note: This section describes an intervention that can be administered to a group of athletes who have all been exposed to the same traumatic event. The aim was to reduce distress and prevent the development of post-traumatic stress disorder (PTSD). Any person who develops symptoms of PTSD should always be referred to a mental health professional for individual assessment and treatment.

Posttraumatic stress disorder (PTSD) is a mental health condition that can develop following exposure to a traumatic event. The symptoms of PTSD include flashbacks (re-experiencing aspects of the trauma), being hyper-vigilant or 'on-edge', avoiding reminders of the event, and changes in mood (e.g. increased anxiety or depressed mood).

Is there evidence it works in team-based sports?

One low-quality study examined the effect of group-based supportive psychotherapy for athletes exposed to a traumatic event.[59] The participants were 18 members of an Iranian adolescent girls' soccer team, who were exposed to a major earthquake while attending a tournament in Nepal. The supportive psychotherapy program was initiated by the team doctor and all players (and their parents) consented to talking part. The intervention commenced two weeks after the earthquake when the team was back in Iran. The program was delivered online since the players lived in villages across Iran. Over 12 months the players took part in online group sessions where they discussed their experience of the earthquake and any psychological distress resulting from it. At the start of the intervention, sessions were conducted every day, and the frequency was gradually reduced to once a week and finally once a month.

Posttraumatic symptoms were measured at multiple time points across the intervention. The results showed that the players reported experiencing symptoms of posttraumatic stress in the weeks following the earthquake, but these significantly reduced by the end of the intervention. However, since there was no control group in this study, it's impossible to tell whether the same results would have occurred without any intervention.

Are there any risks?

There can be major risks in providing interventions to people who have been exposed to traumatic events. Such interventions should never be mandatory (that is, provided to people who don't wish to take part) and should only be provided by mental health experts.

Summary

In the event that a sporting club or team is exposed to a traumatic event, help to manage any psychological distress should be provided. However, there is a lack of evidence as to whether supportive psychotherapy, or other types of interventions, are effective in sporting contexts. The current Australian guidelines on managing PTSD (in the general community) should be used, always in consultation with mental health experts.

EARLY INTERVENTIONS FOR MENTAL HEALTH SYMPTOMS

Evidence in sport

★★★

Evidence in the general community

✓

Cognitive-behaviour therapy

Cognitive behaviour therapy (CBT) helps people to understand how their characteristic ways of thinking ('cognition') and/or behaving might contribute to mental health difficulties, such as anxiety and/or depression.[60, 61] Often people are not aware that they have particular way of thinking or interpreting their experiences that are related to their mental health. For example, overly negative or critical thinking is often associated with depression, while anxiety is often associated with thoughts that over-emphasize threats, danger or feeling vulnerable. Certain behaviours can also contribute to mental health difficulties, such as avoiding people or situations (when feeling anxious) or withdrawing from social activities (when feeling depressed).

CBT is designed to help people to recognise unhelpful ways in which they think or behave and to replace them with better ways of coping. It involves working individually or in groups with a therapist, usually for between 4 to 10 sessions (although more sessions are not uncommon). Here we have only reviewed studies that have provided group-based CBT.

Is there evidence it works in team-based sports?

Numerous studies have examined CBT in team sports, with at least 3 high-quality studies conducted to date. One high quality study[62] randomly assigned 48 male adult rugby players to either a cognitive behaviour stress management (CBSM) intervention or a control (no intervention) group. The CBSM was delivered during the pre-season in 6 group sessions (90–120 mins) over 4 weeks. Sessions progressed from relaxation to cognitive strategies (mental imagery, cognitive re-structuring) and goal setting and planning. At the end of the intervention, the CBSM group reported increased coping skills and a decrease in worry compared to the control group. The CBSM group also reported missing less time due to injury than the controls.

Another study[63] randomly assigned 39 US college baseball/softball athletes to either a CBT program, a control group that watched sports videos, or a second control group that received no intervention. The CBT and the video groups met for 1 hour over 3 weeks. The CBT group reported less fear of negative evaluations/feedback than the control groups at the end of the intervention, as well as less emotional responses associated with negative feedback (e.g. feeling upset, helpful, angry, frustrated depressed). There were no group differences however for self-esteem.

A final study[64] randomly assigned 2 youth gymnast clubs (average age 14 years) to either a cognitive behavioural stress-management program (CBSM) or a control condition (a series of lectures on nutrition). Each group met for twelve 1-hour sessions over 6 months. The CBSM program covered a range of cognitive strategies both in general and sport-specific contexts (e.g. competition). At the end of the 6-month intervention and at 3-month follow-up, there were no differences between the groups on measures of general and sport-specific stress, or injury outcomes.

A recent, lower quality study has also demonstrated benefits of CBSM [65] among a group of 19 Spanish male youth soccer players (average age 16.3 years). Players completed eight 50-minutes CBT based sessions, with significant improvement in mental skills from pre to post program, although stress control, motivation and team cohesion did not change. Since this study did not include a control group, the changes in mental skills cannot conclusively be attributed to the CBT intervention.

Is there evidence it works in non-sporting contexts?

There is very strong evidence from high quality studies that CBT is an effective treatment for a range of mental health conditions in adolescents and adults.[66]

Are there any risks?

There are no major risks associated with CBT, although it can be emotionally challenging to confront difficult patterns of thought and/or behaviour in the immediate term.

Summary

There is good evidence from three high-quality studies that brief CBT programs can help players/athletes to manage emotions such as worry and to improve coping skills. CBT is also well established as an effective treatment for a range of mental health conditions in the general community. More research is needed to further establish the effectiveness of group CBT to respond to other mental health problems in sport, such as depression.

Evidence in sport

★ ★ ★

Evidence in the general community

✓

Mindfulness-based interventions

Mindfulness-based interventions refer to number of approaches, including mindfulness-training, Mindfulness-Based Cognitive Therapy (MBCT), Mindfulness-Based Stress Reduction (MBSR) to name a few. Common to these approaches is learning a type of meditation or mental state called "mindfulness" (or "mindfulness meditation") that teaches people to pay attention to the present moment.[67] People are encouraged to be aware of whatever they are experiencing in the moment, including worries, emotions, ideas, and body awareness, without being judgemental or trying to get rid of or change these experiences. Mindfulness therapies can be accompanied by other interventions such as yoga (see page 56), or self-compassion, which targets self-criticism, something that may be especially relevant to sport given performance demands and expectations. Mindfulness training can be delivered in groups or individually.

Mindfulness is thought to help with mental health symptoms by assisting people to change their state of mind so that they can experience what is happening in the present, rather than worry about the future or what has happened in the past (types of thinking that commonly affect people experiencing anxiety or depression). In the context of sport, mindfulness is thought to be helpful for enhancing the 'flow state'.[68] 'Flow' is a term that is used to describe the mental state of being in 'the zone', which is associated with peak performance.

Is there evidence it works in team-based sports?

Four high-quality studies have examined sports-specific mindfulness programs in elite adult athletes. In one study[69], 57 Portuguese soccer players were randomly assigned to either a Mindfulness Based Soccer Program (MBSP) or a control/waitlist group. The MBSP program was delivered over 8-weeks, with each 90-120 min session combining mindfulness techniques with group discussion, yoga and homework exercises. The control group did not receive any intervention. At the end of the 8 weeks, the MBSP group reported a marginal improvement in anxiety symptoms, and significantly better outcomes than the control group on various aspects of mindfulness (e.g. acting with awareness, compassion/kindness) as well as 'flow'.

The second study[70] randomly assigned 52 NCAA athletes from mixed sports to receive the Mindful Sport Performance Enhancement (MSPE) program or a control/waitlist group. The 6-week program consisted of 75 min weekly group meetings that worked through various elements of mindfulness, along with instruction on how to use the techniques to help improve performance. Overall, the MSPE group did not differ from the control group on the main outcome measure of self-reported depression symptoms. However, athletes who completed at least 5 of the 6 sessions reported greater improvements at the end of the intervention on measures of worry, life satisfaction, and flow.

The third study was conducted with elite youth Brazilian volleyball players who were randomly allocated to either a mindfulness based mental training intervention (MBMT), a music based training intervention (MBT), or a control group.[71] The MBMT intervention was a body scan exercise, and the MBT involved self-selected relaxation music. Participants randomised to the MBMT or the MBT groups engaged in their respective interventions at two time points – after a training session and before bedtime, for the duration of their competitive period (two weeks). There was no difference in physical fatigue between the intervention and control groups, however the participants in the mindfulness intervention reported lower mental fatigue caused by competition.

A final study examined the effects of a mindfulness based program on the incidence of injuries in 160 Iranian male soccer players between the ages of 16 – 19.[72] Participants in the mindfulness condition received seven 45 minute sessions once a week for seven weeks, while a control group received an 'attention control' intervention. The outcomes included sport anxiety, stress, mindfulness, as well as coach and athlete satisfaction with the intervention. Participants in the intervention condition had significantly less days lost to injury and significant less incidence of injury compared to the control group (22 injuries compared to 36 respectively) . However, no difference in severity of injury between groups was observed. At the end of the program, lower levels of stress and trait anxiety

were reported for the mindfulness group compared with the control group.

In addition, there are a number of lower quality mindfulness studies that have demonstrated improvement in one or more outcomes in sporting samples, including mindfulness, emotional regulation, coping skills and resilience[73-75].

Mindfulness with self-compassion

Two studies (both unpublished research theses) examined mindfulness with self-compassion (SC) in US college athletes. One study[67] compared a 6-hour/6 session MSPE program against MSPE-SC, and a control/waitlist in 2 teams of long-distance runners (55 participants). It was thought that self-compassion would be relevant to improving body image and disordered eating in these athletes. The results showed that there were no differences between the mindfulness groups in relation to body image, or to any mindfulness outcomes (or performance) at the end of the intervention.

The other study[76] compared the 6-hour/6 session Mindfulness Meditation Training for Sport 2.0 program to a control/waitlist condition in US college men's soccer teams. There were no differences between the groups on life satisfaction or the ability to tolerate negative emotions at the end of the intervention, nor any benefits for various aspects of mindfulness (including psychological inflexibility).

Mindfulness-Acceptance-Commitment

Mindfulness-Acceptance-Commitment (MAC) is an intervention designed within a sport psychology context. It emphasizes that enhanced performance comes from an athlete's ability to persist with the 'task-at-hand' and be present in the moment, regardless of any internal discomfort. A small study[77] randomly assigned 22 NCAA female basketball players to a 6 hour/6-week program of MAC, compared to psychological skills training (PST). The MAC group reported greater reductions in self-reported substance use and hostility compared to the PST group at the end of treatment, however other important measures did not differ between groups, such as symptoms of depression, psychological distress, eating concerns or generalized anxiety.

Is there evidence it works in non-sporting contexts?

There is strong evidence from high quality studies that mindfulness-based cognitive therapies/MBCT are effective for treating depression in adults.[78]

Are there any risks?

There are minimal risks associated with mindfulness-based interventions.

Summary

A number of studies have examined the use of mindfulness-based interventions in team sports, with at least 4 high-quality studies demonstrating that mindfulness-based interventions can improve both aspects of *mindfulness* (i.e. being 'present', reduced mental fatigue), as well as reducing stress and anxiety.

Future research would benefit from examining larger groups of athletes (ideally from same rather than mixed sports) to understand whether mindfulness-based approaches work for improving other aspects of mental health, such as depression, and whether particular components of mindfulness are more important than others.

Evidence in sport

Evidence in the general community

Acupuncture

Acupuncture usually involves inserting fine needles into specific points on the body, which are then rotated by hand (a laser beam can sometimes be used instead of needles).

Traditional Chinese medicine regards acupuncture as working to correct the flow of energy in the body, while Western medicine contends that it may stimulate nerves, which results in the release of neurotransmitters/chemical messengers in the brain.[79]

Is there evidence it works in team-based sports?

Only one high-quality study[80] has examined acupuncture in a sporting context, but this focused specifically on *competition*/sports anxiety. The study assigned 45 adolescent football players to one of three groups: (1) actual acupuncture, (2) 'sham' (or fake) acupuncture (where the needles are not fully inserted, or not placed at the correct points) or (3) no treatment. All the players completed a questionnaire to measure their anxiety before and after the intervention. Players who received the actual acupuncture reported lower anxiety following the treatment period compared to the other two groups, but there was no difference between the groups on other measures (such as self-confidence). Longer term benefits of the treatment were not examined.

Is there evidence it works in non-sporting contexts?

There's evidence that acupuncture can improve symptoms of anxiety in adults with particular anxiety disorders (such as generalised anxiety disorder or post-traumatic stress),[81, 82] although these studies are not high quality. In adults with depression, acupuncture is more effective than 'sham' treatment, but the effects tend to be quite small.[79]

Are there any risks?

Acupuncture is relatively safe when practiced by a properly accredited professional, but minor bleeding and bruising may occur.

Summary

Acupuncture may be helpful for reducing competitive anxiety in the short term, but more research is needed to be confident of that result. There is no evidence for the use of acupuncture to assist clinical anxiety or other mental health problems in sporting contexts. While acupuncture may be effective for adults with depression and particular anxiety disorders, evidence shows that it is less effective than other treatments such as CBT and mindfulness.

Evidence in sport

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Psychological (or mental) skills training

Psychological skills training (PST) is a term used to refer to a range of techniques, such as goal setting, motivation, mental imagery, self-talk and mental rehearsal, which are used by athletes to enhance performance by having greater mental preparation for competition.[83] PST often involves other components, such as relaxation training and breathing exercises.

PST is thought to assist mental health by building self-management skills to improve self-confidence and reduce anxiety.[83]

Is there evidence it works in team-based sports?

One high-quality study[84] randomly assigned 88 NCAA (mixed team sports) college athletes to a mental skills training program or to a waitlist control group (no intervention). The mental skills training consisted of five 50 min group sessions where participants practiced examining their self-talk, breathing relaxation, mindfulness and acceptance, and developing a growth mindset. Athletes in the PST group reported greater improvement in symptoms of anxiety at the end of the intervention compared to the control group. However, the groups didn't differ in terms of rating their symptoms of depression or overall psychological quality of life.

There have been at least 3 other good-quality studies of PST in athletes[85-87] but all have focused on competition/sports anxiety. Two of these studies found that PST was better than no intervention for sports anxiety, while the third study found no significant effect for PST.

Is there evidence it works in non-sporting contexts?

There are no high-quality studies of PST for mental health outcomes in non-sporting samples.

Are there any risks?

None that are known.

Summary

There is not compelling evidence yet as to whether psychological or mental skills training can improve mental health in sporting contexts. Psychological skills training appears to help manage sports/competition anxiety, but more research is needed to be confident of this result.

Evidence in sport

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Recovery Garments

Recovery garments refer to forms of clothing that are made from, or coated with, particular materials that are intended to promote recovery.[88] Athletes wear these at particular times, such as following exercise or during sleep. It's thought that such garments assist athletes with rest and recovery, which are important to reducing burnout or overtraining syndrome, both of which are associated with psychological distress. It's not known how the garments work, but it's suggested that they may help with regulating immune responses in the body.

Is there evidence it works in team-based sports?

One high-quality study[88] examined recovery garments in 38 male Japanese baseball players. Half were randomly assigned to wear an experimental recovery garment (treated with a nanomaterial called DPV576) and half to a control/non-coated garment. In both cases, the garments were full-length bottoms and a half-sleeve top worn for 14 nights during an intensive training program. The results showed that, at the end of the 2-week program, players in the recovery garment group reported lower levels of mood disturbance and reduced cortisol/stress levels compared to the control group.

Is there evidence it works in non-sporting contexts?

No studies have examined the use of recovery garments in people with mental health difficulties such as anxiety and depression in the general community.

Are there any risks?

There are no known risks associated with wearing recovery garments.

Summary

There is not enough research on recovery garments yet to support their use in sports to assist with mental health outcomes during periods of intensive training or competition. However, the results of one promising study suggest that more research is warranted in this context.

Evidence in sport

Evidence in the general community

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Sleep interventions

Sleep interventions are designed to establish good habits that promote restful sleep, and/or to target specific problems such as insomnia (i.e. problems with the quality and/or amount of sleep). Good habits (sometimes called 'sleep hygiene') include stopping the use of electronic devices an hour before bedtime, reducing caffeine or alcohol consumption in the afternoon/evening, keeping the bedroom cool and dark, and limiting daytime naps. There is a strong association between sleep disturbance and poor mental health, although it is not clear in which direction this relationship occurs; that is, it is not known whether sleep disturbance is a symptom of particular mental health problems or whether sleep disturbance *contributes* to poorer mental health outcomes, or whether both might contribute.

Is there evidence it works in team-based sports?

The best quality study to date[89] compared a sleep intervention in 15 adolescent male soccer players to a control group (of older males). Both groups slept for 8 weeks on a specially designed pillow with integrated speakers on the corners, but only the soccer group received 'sleep brainwaves' (audio 'beats' delivered to both ears) throughout the night. The results showed that while the perceived quality of sleep and waking up improved in the 'brainwave' group, a measure of psychological strain didn't differ from the control group, nor did actual sleep behaviour (e.g. time of going to bed, or being awake during the night).

Five other (lower quality) studies have examined a range of sleep interventions in athletes using pre-post designs. One of these studies[90] involved 25 AFL players (from 1 club) who received a 6-week sleep 'optimisation' program, consisting of improving sleep habits, sleep extension (which aims to achieve a longer sleep duration, usually around 10 hrs per night) and feedback on their sleep patterns. Overall, the intervention did not improve most aspects of sleep, nor did it help depression or tension symptoms, although players reported less fatigue and more vigour/energy. The other 4 studies[91-94] examined either sleep habits or sleep extension in different athlete groups, with mixed results.

Is there evidence it works in non-sporting contexts?

A recent statistical review of high-quality studies of sleep interventions showed that improved sleep led to improved symptoms of depression, anxiety, psychosis, rumination (overthinking) and stress.[95] This study also reported that the greater the improvement to sleep quality, the greater the improvement was for mental health outcomes.

Are there any risks?

There are no known risks associated with improving sleep habits or sleep extension, however sleep *deprivation* may pose a risk for people with epilepsy or bipolar disorder.

Summary

There isn't enough high-quality evidence yet as to whether sleep interventions are helpful for mental health outcomes or for improving sleep itself. More research is needed to understand what, if any, sleep interventions are likely to work best for players/athletes.

Evidence in sport

Evidence in the general community

Yoga

Yoga exercises the body and mind by using physical postures, breathing techniques and meditation. There are many forms of yoga practiced in Western countries, including ashtanga, bikram, hatha and iyengar. Yoga can focus either on meditation or exercise depending on the form. It is thought to be beneficial to mental health by reducing stress, improving relaxation, and helping to provide a distraction from negative thoughts.

Is there evidence it works in team-based sports?

There have been 2 studies of yoga in sporting contexts. One study[96] involved 80 female athletes who were diagnosed with 'sport anxiety' (high levels of anxiety associated with competition). Half were randomly assigned to receive Hatha Yoga twice a week for 2 months and half were assigned to a control group. Results showed that athletes in the yoga group had a significant reduction in anxiety scores at the end of the intervention compared to the control group.

The other study[97] involved 13 male NCAA athletes who attended eight 90 min group mindfulness sessions, followed by a 1hr Hatha Yoga session, over 5 weeks. A control group of 13 athletes was also included. The results showed that athletes in the mindfulness/yoga group scored better on measures of mindfulness, goal directed energy and perceived stress at the end of the study compared to the control group, although no other outcomes differed. No conclusions can be made about the effectiveness of yoga from this study, since it was always paired with mindfulness.

Is there evidence it works in non-sporting contexts?

Research shows that yoga is an effective intervention for adults with depression, with the benefits mostly associated with meditation-based rather than exercise-based yoga.[60] However, the quality of these studies is low. Similarly, there's evidence from low-quality studies that yoga is effective for reducing anxiety symptoms in people with generalised anxiety disorder.[98, 99]

Are there any risks?

There may be a low risk of injury associated with particular yoga postures. Yoga should be practiced in a class with a qualified instructor to help minimise risks.

Summary

There's not enough high-quality research in sports regarding the effectiveness of yoga for mental health outcomes. Further research into the benefits of yoga within sports-settings is warranted.

Evidence in sport

Audio-visual stimulation training

Audio-visual (AV) stimulation training involves delivering audio 'beats' and light flashes via headphones and specially designed eyeglasses.[100] The types of audio and visual stimuli can differ (e.g. the colour of lights) as well as the length and number of training sessions. It's thought that AV stimulation training can regulate mood and emotional states by influencing brain activity.

Is there evidence it works in team-based sports?

One low-quality study[101] compared self-reported 'psycho-emotional' symptoms in track and field athletes who were exposed to AV stimulation training (25 athletes) versus a control condition (no AV stimulation; 40 athletes). The AV stimulation training lasted 25 mins and was administered over 20-22 sessions (each session being separated by at least a day). Athletes in the AV stimulation group reported a significant decrease in anxiety and frustration levels compared to the control group. There was no follow-up to see if these benefits lasted beyond the period of taking part in the study.

Is there evidence it works in non-sporting contexts?

No studies have examined the use of AV stimulation training as an intervention for mental health in the general community.

Are there any risks?

None that are known.

Summary

There is not enough research on AV stimulation training as a method of improving mental health in sports. More evidence is needed to assess whether the short-term benefits of AV stimulation translate into meaningful and sustained improvements.

Evidence in sport

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Evidence in the general community

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Autogenic training

Autogenic training is a relaxation technique that uses visualisation or other simple mental exercises, such as concentrating on breathing, heartbeat, or the temperature or weight of body parts, to increase body awareness.[102] Autogenic training is thought to assist mental health by promoting relaxation and reducing tension.

Is there evidence it works in team-based sports?

One low-quality study[103] reported using autogenic training (plus mental imagery) for anxiety in a group of 31 field hockey players in India. No information was provided about the autogenic training, including the duration of the intervention, or how and by who it was delivered. Compared to baseline levels, anxiety was reported to have significantly reduced after the intervention. Since no control group was used in this study, it can't be determined if the reduction in anxiety was due to the intervention or other factors.

Is there evidence it works in non-sporting contexts?

There is not enough high-quality research to say whether autogenic training is an effective intervention for depression and anxiety in the general community.[60]

Are there any risks?

None that are known.

Summary

There is not enough evidence as to whether autogenic training is useful as an intervention in sporting contexts. More high-quality research is needed.

Evidence in sport

Evidence in the general community

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Positive psychology interventions

Positive psychology aims to build wellbeing by recognising and developing an individual's strengths.[104] This is in contrast to many traditional mental health approaches that focus on the 'deficits' or the challenges that people with mental health problems experience. Positive psychology approaches often focus on positive emotions, engagement, relationships, meaning and achievement and interventions involve activities or exercises that target these aspects of wellbeing.

Is there evidence it works in team-based sports?

So far there have been two low-quality studies looking at positive psychology interventions in a sporting context.

One study[105] has examined a positive psychology intervention in a sporting context. A group of 21 female college athletes received a 7 week program facilitated by a sports consultant. The athletes completed individual exercises each week (e.g. identifying their strengths, describing their best possible future self, practising gratitude, etc.) and met as a group on four occasions for a facilitated discussion to reflect on the exercises. No measures of mental health or wellbeing were assessed, but interviews with athletes at the end of the study suggested a beneficial impact on overall wellbeing.

A pilot study examined the impact of a multi-session gratitude intervention among youth athletes and the effect of coach participation on respective outcomes. Eighteen varsity members of a high school girls' soccer team participated. For the entire sample, lasting effects on mental health, resilience, and coach-athlete relationship were observed at 1-month and 3-month follow-ups. Moreover, positive effects on mental health were significantly maximized for athletes in the coach group.[106]

Is there evidence it works in non-sporting contexts?

Research suggests that positive psychology interventions can be effective in improving wellbeing[107] but there is not enough evidence yet as to whether they are effective for managing mental health conditions such as depression.[60]

Are there any risks?

None that are known.

Summary

There is not enough evidence to support the use of positive psychology interventions in sporting contexts. More high-quality research is needed on this approach.

Evidence in sport

Reflective Diaries

Reflective diaries are used to record a person's life experiences, along with the thoughts and feelings that can accompany them. Through the process of writing and recording these events, it's thought that diaries can act as a coping mechanism for managing life stressors, by providing an opportunity for reflection and learning.

Is there evidence it works in team-based sports?

One low-quality study[108] examined the use of reflective diaries among 10 male county cricketers in England who consented to keep a diary for 1 month during the competitive season (out of 48 players who were approached). Feedback provided by players in interviews at the end of the study showed that most valued the process of writing, but some identified the need to voice their views and concerns with others in order to benefit more from the experience.

Is there evidence it works in non-sporting contexts?

No studies have examined the use of reflective diaries in people with mental health difficulties such as anxiety and depression in the general community.

Are there any risks?

None are known.

Summary

More evidence is needed from high-quality studies before any conclusions can be made about the benefits of reflective diaries in sports.

Evidence in sport

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Evidence in the general community

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Person-centred psychotherapy

Person-centred psychotherapy is a type of talking therapy that is 'client-centred', meaning the therapist does not give instructions but instead follows the client's lead and helps them to uncover their own solutions to the problems they are experiencing. The aim of person-centred therapy is to help the client work towards a state of 'self-actualisation', in which they have a deeper understanding and acceptance of themselves and lead a fulfilling life.

Person-centred therapy focuses on the principles of authenticity, acceptance and empathy.[109] Therapists seek to create a warm and non-judgmental environment, which helps the client work towards self-discovery. This intervention is usually delivered individually (or 1 on 1) given the intense focus on the client's needs, but the principles of acceptance, authenticity and empathy can also be applied in group settings.

Is there evidence it works in team-based sports?

Once high-quality study has examined person-centred therapy in a team sports setting.[110] Adolescent male soccer players (44 participants, aged 13 – 15 years) were randomly assigned to 9 months of a person-centred program or a control (no intervention) group. The person-centred therapy consisted of one 50-minute group session per week, facilitated by a therapist. The athletes were allowed to direct the group discussions and were encouraged to raise issues that felt significant to them. All players completed measures of self-confidence and anxiety at baseline and at the end of the 9-month intervention. The results found that there was no difference between the groups for self-reported levels of anxiety, and that the therapy group reported a *decrease* in self-confidence compared to the control group.

Is there evidence it works in non-sporting contexts?

There is mixed evidence for psychotherapy in the general population. It may be somewhat helpful in the short term for managing depression, but not the long term. There is little evidence that it works for anxiety disorders.

Are there any risks?

None known.

Summary

The only high-quality study to data suggests that person-centred psychotherapy is not effective at reducing anxiety and may in fact be harmful. Given that this is usually provided as a 1 on 1/individually based intervention, it is not recommended as an intervention for groups of players/athletes in sporting contexts.

PROGRAMS FOR COACHES WHO WORK WITH JUNIOR ATHLETES

Coaches have a large influence on the sporting experience, particularly for junior athletes. Several programs have been designed that aim to improve coaching styles and relationships within the team environment. These programs may have beneficial impacts on athletic performance, the desire to participate in sport, and athletes' emotional wellbeing.

Evidence in sport

Communication-based interventions for coaches

Communication-based coaching interventions aim to help coaches understand how their reactions to particular situations can contribute to athletes' mental health difficulties (as well as their athletic performance). For example, responding with harsh criticism when a player makes a mistake can increase the player's feelings of anxiety, and consequently their desire to take risks in games, and so on. These interventions try to help coaches recognise unhelpful patterns in their coaching styles and replace them with ways of communicating and behaving that can improve mental health outcomes for individual players and the team.

Example of programs include the Coach Effectiveness Training (CET) and the Mastery Approach to Coaching (MAC) program. Both programs discourage the use of punitive instruction and encourage treating mistakes as opportunities for feedback and improvement. They are run as single session workshops of 75-90 mins duration.

Is there evidence it works in team-based sports?

One study[111] examined CET with 152 Little League baseball players (aged 10-12 years) and 18 coaches. Training was delivered by a workshop leader two weeks prior to the start of the baseball season. One group of players had coaches that were provided CET and the other group had no coach training (i.e. the control group). The junior athletes were interviewed about their characteristic levels of competitive anxiety (termed 'trait competitive anxiety) pre-season and immediately post-season. The baseball players in the CET group reported lower sports anxiety post-season than the players in the control group.

The second study[112] examined the MAC program compared to a control condition in 216 basketball players (aged 10-14 years) and 37 coaches. Measures of anxiety were completed at baseline and 12 weeks later during the final week of the basketball season. Players in the control group reported higher anxiety scores at the end of the season, compared to players whose coaches received the MAC intervention, who reported a decrease in anxiety over time.

Are there any risks?

None that are known.

Summary

There is promising evidence that communication-based coaching interventions can improve anxiety in junior players.

Evidence in sport

Self-determination theory-based interventions for coaches

Interventions based on self-determination theory (SDT) focus on enhancing the motivational needs of athletes by increasing feelings of autonomy (feeling able to make your own decisions), connection to others, and perceived competence in one's abilities.[113] Coaching interventions informed by SDT attempt to address these areas in order to enhance athletes' wellbeing, increase motivation, and reduce negative experiences such as burnout.

Is there evidence it works in team-based sports?

One good-quality study[114] examined a self-determination theory-based intervention in Gaelic football coaches. Three coaches received six, 1-hr sessions of SDT coaching training provided to them one-to-one over 12 weeks and 3 coaches acted as a control group (no training). The training aimed to increase coaches' support for players and decrease their use of controlling coaching styles. Football players in the SDT and control teams (87 participants) completed baseline and end of study measures of burnout and motivation. The results showed that while players in the control coaching group showed an increase in burnout, no burnout was reported in the SDT coached players. However, there were no differences between the groups in terms of motivation.

Is there evidence it works in non-sporting contexts?

Self-determination theory-based interventions have not been applied in the general community to respond to mental health conditions.

Are there any risks?

None known.

Summary

There is not yet enough high-quality research in sports regarding the effectiveness of SDT based coaching interventions for athletes' mental health outcomes. More research is warranted on the benefits of SDT based coaching for improving player wellbeing.

Evidence in sport

Stress-inoculation training for coaches

Training and competition can induce stress not only in athletes, but also in coaches. Coaches who respond to stress in adaptive ways are more likely to enhance player (and team) wellbeing than coaches who respond to stress with anger or hostility. Stress-inoculation training helps individuals to cope with stress and prepare themselves in advance for upcoming potentially stressful situations. Training involves teaching participants to understand how they tend to react to stressful situations and feelings of anger. Following this, participants learn to re-interpret stressful events and ultimately reduce responses characterised by anger or aggression when such stressful events are encountered.

Is there evidence it works in team-based sports?

One low-quality study[115] examined the effectiveness of stress-inoculation training with four male high school basketball coaches. The coaches were given five training sessions, each lasting 60 minutes. The results showed that coaches reported less tension/anxiety and anger/hostility in game situations, but other measures of anger and aggression (such as anger control or observed aggression) showed no significant improvement.

Is there evidence it works in non-sporting contexts?

No studies have specifically examined the use of stress-inoculation training in people with mental health difficulties such as anxiety and depression in the general community.

Are there any risks?

None known.

Summary

There is not enough high-quality research regarding the effectiveness of stress inoculation training in coaches on players mental health outcomes. More research is needed.

PROGRAMS TO INCREASE 'MENTAL TOUGHNESS'

What is mental toughness and what is its role in sport?

Athletes, coaches and researchers agree that psychological factors play an essential role in an individual's success in sport.[116] Mental toughness (MT) has been proposed as a key psychological component in sport, but there is little agreement as to what it is, how it's measured and whether improving mental toughness actually improves *mental health*.

Mental toughness is usually taken to mean having high levels of self-belief, resilience and persistence. People who are 'mentally tough' are described as being able to cope under pressure and to maintain their concentration in spite of distractions.[116] It is not surprising therefore that mental toughness has become an important concept within sports.

Research suggests that an individual's level of MT is determined by genetics and early life experiences but can also be increased through targeted training. A number of mental toughness training programs have been developed for elite athletes. However, the role of MT in sport is contentious, since this concept can be regarded as both a positive and a negative.

THE POSITIVE ARGUMENT FOR MENTAL TOUGHNESS	THE NEGATIVE ARGUMENT FOR MENTAL TOUGHNESS
Players who are mentally tough can persevere in the face of adversity and reach their full potential. These factors are seen as indicators of good mental health.[117] Therefore, MT is seen as a component of mental health, or could enhance optimal mental health.	Mental toughness glorifies the view of 'traditional masculinity' and stoicism that is prevalent in professional sports.[118] As a result, players may be reluctant to seek help for mental health issues for fear of being seen as 'weak' by teammates or coaches. Therefore, MT training could exacerbate the stigma of mental health in sport.

This debate remains unresolved due to a lack of research into the relationship between mental toughness and mental health.

Despite this, MT programs are now seen as commonplace within many sports. To evaluate these programs, we have separated them into two groups: (1) programs involving psychological skills training that are delivered in a non-threatening environment, and (2) programs that use a form of "pressure training", in which the players are exposed to stressful or adverse stimuli as part of the training process.

Evidence in sport

Mental toughness training in non-pressurised environments

Programs in this context use psychological skills training to increase mental toughness. The skills that are typically taught include goal setting, mindfulness, concentration and emotional awareness. Additional MT-specific concepts may be included, such as techniques to push through the pain barrier during training and competitions.

Is there evidence it works in team-based sports?

Two studies have tested MT programs in non-pressurised environments. The first was a high quality study that randomly assigned adult basketball players to an MT intervention or a control group.[119] Players in the intervention group completed the Mindful Sport Performance Enhancement (MSPE) program. The program consisted of weekly 90-minute sessions over six weeks, with homework exercises between sessions. The intervention group were taught a sport-specific form of mindfulness in which they were asked to visualise themselves in various sporting scenarios and mentally rehearse how they would respond. The researchers used the Mental Toughness Questionnaire[120] to measure MT at the beginning and end of the study. Compared to the control group, the intervention group reported an increase in MT at the end of the program. The study did not measure whether the intervention improved any mental health outcomes (such as anxiety).

Another study[121] compared a specific MT training program to a general psychological skills training (PST) program in 75 adolescent male players (aged < 15 years) from three Australian football teams. Each team was randomly assigned to a condition. One team was assigned to MT training, one to the PST program and one to the control group. The MT group participated in 6 weekly group sessions focusing on tough attitudes, practiced concentration and problem-solving exercises, and learned techniques to manage their emotions in stressful situations, and discussed ways to push through the pain barrier during training and games. In the PST group, 6 weekly group sessions focused on learning skills such as goal setting, emotional awareness, concentration techniques, affirmations, and imagery. The control group received no intervention. The results showed that MT and PST were equally effective in increasing mental toughness. The study didn't measure whether either intervention improved participant mental health.

Are there any risks?

Most of these psychological techniques are unlikely to cause negative side effects. However, it is possible that advising players to 'push through pain' during training sessions and games could increase the risk of injury.

Summary

Psychological skills training delivered in non-pressurised environments can increase mental toughness. But it is not yet clear whether *MT-specific components* are needed. More high -quality research is needed before we can be more confident of the effectiveness of MT training in non-pressurised environments.

Evidence in sport

Mental toughness training in pressurised conditions

One aspect of mental toughness often described in sport is the ability to perform under pressure.[116] Therefore, some programs expose players to stressful situations in order to develop MT. In 'pressure training', players are intentionally exposed to increased pressure during training sessions to build MT. These programs use a variety of methods to create feelings of pressure, including physical challenges, introducing negative consequences for poor performance, and/or taking players out of their comfort zones.[122]

Is there evidence it works in team-based sports?

In one low-quality study[123], 19 Dutch female basketball players were exposed to pressure situations in their regular training sessions over three weeks. Players completed a game simulation exercise, which focused on the last two minutes of a game and a free throw exercise. Pressure was added via distractions during the task, negative consequences (e.g. a missed free throw resulting in the whole team having to run sprints) and fatiguing the players before the session. At the end of the study, athletes and coaches 'perceived' that the team became more resilient to stressors experienced in game settings as a result, but mental toughness was not measured (nor the effects of the program on player mental health).

Another low-quality study[124] evaluated the Mental Toughness Education and Training Program with 3 English soccer league referees. The referees took part in 6 monthly workshops that involved pressurised role-plays. The program also incorporated elements of CBT, such as training to acknowledge and change unhelpful thoughts. All 3 referees reported higher scores on a measure of MT at the end of the program.

Are there any risks?

Introducing high levels of pressure may have harmful effects on mental health, including increasing feelings of acute anxiety (such as panic). Extreme pressurised training may also lead to negative impacts on relationships between team members and reduce feelings of safety within the sporting environment.

Summary

There is not enough high-quality evidence regarding the benefits of mental toughness training in pressurised environments. Given the current evidence base suggesting the potential risks of these programs, they are **not recommended** as a way to increase mental toughness in sports.

PROGRAMS FOR SUPPORTING ATHLETE MENTAL HEALTH DURING MAJOR CAREER TRANSITIONS

Evidence in sport

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Programs for retiring athletes to manage the mental health impacts of transition out of sport

Numerous sporting bodies in Australia and overseas have developed programs to help athletes to transition out of sport as smoothly as possible. However, none have evaluated or conducted research on whether these programs assist athlete mental health.

The few studies that have been conducted have focused on *career* outcomes rather than mental health outcomes. Therefore, it is unclear whether existing programs are effective at improving the mental wellbeing of athletes during the retirement process.

Evidence in sport

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Programs for youth athletes to manage the mental health impacts of transitioning into elite sport

The transitional phases of an athlete's career are garnering more attention in the literature as key points where mental health may be more vulnerable. Specific stressors may arise during certain phases. For transitions into elite sport, such stressors can include adjusting to a new environment, selection pressure, injury, and balancing sport, work and study.

Is there evidence it works in team-based sports?

One study evaluated a stressor-coping program for the transition *into* elite sport with youth rugby league players in Australia and New Zealand.[125] An group of 21 males (mean age = 18.9) received the intervention program while a control group of 20 males did not (mean age = 19.2). Researchers measured changes in the use of coping strategies, coping effectiveness, and psychological wellbeing before and after the program. The program consisted of six sessions and covered topics such as defining stress and coping, appraisal and response, obstacles and expectations during transitions, social support and problem solving. The results showed significant improvements in the experimental group compared to the control group for increased task-based coping strategy use, decreased disengagement-based coping strategy use and increased efficacy for problem and emotion-focused coping strategies. No changes were observed for social support efficacy or psychological wellbeing.

Are there any risks?

No risks were identified.

Summary

Preliminary evidence suggests there may be benefits to programs assisting young athletes to transition into professional or elite sport, but more high-quality studies are required to determine the effectiveness of such programs.


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Glossary of terms

Term	Definition
AHPRA	Australian Health Practitioner Regulation Agency. This organisation works in partnership with National Boards to ensure Australia's registered health practitioners are suitably trained, qualified and safe to practise.
Clinical Psychologist	Clinical psychologists are trained in the assessment and diagnosis of mental health conditions and psychological problems and are qualified to provide advice in clinical and compensation areas. These professionals are required to be accredited with AHPRA. For more information about the roles of different psychologists, see the **Australian Psychological Society website**.
Cultural Healer	Practitioners who have expertise in Aboriginal and Torres Strait Islander healing practices and recognise factors that promote mental health and wellbeing among Aboriginal and Torres Strait Islander peoples. Cultural healers are often well-equipped to promote and support social and emotional wellbeing in Aboriginal and Torres Strait Islander peoples.
Early detection and intervention mental health programs	Early detection and intervention programs aim to reduce the severity of mental health symptoms and prevent mental health symptoms from developing into diagnosable mental health conditions.
Help-seeking behaviour (See also peer help-seeking and professional help-seeking)	Searching for, or requesting, help from others, which may include seeking help from formal sources (i.e. professionals) or informal sources (i.e. peers)
Peer help-seeking	Help-seeking behaviours about mental health directed towards non-professionals, such as family, friends, colleagues, teammates, or peers.
Professional help-seeking	This refers to help-seeking behaviours about mental health directed towards medical professionals (e.g. general practitioners, dietitians) or mental health professionals (e.g. clinical psychologists, mental health social workers, psychiatrists).
Mental health	Mental health is our psychological, social and emotional health, and affects how we think, feel, and act. It also helps determine how we reach our potential, handle stress, relate to others, and contribute to our community.
Mental health awareness	Mental health awareness refers to understanding of mental health challenges (including their prevalence) and the reduction of stigma surrounding mental ill-health.
Mental health condition (also referred to as mental ill-health or mental health challenges)	Mental health conditions broadly describe many different disorders, illnesses, and syndromes. Some conditions occur once in a person's life, other times people experience recurrent symptoms over a lifetime with periods of recovery between. A smaller number of people will experience enduring symptoms of mental ill-health, in which case, resilience and specialist support can promote their recovery.

Term	Definition
Mental health continuum	Viewing mental health on a continuum acknowledges that – at any given time – some people may be 'mentally fit' and healthy, others may be experiencing mental ill-health (or diagnosable mental health conditions), and others may fall somewhere between.
Mental health literacy	Mental health literacy is the understanding of mental health, including knowing how to recognise symptoms of mental ill-health, how to maintain good mental health, and how to seek help or address poor mental health.
Multidisciplinary	Combining or involving several academic disciplines or professional specialisations in an approach to a topic or problem.
Prevention	Prevention involves identifying risks to mental health across all levels of a sport and implementing system or individual changes to reduce these risks. It also works to bolster the protective factors for mental health across a system. Approaches to prevention are usually categorised as either Universal, Selective or Indicated, and target different members of the population.
Psychosocial	Relating to the relationship between social factors and individual thought and behaviour.
Randomised controlled trial (RCT)	A randomised controlled trial is a type of study designed to accurately assess efficacy of an intervention, treatment or product by using random allocation of participants to reduce the chance of introducing bias to the results.
Social distance (mental health stigma)	In a mental health context, social distance refers to the willingness of a person to engage in relationships with a person experiencing mental health challenges, and the degree of intimacy in those relationships.
Sports psychologist	Sport and exercise psychologists support optimal performance enhancement, enjoyment and retention by promoting healthy mental skill development, management of sport-related anxiety and stress, mental focus, team building and leadership, health and wellness, communication and conflict resolution, and more. These professionals are required to be accredited with AHPRA. For more information about the roles of different psychologists, see the **Australian Psychological Society website**.
Stepped care	Stepped care is an evidence-based, staged system comprising a hierarchy of interventions, from the least intensive to the most intensive, which can be matched to the individual's needs.
Suicide prevention programs	Programs that aim to reduce the likelihood of suicide ideation, attempts and deaths by improving awareness about severe depression and suicide, recognition of warning signs, skills to support individuals at acute risk, and what actions to take or services to contact in crisis situations.

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