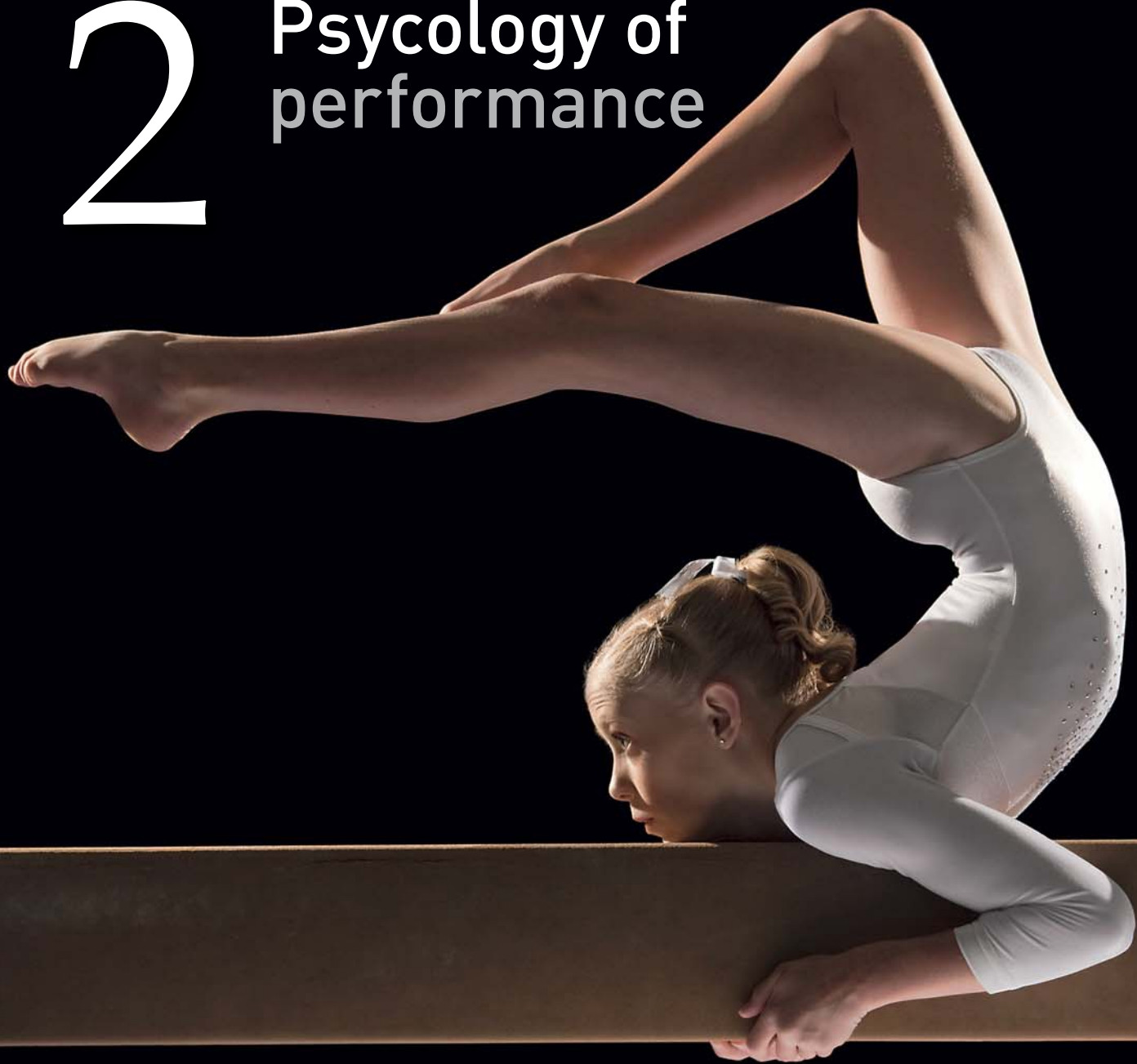


2 Psychology of performance



BEFORE YOU START

Why is it that a volleyball player can serve faultlessly all match and then, when required to serve the ball on match point, miss? What about a tennis player whose performance plummets after a couple of errors? What is it about sport that, even after years of developing and sculpting the human body for a perfect physical performance, when it comes time to compete something else—the brain—has ultimate control over the effectiveness of that body?

In all sporting pursuits, the mind is a powerful tool, and it has the ability to make or break an athlete. As a result, sports psychology is widely accepted as an essential part of any athlete's training. You will see in this chapter how psychology can be used as a tool to both diagnose and remedy weaknesses in an athlete's performance.

CHAPTER OVERVIEW

- What is sports psychology? 43
- Common sports psychology problems 44
- Techniques for managing sports psychology problems 55

What is sports psychology?

Sports psychology is the science that applies the principles of **psychology** to sport. Psychology is the study of the mind, mental processes and behaviour.

The principles of psychology are often used by athletes and coaches to improve and refine performance, and to give athletes and teams an edge over their competitors. Adopting psychological **strategies** helps them to perform at their peak when it matters most.

The principles of sports psychology can equally help a novice athlete understand how to best learn a new skill. They can help beginners to develop strategies to overcome barriers that block their ability to transfer simple skills learned as drills to their games. For example, beginner golfers might find that they can hit the ball cleanly off the tee in all their practice shots, but when performing the same shot in a game they hit the ground with their club. They have let **anxiety** and distractions take over.

Few high school students will go on to become professional athletes, but many have aspirations of becoming a professional. Once athletes have put in the hard yards to gain the physical skills they need, jumping to the next stage can be difficult. Sports psychology principles can be used to help motivate athletes to keep going with their sport and to progress to the next stage of their sporting career.

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Figure 2.1 Sports psychology can be used to improve athletes' performance.

Common sports psychology problems

This section looks at some of the common psychological concerns faced by athletes. Strategies to overcome these concerns are looked at later, from page 55.

Anxiety

Athletes commonly experience anxiety, which is feeling uneasy, worried or apprehensive.

Anxiety is a heightened emotional state that can cause psychological and physical discomfort. A psychological response to anxiety might include fear (of failing or of being judged), worry, tension, nervousness or apprehension; a physical response might be trouble sleeping. People can also experience physiological responses to anxiety, such as a change of **heart rate** or breathing, or an increase in perspiration. These responses are brought about by humans' fight or flight instinct. The physiological changes seen in anxiety are preparing the body to fight or to flee in the face of danger.

Figure 2.2 Anxiety will be felt by a basketball player before an important free throw.

Some anxiety is a perfectly normal response to everyday problems, and a small amount of anxiety can be a beneficial and motivating influence; for example, anxiety about an important game in a few weeks might cause you to train extra hard in preparation. However, anxiety can sometimes become a problem. When anxious, athletes might:

- feel threatened
- be unable to think clearly
- seize up
- be unable to perform to previous standards or expectations.

It is important for athletes to use relaxation strategies when they feel anxiety beginning to become a problem.

Can you think of a sporting situation that has caused you to feel anxious? Would everyone in your class respond similarly in the same situation?

Trait and state anxiety

Anxiety is affected both by a person's inherent personality (traits) and by their environment or situation (state).

Some people are more susceptible or predisposed to feel anxious than others. The way in which a person's personality traits affect their anxiety levels is known as **trait anxiety**. Trait anxiety is an athlete's general predisposition to perceive a situation as threatening or non-threatening. Because they have an underlying tendency to react in a certain way, people who display high levels of trait anxiety usually perceive more situations as threatening than those who have low levels of trait anxiety.

State anxiety is brought on by an athlete's situation or circumstances. It is an emotional response to a particular situation or environment.

The interaction of trait and state anxiety determines a person's anxiety. For example, it is common for athletes to feel some nervousness or anxiety when playing an important grand final match (state anxiety); however, the level of this anxiety is determined by each individual's personality (trait anxiety).

Consider your own anxiety levels. Do you think you have high or low trait anxiety?

Two important variables in determining performance anxiety are:

- the importance of the situation to the individual
- the uncertainty of the outcome of the situation.

Both state anxiety and trait anxiety can be measured using questionnaires. Athletes are scored on a continuum for each, depending on their responses.

Cognitive and somatic state anxiety

Cognitive state anxiety is anxiety linked with a fear of failure and concerns about being able to meet expectations. It can lead to negative self-evaluation and be a threat to self-esteem. Cognitive state anxiety can only be measured using surveys and questionnaires.

Somatic state anxiety is the physiological response a body displays when anxious. Examples of such responses include increased heart rate, increased respiration, clammy hands, stomach butterflies, a dry mouth, tense muscles and nausea. Somatic state anxiety can be measured using methods such as taking a person's pulse.

Generally, when a worrying event is at least a day away, feelings of cognitive state anxiety are higher than somatic state anxiety. The closer to the event athletes get, the higher their somatic state anxiety. Interestingly, once the event begins, somatic state anxiety tends to dissipate, but cognitive state anxiety will fluctuate throughout the event as the probability of success or failure changes.

Can you relate to this? If you could separate your 'nerves' before an event into cognitive and somatic state anxiety, would they follow this timeline?

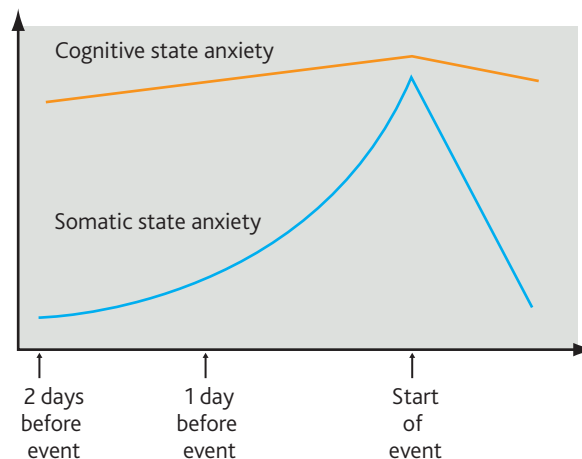


Figure 2.3 Initially, cognitive state anxiety is higher than somatic state anxiety, but somatic state anxiety increases as the event gets closer.

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ACQUIRE

- What is anxiety?
 - What are some characteristics of anxiety? Will everyone feel anxious in the same way? Why?
 - Can anxiety be beneficial? Give an example.
- Describe the difference between trait and state anxiety.
 - Identify some causes of state anxiety in sport.
 - How can trait anxiety influence the effects of state anxiety?

EXTENSION

- Complete the questionnaire for a sport competition anxiety test (SCAT).
- Analyse the questions being asked. Consider why they have asked these questions.
- What do your results say about your anxiety levels?



[Click to access a sport competition anxiety test online.](#)

Personality traits

Personality traits are a critical factor in athletic performance. As discussed in Chapter 1, personality traits such as keenness, confidence, competitiveness and aggression influence an athlete's chances of success. In recent years, attention has been focused on identifying the specific personality traits that enable athletes to function well, as individuals or in teams.

Anxiety is not the only psychological factor affected by personality traits and personality type. For example, one critical factor in success is the athletes' aspiration—their ambition to succeed. Not all people have personalities that are well suited to ambition; for some people, striving to achieve ambitions only causes high levels of anxiety.

Different personality types experience sports psychology problems, such as poor **motivation**, under- and over-**arousal**, and anxiety, differently. Personality traits can also determine how athletes respond to the techniques that are used to overcome these psychological issues.

Stress

Stress is the non-specific response that the body makes to demands placed on it. Stress can be good or bad, but the physiological reactions in the body are basically the same. When athletes compete, they might experience too much stress (**hyperstress**) or too little stress (**hypostress**), 'good' stress (**eustress**) or 'bad' stress (distress).

Have you ever experienced eustress—'good' stress? In what form did you experience it, and how did it affect your performance?

Stress is very closely linked to anxiety and, like anxiety, stress can come from internal or external sources, which might or might not be under the direct control of the player. Some of the sources of stress on players are listed in Table 2.1. Because individuals vary, what one person finds stressful, another might not.

Can you think of a time when you experienced stress that was related to state anxiety?

ACQUIRE

List the four types of stress and describe an example of each.

APPLY AND EVALUATE

- 1 Categorise the sources of internal and external stress listed in Table 2.1 into three groups:
 - those under an athlete's control
 - those not under an athlete's control
 - those partly under an athlete's control

With a partner or in small groups, compare your results. Did you disagree on any points? Why?

- 2 What situations or problems unrelated to sport or physical activity do you think might also be a source of stress for athletes? Justify your response.

Table 2.1—Sources of stress for athletes

Internal sources of stress	External sources of stress
Injury	Audience/spectators
Illness	Media
Personality traits, such as self-esteem, self-confidence and coping style	Expectations of others
Personal expectations	Environment (weather, field, referee)
Fear and/or memories of success or failure	Opposition
Reactions to opposition	Event planning
Skills	Stage and level of competition

Under- or over-arousal

One meaning of the word 'arouse' is to stir into action. When used in sports psychology and sports performance, arousal refers to an athlete's readiness to perform.

Arousal—the physical and psychological state in which an athlete is able to take action—is linked to the release of hormones, such as adrenaline and noradrenaline, and the body sending signals through the nervous system.

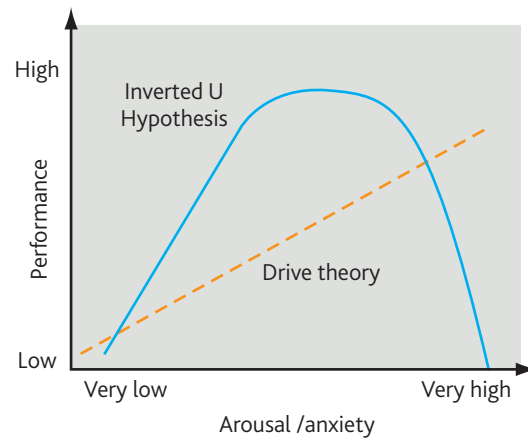
Like anxiety, arousal is linked to humans' fight or flight instinct. As an athlete is aroused and prepares for action, the body undergoes physiological changes—such as an increase in heart rate, breathing, perspiration, brain activity and metabolic rate. Blood is diverted from the gut to the muscles, as the body prepares to use its muscles for action (which causes the feeling of having 'butterflies' in your stomach). For this reason, above-average levels of arousal are essential for peak performance in activities requiring physical strength, endurance or speed.

Although arousal is not the only factor to affect performance, sports psychologists have linked levels of arousal to performance. An athlete who is not at all aroused would be deeply asleep; someone who is too aroused can become anxious. In between is an optimal level of arousal—excitement—that allows athletes to perform at their best.

The first theory to try to explain the relationship between arousal and performance was Clark Hull's 1943 drive theory. Drive theory assumed a direct relationship between arousal and sports performance (see Figure 2.4). The more aroused athletes were, the better they were able to perform. This theory did not allow for over-arousal leading to anxiety, and was only applicable to simple motor tasks, not complex ones.

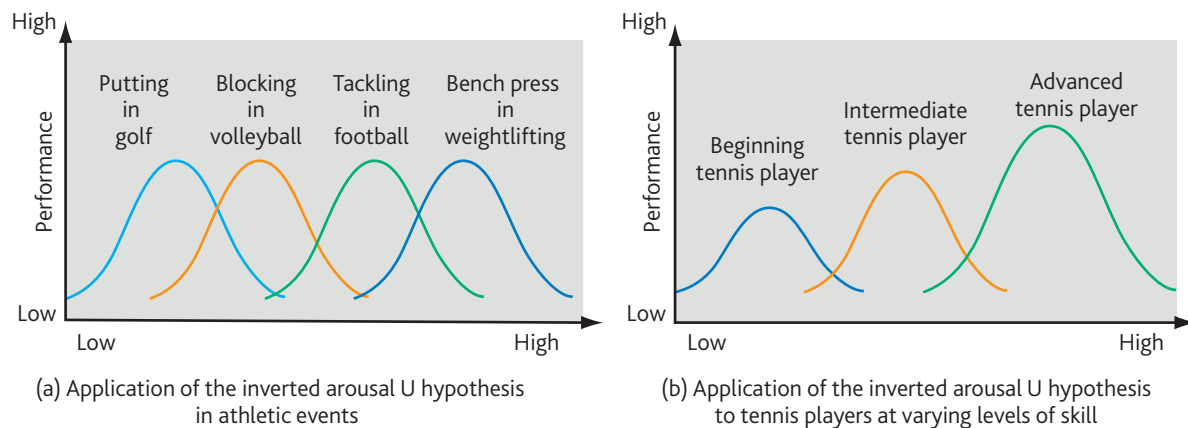
Another theory, the inverted-U hypothesis, suggested that a moderate level of arousal is needed for optimal performance; too little or too much arousal leads to a decline in performance. The name of the theory refers to the shape of the line formed when performance is plotted against arousal and anxiety on a graph (see Figure 2.4). This theory takes into account the complexity of the task and the athlete's stage of learning. As a result, different skills and sports have different optimum levels of arousal.

To achieve optimal arousal, athletes can use techniques for relaxation, motivation and goal setting, which are discussed later in the chapter.



2004 AF

Figure 2.4 Inverted-U hypothesis and drive theory are used to explain optimal arousal.



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Figure 2.5 The inverted-U hypothesis can be applied to allow for the complexity of the task and the athlete's stage of learning.

ACQUIRE

- 1 Explain how anxiety and arousal differ physiologically and psychologically.
- 2 Identify the limits of the inverted-U theory.
- 3 Compare the differences in performance between an under-aroused athlete and an over-aroused athlete.

APPLY AND EVALUATE

Referring to Figure 2.5, why do you think different sports might require different levels of arousal for optimal performance?

EXTENSION

A number of other theories predict a relationship between performance and arousal. Research some other theories. How do they differ from the drive theory and inverted-U hypothesis? In what ways are they similar?

Distractions

Distractions are an inevitable part of every sporting situation. Players who are distracted must refocus their attention or concentrate on the task.

In sport, distractions range from noisy spectators or a frustrated coach yelling, to the smell of a hamburger. Another type of distraction is an opponent's deliberate strategy to draw attention away from the play they wish to make.

An example of an opponent using distraction deliberately in a game can be seen in volleyball. Volleyball offence in the 1960s was very predictable. Spike attacks were only ever made from the two outside positions in the front court. In the early 1970s, Japanese players revolutionised this by making spike attacks from any position on the court. With this new method of attack, blockers' attention was drawn to opposing players who ran through a spike motion only to have the ball sent to another player on the court. It became necessary for players on the defensive team to distinguish the irrelevant cues of the 'dummy runners' and identify the correct spiker to defend.

Can you think of an example in your sport where irrelevant cues are used to distract or confuse the opposition?

Athletes prepare themselves for distractions by adopting some of the concentration techniques that are discussed later in this chapter.

Attention

To understand distractions, it is necessary to understand the nature of attention and concentration.

Attention involves taking control of the mind and, with clarity, focusing the senses—such as sight and hearing—on what is important. It might mean withdrawing concentration from one thing to focus on another. Terms commonly used when describing attention include 'alertness', 'focus' and 'concentration'.

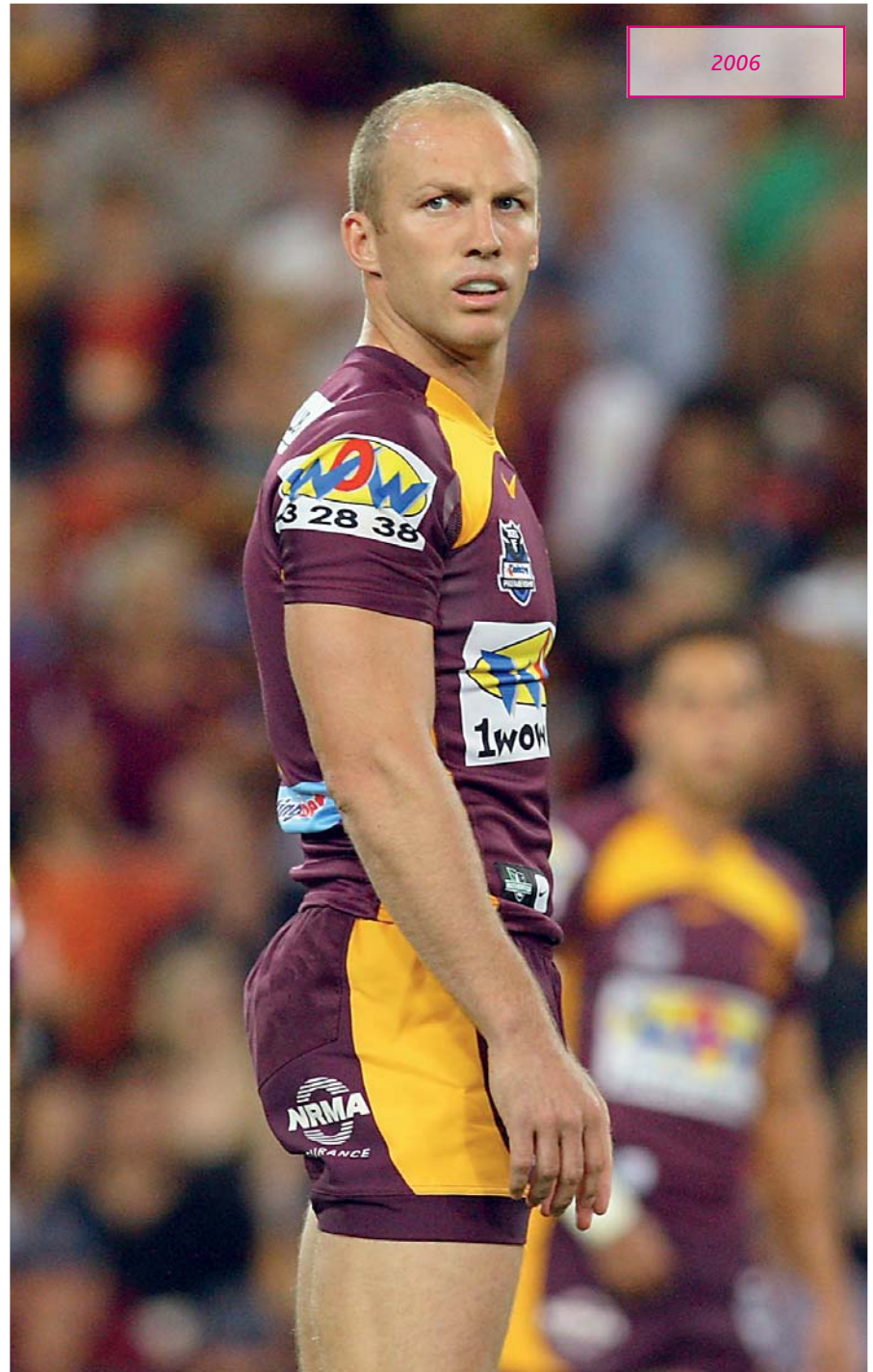


Figure 2.6 Focusing attention is important when performing under pressure.

Attention can be considered a mental process that is:

- selective—we can focus on some things, but not others
- shiftable—we can change it voluntarily or involuntarily
- divisible—we can maintain more than one focus at the same time.

When athletes perform, they are expected to be able to focus their attention on the tasks required of them (relevant cues) and block out anything that might distract them from their performance (irrelevant cues or distractions). Sports psychologists call this selective attention.

An example of selective attention at work is when you read a book while playing music or watching television. As you read, your brain will allow you to selectively attend to the book while still being conscious of the sound in the background. If you tune in to the music or television, it will become difficult to follow the message of the book even if you continue reading. When this happens, you will often have to reread a section of the book to understand what is written.

Dimensions of attention

In 1976, Robert Nideffer identified two different **dimensions of attention**: width and direction. The width dimension refers to the amount of information from the environment that an athlete tries to perceive, which can be broad (a lot) or narrow (a little). The direction dimension looks at how athletes can focus either on stimuli from sources that are internal (their own thoughts and cues) or on those that are external (such as environmental cues and their opponent). According to Nideffer, four types of attention are therefore possible, as shown in Figure 2.7.

The dimension or type of attention required varies depending on the type of sport and the stage of the game. For example, a broad–external attention focus is often a requirement in open-skill team sports. In target sports such as archery, a typical attention focus would be narrow–external. In many activities, being able to shift between the dimensions of attention is important.

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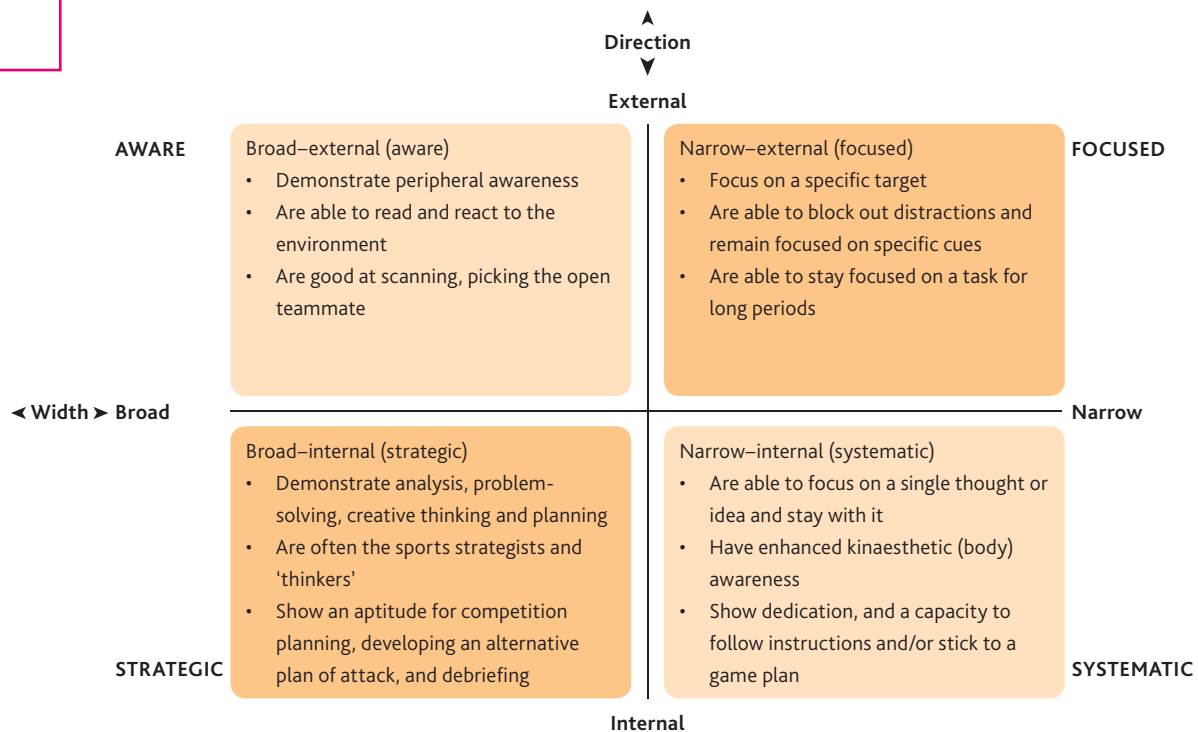


Figure 2.7 Athletes demonstrate different characteristics across the dimensions of attention.

ACQUIRE

- 1 List four different types of distractions a player might experience.
- 2 Explain the term 'selective attention'.
- 3 Describe the four dimensions of attention.

APPLY AND EVALUATE

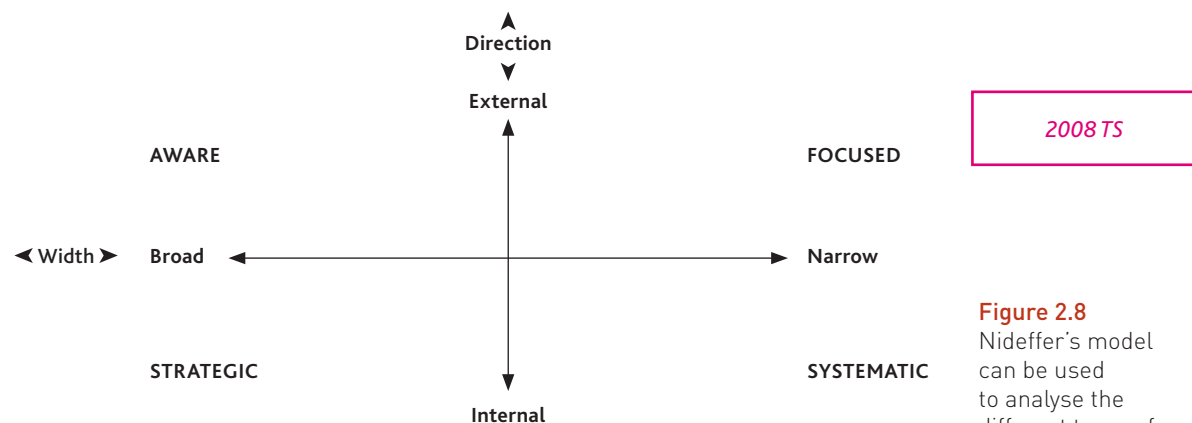
Copy Figure 2.8 onto a sheet of paper. Referring to Figure 2.7, place the letter or number of each of the following sports and coaching skills in the appropriate quadrant of the diagram.

Sports skills:

- a Tackling in football
- b Putting in golf
- c Psyching up for the game
- d Rebounding in basketball (when the ball has hit the rim)
- e Listening to instructions
- f Planning a gymnastics routine
- g Executing a gymnastics routine
- h Running a marathon

Coaching skills:

- 1 Developing a game plan
- 2 Helping an athlete correct an error
- 3 Listening to a player
- 4 Deciding how to respond to an official's bad call
- 5 Delivering a speech
- 6 Analysing your competence as a coach
- 7 Giving directions at the beginning of practice
- 8 Resolving a conflict with a player



Source: American Coaching Effectiveness Program, *Sport Psychology Workbook*, Human Kinetics: Champaign, Illinois

Figure 2.8
Nideffer's model can be used to analyse the different types of attention required by different skills and activities.

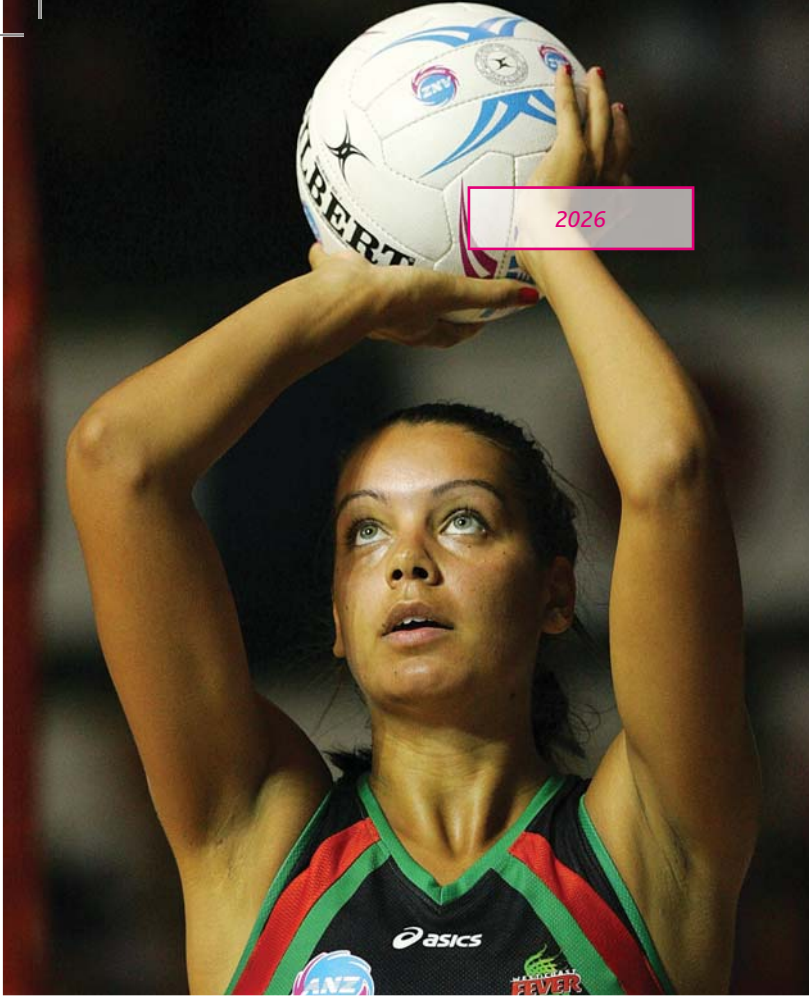


Figure 2.9 Motivation keeps athletes striving for success.

Poor motivation

Motivation is defined as the drive that causes people to behave in a particular way. Motivation can have a significant influence on athletes' performance. Athletes who lack motivation or who have poor motivation might not attend all training sessions, not train fully during training sessions and not perform at their best during competitions. Without some kind of reinforcement for effort, athletes will find it difficult to stay motivated. On the other hand, motivation is what keeps people striving for success.

Consider swimmers who have to attend early training sessions most mornings and again in the afternoons after school or work. Without effective motivation, they might go to training less frequently or apply less effort during training. This will cause their fitness levels, skill and performance to decline.

An athlete's level of motivation can affect and be affected by many of the other psychological factors mentioned in this chapter, such as stress and anxiety.

How would you rate your motivation to improve in the sport you are currently studying?

Poor processing of information

Sports performance can also be affected by athletes' abilities to process information. As explained in Chapter 1, the four stages of the information-processing model are:

- input
- processing
- output
- feedback.

During the input phase, the senses detect signals (or cues) that provide the athlete with essential information. An inability to detect these signals can result in poor performance. Malfunctions can include being unable to hear, see or understand the cues clearly, or missing vital cues due to distractions. Factors such as anxiety, over-confidence and under-arousal can all lead to cues going undetected.

During the processing phase, information gathered during the input phase is organised and analysed, and a decision is made about how to act. If cues were missed during the input phase, incorrect decisions might be made based on incomplete information. In this phase, factors such as anxiety and over-arousal can also impede a player's ability to access and process vital information stored in the long-term memory. Players who are not focused will often take longer to think and decide, and have slower reaction times and poorer performance.

When a decision is made, over-arousal or under-arousal can affect a player's ability to move with precision in the output phase. Over-arousal can increase the tension in a player's muscles and lead to imprecise movements. Under-arousal can have a lethargic effect on muscles, causing early fatigue and slower, clumsier movements.



Figure 2.10 Positive motivation, or the drive to succeed, and team cohesion are essential for strong performance.

Any feedback—internal or external—received by players during the feedback phase will reflect the earlier problems and can perpetuate any feelings of anxiety they may have had. Players who are already lacking confidence may then find it more difficult to perform well in future. They may also lose their motivation to continue, unless they are particularly determined or persistent.

Strategies to control poor information processing are often techniques to manage anxiety, stress, arousal and concentration.

Poor team cohesion

Teams need to develop cohesion to function at their best. **Team cohesion** is the main factor that changes a collection of individuals into a team. Albert Carron, a sports psychologist, defined group cohesion as 'a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives'.

Teams and groups that work well together demonstrate two types of cohesion:

- **task cohesion**, which is the ability to identify closely with the group's goals and to experience success obtaining these goals
- **social cohesion**, which is a bond between members formed through relationships and social interaction

It is possible to have strong task cohesion without the same social cohesion, but teams with both types of cohesion generally enjoy more consistent success. Research has shown that teams that lack harmonious relationships will not be as successful as teams made up of players who like and respect each other. For example, in 2010 the touring Pakistan test cricket team was competing well with strong task cohesion despite obvious animosity between some players. Eventually, the bickering of the team caused the task cohesion to wane, and the Pakistan team was defeated by the more cohesive Australian side.

▮ *Are you playing a team sport? How would you rate the task cohesion of the team? What about the social cohesion?*

A united team is far more effective than the sum of the individuals who make up that team. For example, a basketball team might have a number of strong individuals capable of scoring goals. Certain positions on a team—such as the point guard, which has the primary responsibility for creating scoring opportunities—will often receive more glory than others—such as the centre, whose main responsibility is to gather in rebounds and defend against the other team's shots. Low-profile positions may not get the individual glory of the goal scorers, but their role is still vital for the success of the team. In such sports, players need to recognise the importance of every position in the team, no matter what it is. To minimise any resentment and to safeguard team cohesion, coaches need to ensure that each player is made to feel equally important.

Figure 2.11 shows the factors that influence a team's cohesion and the possible personal and group consequences. Techniques used to manage team cohesion and team dynamics are discussed later in this chapter on page 70.

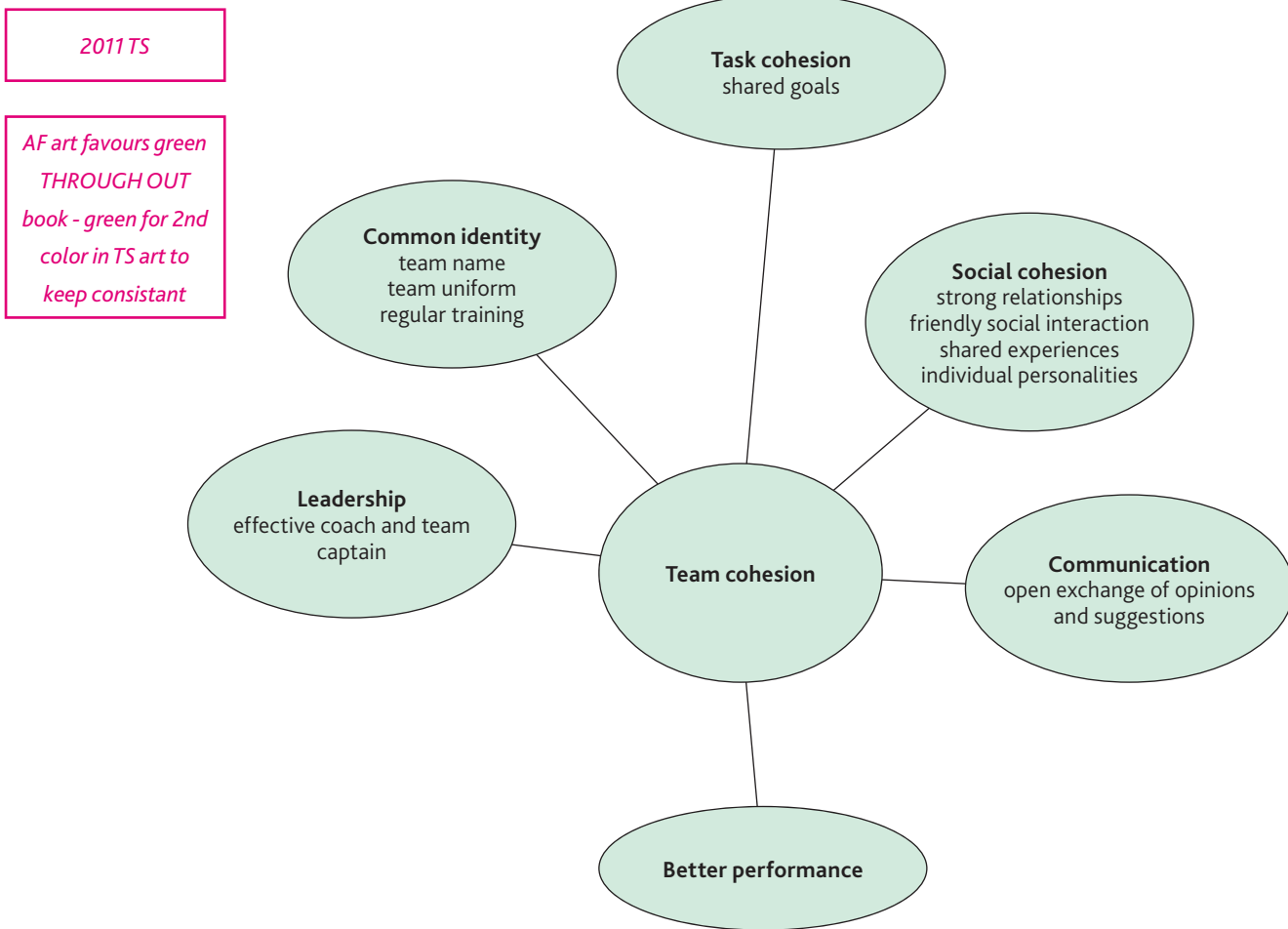


Figure 2.11 Team cohesion is built on factors that include task cohesion and social cohesion.

ACQUIRE

- 1 How can athletes' motivation affect their performance?
- 2 How can problems experienced during the input and processing stages of the information-processing model affect the output stage?
- 3 Describe the two types of team cohesion.

Techniques for managing sports psychology problems

Many different techniques can be used to manage sports psychology problems. While the techniques are grouped below according to the problem they are most commonly used to solve, it is important to remember that each technique can have benefits in more than one area. For example, **mental rehearsal** has effects not only on anxiety and over-arousal but also on motivation and concentration.

Managing anxiety, stress and over-arousal

When negative feelings, such as anxiety, stress or over-arousal, affect athletes' performance, techniques can be used to help athletes gain control of their emotions.

Mental rehearsal before the event prepares athletes for the pressure of competition; relaxation techniques, such as **progressive relaxation, meditation, biofeedback** and **hypnosis** can be used before and during an event to help athletes reduce their reaction to stress.

Mental rehearsal

Mental rehearsal is when an athlete practises in his or her mind the physical skills that the athlete wishes to perform. In this process, there is no visible physical movement; the athlete imagines the performance and rehearses the activity in his or her mind to try to prepare the mind and body for competition.

Mental rehearsal is particularly used to manage and reduce negative emotions such as anxiety. A key feature of mental rehearsal is that it can often replicate the feelings of anxiety individuals will experience during the performance while allowing them to visualise success. This provides athletes with a positive frame of mind for competition and prepares them for the pressure they could experience.

Have you tried using mental rehearsal before a performance? If so, what difference did it make?

This ability to picture a performance, or aspects of it, is a skill that can improve performance. Mental rehearsal has been found to be effective when acquiring new sports skills and when performing well-learned skills. Many studies have found that a combination of mental and physical practice results in better performances than mental or physical practice alone.

Mental rehearsal allows athletes to:

- practise old skills
- learn new skills
- experience success
- train in any conditions
- concentrate and refocus
- prepare for training or competition
- find motivation
- gain confidence
- develop coping strategies
- control anxiety and arousal.

It is believed that mental rehearsal works because imagining an action creates electrical activity in the muscles involved in the movement, even though they do not visibly move. Mental rehearsal also allows the brain to work out problems, propose solutions and make decisions. It strengthens the neural connections between the brain and the muscles, which are needed to create the movement. Good mental rehearsal works because athletes not only see the image, they also feel it.



Figure 2.12 To focus the athlete, visualisation can take place immediately before performance.

As athletes develop and practise their mental rehearsal skills, their performance, concentration and attention will improve. They will also gain greater confidence.

Guidelines for mental rehearsal include the following:

- Athletes should try to mentally rehearse in the environment in which they will perform or compete so they can better include environmental cues in their imagery.
- Athletes should mentally rehearse the total performance or the sections that are particularly difficult for them.
- The mental rehearsal should end with an image of achieving the goal to reinforce success.
- To focus the athlete, mental rehearsal should occur immediately before performance.
- Mental actions and imagery should occur at the same rate as they would in a real performance.
- Athletes should imagine how their muscles will feel as the mental task is being performed.

Visualisation

Visualisation is one mental rehearsal technique that involves creating a mental picture of just one aspect of a performance or skill. It often happens immediately before performance. It is different from mental rehearsal, which involves rehearsing a whole performance.

The mental picture created through visualisation might be an 'internal' picture (the athlete imagines what it looks like from the athlete's perspective as the performance unfolds) or an 'external' picture (the athlete imagines the crowd's perspective of the performance).

It is also possible to visualise a picture of something other than the performance, such as the environment at the event, a safe and secure place, or the moment of victory.

For example, high-divers might picture themselves leaving the diving board in a certain way. It will improve the divers' confidence because in their mind the dive has begun successfully. High jumpers may use visualisation to focus on clearing the bar or correctly planting the take-off foot before the jump.

Anything can be visualised, but not all people find it easy to visualise. First, the person must believe that the strategy is effective. Second, it is a skill that requires time, patience and practice—it might require practice every day.

Clear, vivid visualisation can assist athletes to:

- 'switch on' or 'switch off' (become aroused or relaxed)
- see and experience success
- refocus (before or during an event)
- practise and perfect skills
- motivate themselves
- prepare for a performance.

ACQUIRE

- 1 Compare mental rehearsal with visualisation. How do they differ?
- 2 Why would an athlete use mental rehearsal techniques? How do mental rehearsal and visualisation help improve an athlete's performance?
- 3 When is the best time for an athlete to use mental rehearsal?

APPLY AND EVALUATE

- 1 Discuss how mental rehearsal and visualisation could be used by a golfer.
- 2 Describe how you could use mental rehearsal or visualisation in your current physical activity.

PRACTICAL

Mental rehearsal

- 1 Perform this group task as a class.
 - a Propose a suitable practical experiment, such as the example below, to test the effects of mental rehearsal on athletic performance.
 - b Carry out the experiment, recording the scores.
 - c When your experiment is complete, tabulate and graph the results.
 - d Discuss any differences in the results.

Example of a suitable experiment—basketball free throws

Three groups perform a number of basketball free-throw trials. The first group uses physical practice only; the second group uses mental practice only; and the third group uses a combination of physical and mental practice.

- Group 1 (physical practice) performs twenty free throws in a row.
 - Group 2 (mental practice) mentally rehearses free-throw shooting for 5 minutes, and then shoots twenty free throws.
 - Group 3 (mental and physical combination) mentally rehearses for 5 minutes, and then shoots ten free throws. The group then does another 5-minute mental rehearsal session, followed by the final ten free throws.
- 2 Assess your own visualisation skills by completing the following task.

Select a specific skill or activity in a sport you play. With no one else present, imagine yourself performing the skill or activity at the place where you usually perform it. Close your eyes and, for 2–3 minutes, try to see yourself at this place. Hear the sounds, feel the body movements and be aware of how you feel. On a scale of 1–5 (with 1 being very poor and 5 being very good), assess how well you did each of the following:

 - a saw yourself performing the activity
 - b heard the sounds of performing the activity
 - c felt yourself performing the activity
 - d were aware of your mood
 - e were able to control your image.

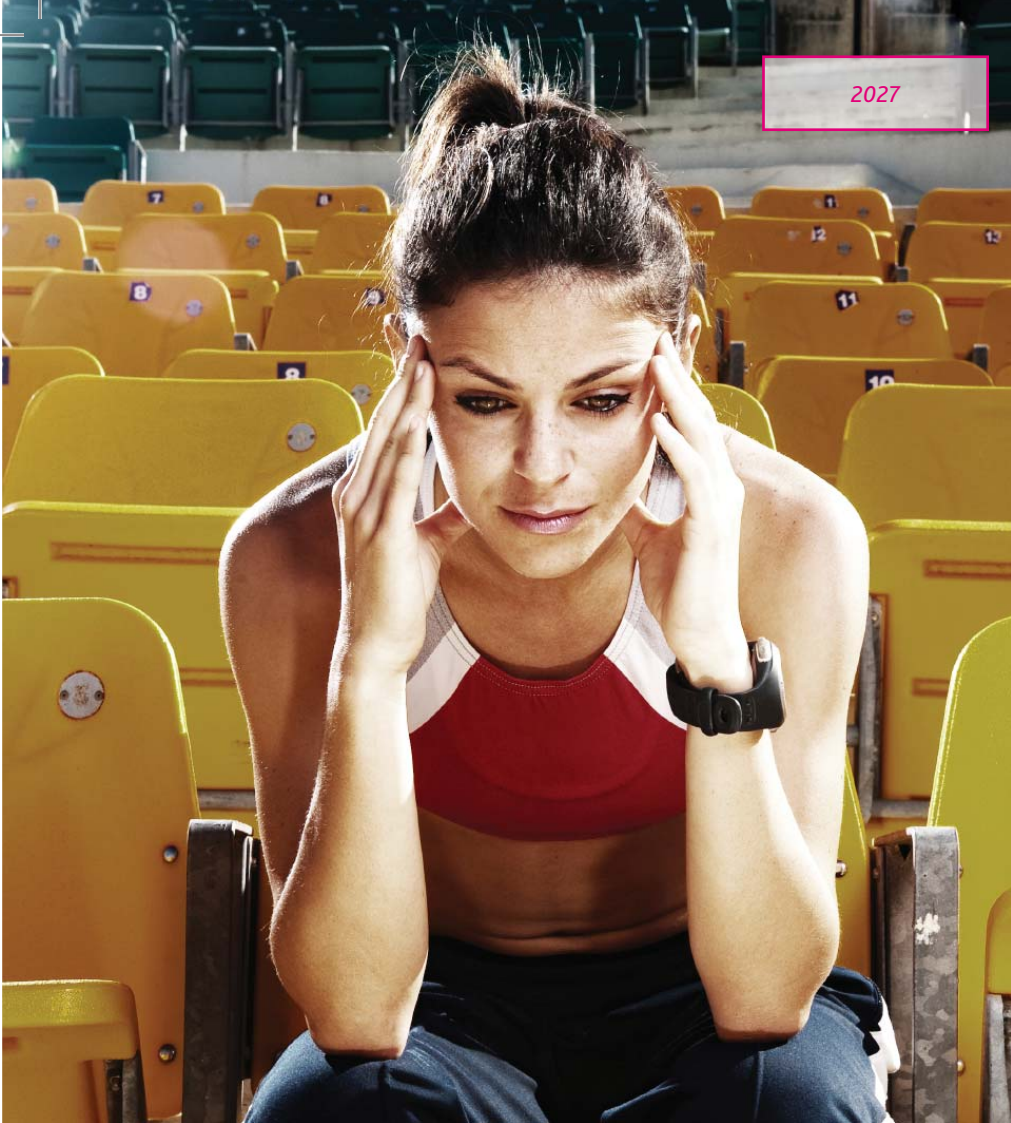


Figure 2.13 Relaxation techniques help athletes feel less anxious and more motivated.

rehearsal. As with mental rehearsal and visualisation, it must be practised so that it becomes a natural response. The techniques should be performed regularly and frequently—two or three times per day in the beginning, and then as necessary.

Relaxation techniques usually have one or more of the following characteristics:

- procedures for tensing and then relaxing muscles
- a focus on breathing
- a focus on feelings of heaviness and warmth
- visualisation.

For most relaxation techniques, the person needs to sit comfortably or lie down. Four other factors are also necessary for relaxation:

- a quiet environment
- a positive attitude
- low muscle tension
- a relaxation device or technique.

The many relaxation devices and techniques include progressive relaxation, meditation, biofeedback and hypnosis. Each technique is slightly different, but they all produce essentially the same result: calmer, more relaxed players who feel positive about the next bout of exercise.

Relaxation techniques

Relaxation techniques are often used by athletes to calm themselves, thereby decreasing anxiety and controlling over-arousal. An astute and experienced player will be able to relax in stressful situations and to respond with control and calmness, without being under-aroused.

When athletes are relaxed they are better able to put their performances in training and competition into perspective. They will be less worried about the results and will be better able to focus on the performance. This will make them less anxious and more motivated, which ultimately will improve their performance.

Relaxation can be useful before, during or after an event and usually precedes mental

Progressive relaxation

Progressive relaxation involves the systematic tensing and releasing of muscles. If all muscles are relaxed, it is impossible to experience feelings of stress and tension.

The following is one progressive relaxation technique:

- 1 Make a fist with the right hand and squeeze tightly for 5–7 seconds.
- 2 Concentrate on being aware of the strain in the back of the hand and up the arm.
- 3 Let the hand relax completely, and feel the difference.
- 4 Continue the process using other individual muscle groups.

By concentrating on each muscle group in a similar manner, the person becomes progressively better at relaxing. Eventually the person is able to relax the muscles without first tensing them; sometimes a cue word is enough to produce the feeling of relaxation. This technique is particularly useful for neck and shoulder tension, tension headaches and tight jaw muscles.

Meditation

Meditation involves totally concentrating on a word, phrase or image—often called a 'mantra'. Concentrating on one thing frees the mind from other distracting thoughts that might cause stress. Meditation gives the body time to relax and recuperate after stress or physical activity.

Biofeedback

Biofeedback uses instruments that measure changes in bodily functions. The instruments give athletes better control of changes to their bodies because they make them aware that the changes have occurred. The instruments can measure changes in skin temperature, sweating, heart rate, breathing, muscle activity and brain waves.

For example, a heart rate monitor alerts a person to a fast heart rate, and the person then concentrates on lowering the heart rate by using relaxation techniques. Players can use the instruments in training to develop skills to control feelings of anxiety or arousal. The same strategies can be applied in the competitive environment to relax.

Biofeedback is a very effective relaxation tool. The main drawback is the expense of the equipment.

Hypnosis

Hypnosis is the creation of a sleep-like condition with the help of another person. It is used to induce a state of deep relaxation and has some similarities to meditation.



Figure 2.14 Meditation involves total concentration and can relieve stress.

PRACTICAL

Relaxation techniques

- 1 Conduct the following relaxation activity in your class. The activity should be done in a quiet place with gentle, relaxing music playing softly in the background.
 - a Lie comfortably on your back and close your eyes.
 - b Deeply relax all the muscles in your body, beginning with your toes and progressing up to your face. Make all your muscles feel very heavy and totally relaxed.
 - c Breathe through your nose and become aware of your breathing. As you breathe out, say the word 'one' silently to yourself. Every time that you breathe out, say 'one'. Continue for 10 minutes.
 - d When you have finished, open your eyes slowly and lie still for a few more minutes.

When would you complete a relaxation task such as this? If you had to play a competitive match now, how would you feel? How would the relaxation activity affect your performance?

- 2 Read the case study below, and then answer the questions that follow.

Case study

John had been in this situation a hundred times before. It is the final, and he is on the free-throw line. The scores are equal, with one shot to come and 15 seconds on the clock. Suddenly, everything freezes. He hears the crowd and sees the opposition. The hoop is far too small for what appears to be the beach ball that he is now holding. Everything is hazy. He cannot feel his hands. He has 10 seconds to make the match-winning shot.

- a Explain the physiological and psychological responses taking place in John's body.
- b Identify what might have caused this situation.
- c Suggest some techniques that John could use to make this shot successful.

APPLY AND EVALUATE

Lydia Lassila won a gold medal in the women's freestyle aerials at the 2010 Winter Olympic Games in Vancouver. Her sports psychologist, Queenslanders Jeffrey Hodges, explained the struggles Lydia experienced and the techniques he used to overcome these in an interview with ABC radio. Listen to the interview and discuss the psychological problems Lydia experienced and the techniques she used to overcome them.



[Click to access the interview with Jeffrey Hodges.](#)

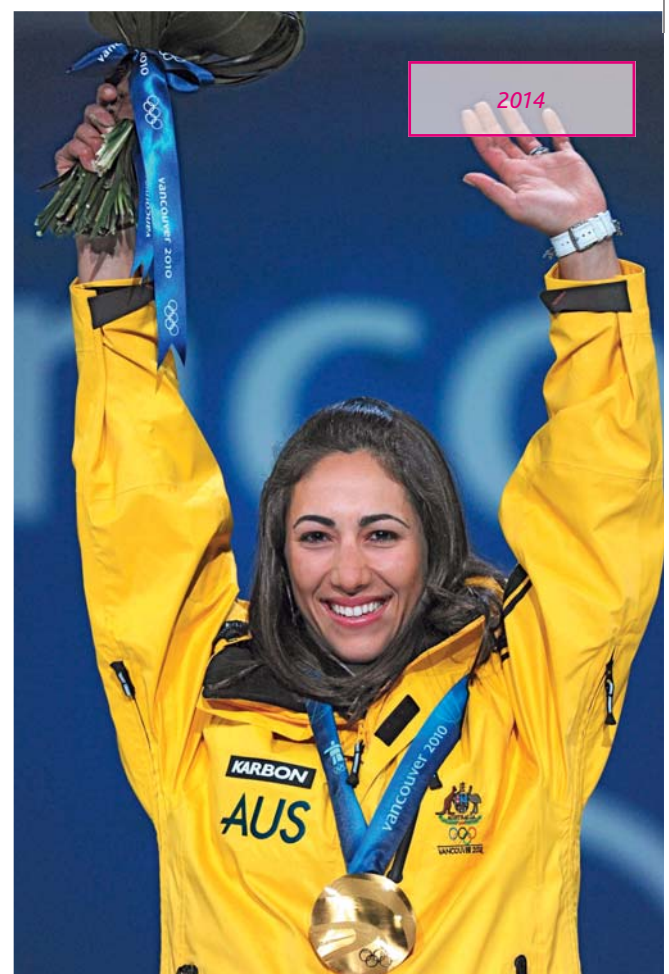


Figure 2.15 Lydia Lassila used mental rehearsal and relaxation techniques to win a gold medal at the 2010 Vancouver Olympics.

Managing concentration

Concentration techniques

It is important that athletes of all skill levels, and their coaches, develop techniques that reduce the effects of distractions and improve concentration.

Constructive coaching

Often, during practice or competition, players will hear someone, often a coach, say to them, 'Keep your eyes on the ball,' 'Watch the ball into your hands' or 'If it's not in the strike zone, don't swing.' Such comments are intended to make the player focus attention on the task at hand.

Recognising relevant cues

Not all comments from the sidelines, however, are helpful. Comments such as 'That was useless!' or 'My grandmother can kick better than that!' do not help to keep an athlete focused, and they can instead become a distraction.

An athlete's ability to recognise and attend to appropriate stimuli during competition is called focus or concentration. Concentration involves giving attention to relevant environmental cues, and maintaining that attention. Attention involves the use of the senses: sight, touch, hearing and smell. By improving their ability to focus on relevant cues and ignore irrelevant ones, athletes will be able to improve their performance.

During a competition, players need to be able to constantly adjust their focus to allow for changing conditions, such as changes in the actions of their opponent.

For example, what cues are relevant when a rugby union goal-kicker is taking a kick for goal? Relevant cues can include the angle of the kick to be made, the direction and intensity of the wind, and the position of the ball in its holder on the ground. Irrelevant cues can include the crowd behind the goalposts, the players running towards the kicker to 'charge down', and the score. The ability of kickers to focus on relevant cues and to filter out all extraneous noise and movement is critical to their ability to kick goals.

Have you developed a strategy that can help you to regain concentration when distracted?

Routines

Many athletes take a moment to perform routines before closed skills, such as serves, free kicks and pitches, to increase their concentration. For example, a rugby union goal-kicker might find that his usual pre-kick routine of taking five steps back, taking two steps to the side, looking at the posts, looking at the ball, tapping the right boot twice on the ground and then putting the foot beside the ball will improve his concentration.

Performing small routines or tasks periodically can also help athletes to maintain or regain their concentration. For example, a tennis player might adjust the racquet strings between points; a badminton player might walk to the back of the court and touch the base line before returning to serve at the T; and a volleyball player might bounce the ball several times before rolling it back to the opponent.

Such routines can help because they give athletes a few moments to gather their thoughts and because their bodies recognise the rehearsed movement pattern and know instinctively what to do next.

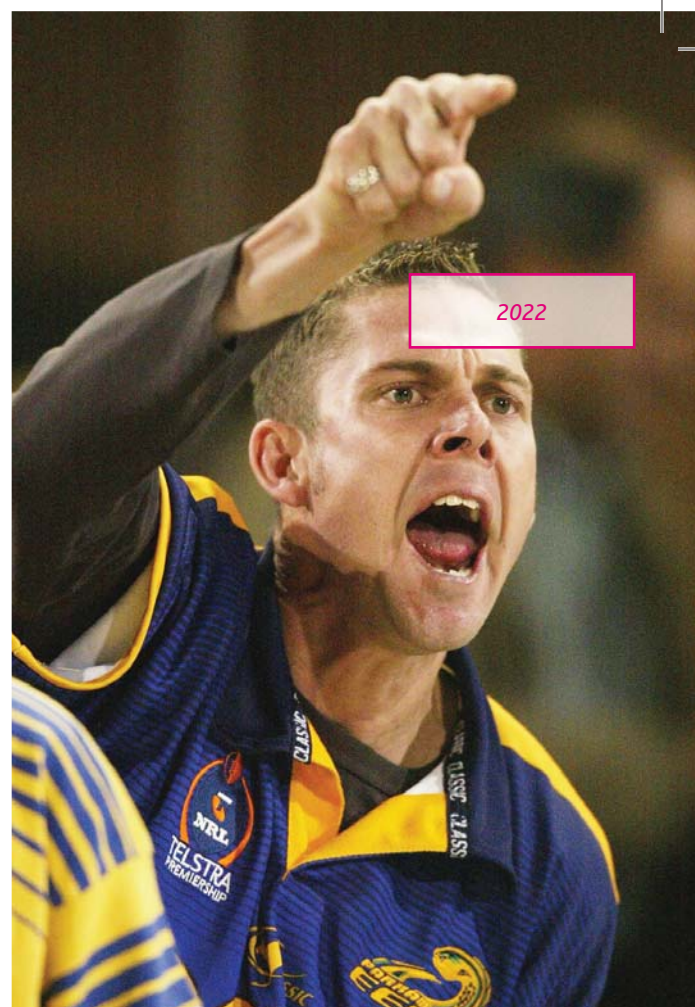


Figure 2.16 Not all comments from the sidelines are helpful.

Six-step routine

One routine that can be applied to most sporting situations is the six-step routine.

- 1 Consider your tactics and strategy.
- 2 Check your equipment.
- 3 Take a deep breath and release any tension.
- 4 Build a positive mental image.
- 5 Focus.
- 6 Go for it!

Case study—routine

Have you ever played a game where nothing can go wrong? Everything you try works to perfection: the ball seems to come to you in slow motion; you have time to execute the play just as you imagined; and your physical responses are confident. Athletes call this being in the 'zone'.

Some athletes are able to consistently achieve this mental state. Very few professional basketball players have been able to shoot more than fifty consecutive free throws during their careers. But Tom Amberry shoots free throws at a gym near his home in Seal Beach, California, and often sinks 500 in a row. Some days he simply cannot miss. On 15 November 1993, aged 71, he shot 2750 consecutive free throws.

Instead of worrying about whether the ball will go through the hoop, Amberry shifts his attention. He checks to make sure his shoulders and feet are properly lined up. Then, he bounces the ball exactly three times, never taking his eyes off the ball's black inflation hole. He makes sure his fingers line up on the ball the same way before each shot. Finally, he looks at the basket and shoots. His trick is to use a routine to remove conscious control of the shot and let instincts take over.



[Click to download practical worksheets and detailed instructions for the six-step routine and to learn more about Amberry's methods.](#)

Associative and dissociative attention strategies

How does a marathon runner stay focused for several hours while competing? Elite marathon runners have two possible strategies to maintain concentration: associative and dissociative.

Associative attention strategies involve concentrating on bodily functions and feelings (for example, heart rate, breathing and muscle tension).

Dissociative attention strategies, on the other hand, require athletes to concentrate on external cues (for example, people, cars and the course) rather than those occurring in their body. Being a 'dissociator'—one who tunes out body cues—might cause problems later in the race when the athlete is extremely tired.

ACQUIRE

- 1 Using a sporting example, explain the difference between relevant and irrelevant cues.
- 2 What can athletes do to increase their concentration when feeling distracted?
- 3 How do routines help athletes improve their concentration?
- 4 Explain the differences between associative and dissociative strategies.

PRACTICAL

Concentration techniques

Design your own experiment to test the effectiveness of concentration techniques.

For example, practise shooting basketball or netball goals. In small groups, try to shoot goals:

- 1 without external distractions
- 2 while other group members act as distractions by cheering loudly, heckling or calling out.

Start off without using any concentration techniques. Then, repeat using a variety of concentration techniques.

Preferred concentration techniques vary. Which technique did each member of your group find the most helpful?

Managing poor motivation and under-arousal

Motivation and under-arousal can be closely linked, and for this reason the strategies used to remedy one are often also effective at managing the other.

How are athletes motivated?

What motivates one athlete may not necessarily motivate another, so each athlete needs to determine how they best achieve and maintain motivation.

To understand motivational techniques, it is important to understand the types and sources of motivation.

Positive and negative motivation

Motivational influences can be categorised into two broad types:

- **Positive motivation** is recognition, praise and reward for good performance. Athletes are motivated to do well to receive the rewards.
- **Negative motivation** is the feedback athletes receive when coaches, parents or friends consider their behaviour unacceptable or substandard. Athletes avoid unacceptable behaviour for fear of the negative reactions of others. An example of negative motivation can be a coach's dropping players to a lower grade when they fail to perform.

Although both forms of motivation are used, coaches need to carefully assess all players and treat each player individually. Because of personality differences, individual players respond differently to positive and negative motivation. Motivation techniques used incorrectly can lead to a decline in performance.

Generally, positive motivation is more acceptable to athletes than negative motivation. It is also usually more successful in improving and maintaining motivation.

☞ *Which type of motivation—positive or negative—do you respond to better?*

Intrinsic and extrinsic motivation

Motivation can come from one of two main sources:

- Intrinsic (internal) sources of motivation come from within the individual.
- Extrinsic (external) sources of motivation come from outside the individual.

Intrinsic and **extrinsic motivation** can co-exist, and an important factor in maintaining motivation is to determine the right balance between the two. Both types of motivation serve to reinforce particular behaviour.



Figure 2.17 Negative social reinforcement can motivate some players to perform at their best.

Intrinsic forms of motivation come from individuals' personal concerns about their performance and their own desire to succeed. Their sense of satisfaction may come from having fun or doing well, and is not necessarily related to any external measure, such as trophies or public recognition. Rather, it is the personal knowledge that an individual has done his or her best. An example of intrinsic motivation is an athlete who continues to finish a race despite knowing that there is no chance of winning; simply finishing satisfies a personal need.

Extrinsic forms of motivation are often associated with material rewards, such as money, trophies and recognition. Examples of extrinsic rewards are the financial payments given to professional athletes, trophies presented at swimming carnivals or, in a sports class, not having to help pack away equipment after the class.

Social reinforcement

One type of external motivating force is **social reinforcement**. Social reinforcement is any type of recognition or disapproval that occurs in front of others, such as teammates, parents or spectators.

An example of positive social reinforcement is recognition and approval from the coach in front of teammates. Negative social reinforcement would be disapproval and rebuke in front of teammates.

Both positive and negative social reinforcement motivate players to do better next time in order to either earn the recognition or avoid the disapproval; however, mismanaging social reinforcement can cause anxiety in some athletes.

ACQUIRE

- 1 Define 'motivation'.
- 2 Explain the difference between intrinsic and extrinsic motivation.
- 3 Describe, in your own words, social reinforcement.

APPLY AND EVALUATE

- 1 Describe your experiences with positive and negative motivation.
- 2 Suggest which form of motivation—extrinsic or intrinsic—would have the greatest long-term effects on sports participation. Why?
- 3 Imagine you are an under-10s soccer coach. Describe the types of social reinforcement you would give your players.

EXTENSION

- 1 Federer has won all four major tennis tournaments during his career (a career grand slam) and has broken the record for the most major tournament wins (sixteen).

Follow the weblinks to watch footage featuring tennis player Roger Federer.

What is Federer's motivation? What factors influence his motivation? Are they intrinsic or extrinsic?



[Click to watch online footage of Roger Federer.](#)

- 2 Investigate the type of motivation used by one professional athlete of your choice.

Techniques for improving motivation and under-arousal

Athletes' motivation comes from many sources (internal and external) and in many forms (positive and negative). For this reason, coaches employ many different techniques to keep players motivated.

Linked closely to motivation is arousal. As explained earlier in this chapter, for all physical activities there is an optimal level of arousal, below or above which performance deteriorates.

While relaxation techniques are useful for managing over-arousal, a number of strategies can help to lift the arousal levels of those who are under-aroused.

Under-arousal can occur when athletes' motivation is low or when they believe that they need to put in little effort. For example, when the opposition team is relatively weak and easy to defeat, arousal levels would be low due to the perceived ease of beating them. It is not uncommon for higher-ranked teams or players to be defeated by weaker opponents because they were under-aroused and complacent.

When players are lacking motivation or are under-aroused, psyching-up strategies are needed. Psyching-up strategies known to be effective include:

- receiving constructive feedback
- listening to fast-beat music
- hearing pep talks
- reading public notices
- being challenged
- using self-activation
- warming up pre-competition.

Feedback

Feedback from a well-respected coach or teacher can significantly boost an athlete's motivation. Whether on a team or in a physical education class, all athletes need feedback on their performance to help them feel a sense of worth.

Feedback is often linked to skill development; it is well known that to acquire new skills, feedback on technique and performance is needed. Feedback not only teaches athletes new skills but also gives them motivation to keep achieving small goals.

It is important, however, to ensure that any feedback given is constructive and mostly positive. Athletes who constantly hear negative feedback can lose confidence and motivation.

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Figure 2.18 Listening to up-beat music improves arousal and motivation.

Music

We often see athletes warming up while listening to their iPods and other MP3 players. Research over the years has shown a definite link between music and regulating arousal.

Music's tempo has an effect on athletes' movements. If athletes listen to a fast-tempo song, they are more likely to move quickly in response to the beat of the song. Under-aroused athletes wishing to increase their arousal should listen to music with a fast tempo. Over-aroused athletes can also manage their arousal with music. Research has shown that by listening to relaxing music with a slow tempo, over-anxious and over-aroused athletes can reduce their arousal levels.

Music is also believed to reduce perceived exertion during exercise because athletes' attention is diverted by the music. This enables athletes to train harder and longer.

It is not only professional athletes who can benefit from using music to regulate arousal. High school students have also reported changes in their effort and performance in lunchtime or class matches when up-tempo music is played loudly both before and during the match.

Pep talks

Motivational talks, commonly known as pep talks, by a coach, teacher, teammate or parent are a popular way of increasing athletes' motivation and arousal. Pep talks only work, however, if the athlete is receptive to the person delivering the speech—the athlete must respect or admire the person giving the talk.

Pep talks often use personal or team challenges, stories, poems, silence, reasoning and voice inflection to encourage and spur on players.

Figure 2.19 Public notices, such as posters, can be used to inspire and motivate athletes.

Public notices

Public notices, bulletin boards and posters are visual displays that can be used to inspire and motivate athletes in a way that is similar to pep talks'. Placed in prominent places, such as change rooms or training areas, they can be used to convey positive, motivating thoughts and ideas. Phrases such as 'experience tells you what to do; confidence allows you to do it' and 'the difference between try and triumph is just a little "umph"' can be effective.

In professional sports, this sort of psyching-up strategy is often seen in advertising campaigns that spur on both athletes and their fans.

Personal challenges

Personal challenges laid down by the coach or the opposition can also stimulate athletes to work hard.

For example, a coach might use a player's statistics to set goals to motivate that player: 'You served eight aces in your last tennis game. Let's see if you can achieve nine in your next game.' Using statistics can both motivate and increase arousal during performance.

Sometimes personal challenges can be accompanied by rewards for good performance: 'If you can achieve nine aces in your next game, we'll go out to celebrate.'

Self-activation

Lethargy can be reversed by the mental and physical actions of the athletes themselves. It is common to see athletes preparing for a big match by talking to themselves and psyching themselves up. Often their self-activation, or self-talk, is accompanied by actions, such as slapping their thighs.

Tennis player Lleyton Hewitt has a well-known self-activation strategy. His convincing 'Come on!' (yelled while pointing to his forehead) is effective at increasing his arousal during crucial points in his matches. It is also seen to possibly increase the anxiety and desperation his opponents feel after losing a point.

Pre-competition workouts

Warm-ups before competition are a vital part of achieving optimal arousal. A player who walks onto a court cold does not just risk injury but also increases the chance of not being psychologically ready for the match.

Arousal has been linked to adrenaline, and adrenaline is linked to physical activity—so it can be said that physical activity before competition provides athletes with the adrenaline they need for optimal arousal.

Furthermore, in team sports a high-quality warm-up can amplify the team effect, whereby the increasing arousal levels of teammates boost an individual athlete's **energy** and arousal. For example, in volleyball a typical warm-up includes a spiking session by both teams. In this session, if a player on the team performs a particularly good or intimidating spike, the rest of the team will respond and use it as a precursor to boosting their performance.

APPLY AND EVALUATE

- 1 Read the case study below, and propose a range of strategies that could be used to improve Sarah's motivation.

Case study

Sarah is a very talented hockey player and has received a scholarship to the Australian Institute of Sport. To retain her scholarship, Sarah must train hard during the off-season to improve her strength and **aerobic** fitness. Her coach has also suggested that she plays in a summer league to maintain her skills. Since her return at the start of the year, Sarah has played quite well, but she has not lived up to expectations. She seems lazy and uninterested at practice, and her school work also has deteriorated.

- 2 Think about your current level motivation in your chosen sport. Choose one strategy to help improve or maintain your motivation. Justify how and why it will work for you.

Managing goals

Goals serve a number of purposes and can be effective across a range of sports psychology problems; they provide focus and direction, and help to produce better results. Goal-setting in sport can assist motivation, and concentration, while reducing anxiety.

Athletes who have short-term and long-term goals are more likely to be motivated and aroused to strive for their goals. Their goals will provide a clear aim, and as athletes begin to achieve their short-term goals, their motivation will further improve. They will become more likely to train harder, which will lead to improved performance and to achieving further goals.

Goals can be related to the quality of the performance (performance-oriented) or related to the result or outcome (outcome-oriented). They might be based on technical, tactical, psychological or physiological factors.

Athletes who set realistic goals often experience less anxiety. Rather than focusing on any one performance, athletes will be able to reflect on each performance in relation to their achievement of the overall goals.

Short-term goals

Short-term goals are goals that can be achieved over a short period of time. Short-term goals should be realistic, appropriate and provide immediate performance feedback. They can be set for a single training session or for days (or weeks) ahead.

Some examples of short-term goals are:

- I will train four times per week for the next six weeks.
- I will increase weights by 10 per cent every three weeks.
- I will work on defence at training tonight.
- I will get six rebounds in the game today.
- I will mentally rehearse a difficult task at least once each day.

Short-term goals are often stepping stones on the path to achieving **long-term goals**. Smaller, short-term goals are used to break up larger, long-term goals into more manageable parts.

Long-term goals

Long-term goals focus on what might be possible in a few months, in one year or even in four years. Long-term goals often represent the end-point of training.

Some examples of long-term goals are:

- I will secure a top-five position at the competition.
- I will represent Australia at the next Olympic Games.
- I will achieve an 'A' for physical education this term.
- I will receive the most valuable player award at the end of the season.

 *What long-term goals have you set for yourself?*

Successful goal-setting

A number of useful principles can aid both coach and athlete to set effective goals.

- Make goals specific, not general.
- Set deadlines, write down the goals and set priorities.

- Provide clear and regular feedback about progress towards the goals.
- Ensure goals are challenging but achievable.
- Make goals flexible.
- Describe goals in behavioural terms.
- Use short-term goals to help achieve long-term goals.
- Make goals performance-oriented, not outcomes-oriented.
- Ensure goals are accepted and 'owned' by the athlete or team.

Athletes need to be able to assess the achievement of their goals over time. For a goal to be successful, it needs to be SMARTER: specific, measurable, attainable, realistic, timely, exciting and recorded. (For more information about setting SMARTER goals, see page 240 of Chapter 6.) For example, a goal such as 'I will get fitter' is less specific and harder to measure than 'By the end of this year, I will be able to do twenty push-ups'.

Athletes also need to be supported in the pursuit of their goals. Goals are most effective if they are collectively supported by the athlete's coaches, parents and friends. However, it is important that goals be based on the athlete's own standards, not on the standards or expectations of others. An athlete must feel that he or she 'owns' the goals.

ACQUIRE

- 1 Why is it important to set goals?
- 2 Distinguish between '**outcomes-oriented goals**' and '**performance-oriented goals**'.
- 3 Why are short-term goals useful in achieving long-term goals?

APPLY AND EVALUATE

- 1 Follow the principles for setting effective goals and set yourself a long-term performance-oriented goal towards which you can work.
- 2 List three progressively more challenging short-term goals that will move you towards achieving your long-term goal. For each of the three short-term goals:
 - a Set a date by which you want to achieve the goal.
 - b Describe two actions you could take to help you reach that goal on time.

EXTENSION

- 1 Choose a famous sportsperson and gather information about that person's psychological preparation for competition. Research the person's:
 - motivation
 - goals
 - psychological skills.
- 2 Compare your athlete with a classmate's chosen athlete.
 - What similarities and differences are evident?
 - Why are these evident?
 - How do each athlete's psychological skills affect his or her performance?



Figure 2.20 Cohesive teams are often more effective teams.

team uniform and have regular team training sessions. Many teams will go on weekend retreats that focus on teamwork and trust activities to further increase team cohesion.

Appointing a good leader is essential to maintain healthy team dynamics. The leader must be someone with demonstrated leadership qualities, good skills and the respect of teammates. The leader should be committed to the team goals and always act in the team's best interests.

Communication is another key factor in creating harmony. A team needs an environment in which all team members are encouraged to contribute their ideas and have their opinions and suggestions listened to.

Models of coaching

Three different styles of coaching are commonly adopted by sports coaches.

1 *Cooperative style*

The **cooperative style of coaching** is the most commonly used style. A cooperative coach shares the decision-making responsibilities among all members of the group, which allows individual team members to feel important.

When using this style, care must be taken to ensure that decisions are always the best for the team and do not only reflect the opinions of the team members with the strongest voices.

This style is also called 'liberal style' or 'teacher style'.

2 *Autocratic style*

In an **autocratic style of coaching** a coach has total power over the group's decisions. This coaching style is also known as the 'command style' or 'dictator style' of coaching.

This style is effective when athletes are novices and rely on the experience of the coach to guide and instruct them. As athletes become more experienced, autocratic coaches may need to consider the opinions of the athletes more.

3 *Democratic style*

Using the **democratic style of coaching**, coaches encourage athletes to lead their own training sessions and only intervene when they feel it is necessary. The democratic style is also known as the 'babysitting style' or 'submissive style'.

For this style to be effective, the athletes need to be highly motivated to achieve goals and work hard.

Coaches using this style must be aware of the capabilities of the athletes under their care and ensure that athletes maintain a high standard in their training.

Managing team cohesion

Three important strategies to improve team cohesion include building a common identity, choosing a strong leader and encouraging communication among team members.

A common identity is useful to improve team cohesion. To build an effective team, teams should have a team name, a



02: SUMMARY

- Athletes can experience anxiety as a result of their inherent personality traits (trait anxiety) and/or their environment or situation (state anxiety).
- Arousal is a measure of how enthusiastic or ready an individual is to perform. In between the two extremes of under-arousal and over-arousal is an optimal level of arousal at which athletes will perform at their best.
- The information-processing model can be used to explain how athletes' abilities to recognise cues and make appropriate decisions affect and are affected by their state of mind.
- Mental rehearsal and visualisation allow athletes to practise skills in their mind before performance, improving their ability to physically perform the skills when required.
- Relaxation techniques give athletes time to calm their mind, focus and improve their performance.
- All athletes need motivation to succeed. Motivation can be positive (a reward for a good performance) or negative (a desire to avoid the consequences of a poor performance).
- Intrinsic motivation is a source of motivation that comes from within the individual. Extrinsic motivation comes from outside the individual.
- Psyching-up strategies are effective at improving low motivation and under-arousal.
- Goal-setting provides athletes with ongoing challenges and motivation.
- Team cohesion can be improved by building a common identity, choosing a strong leader and encouraging communication.
- Three models of coaching are the cooperative style, the autocratic style and the democratic style.

NOW THAT YOU HAVE FINISHED ...

- 1 What are some common psychological problems faced by athletes?
- 2 a Identify some causes of state anxiety in sport.
b Describe four coaching strategies that could be used to reduce it.
- 3 Identify the sources of stress an athlete may face before and during competition.
- 4 Explain why a state of complete relaxation is not always beneficial for sports performance.
- 5 Describe how optimal arousal can enhance performance.
- 6 Rank the following Olympic sports from the one that would benefit from the most arousal to the one that would require the least arousal to perform. Then, outline the reasons for your ranking.
 - archery
 - tae kwon do
 - boxing
 - sailing
 - shooting
 - football (soccer)
 - swimming
 - weightlifting.
- 7 Outline the differences between intrinsic and extrinsic motivation.
- 8 Discuss the effect of motivation on performance.
- 9 Research how athletes from different sports use psychological strategies to improve their motivation and control their anxiety.
- 10 a Describe the relaxation and goal-setting techniques that can be used to manage anxiety.
b Evaluate their effect on performance.