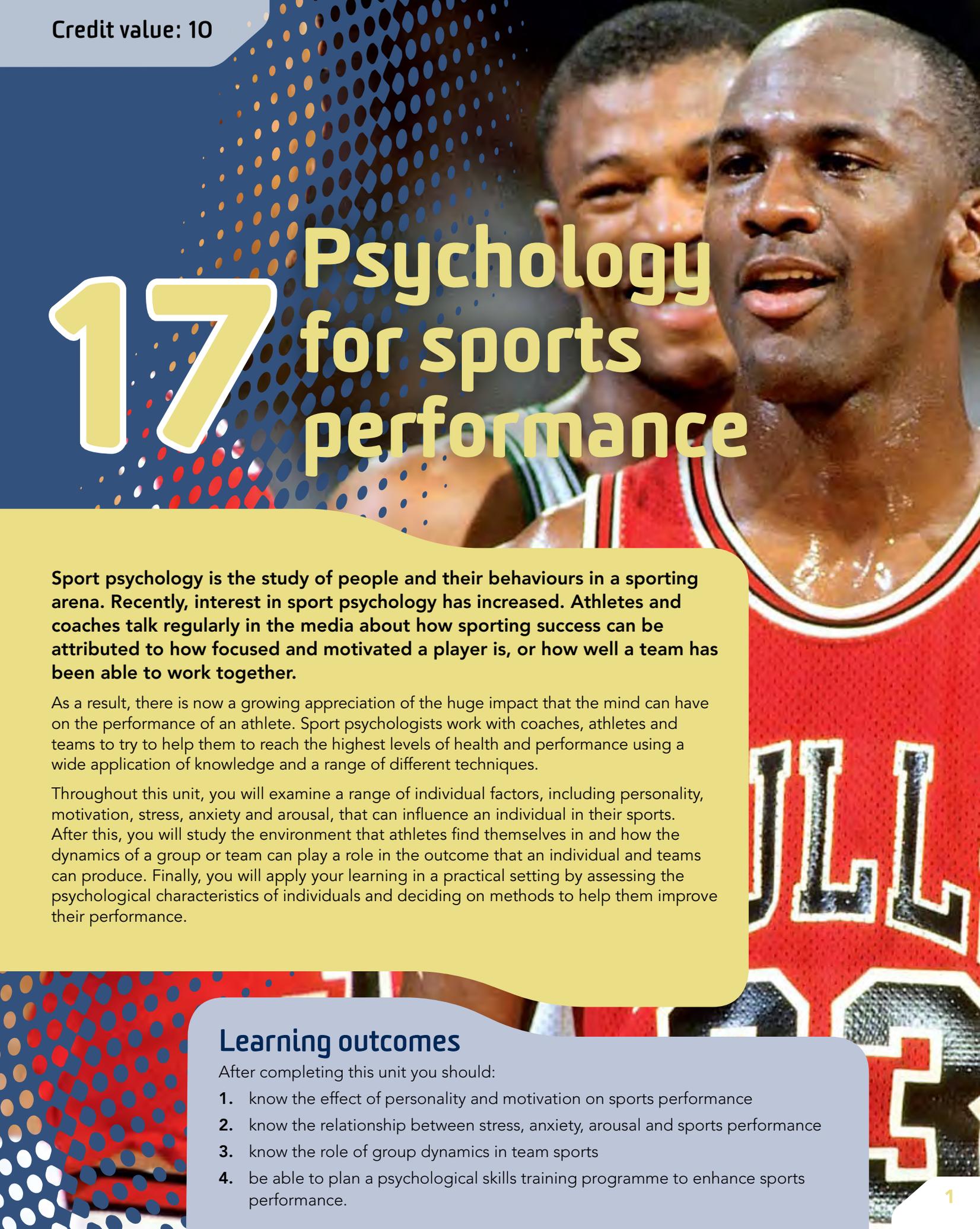


17 Psychology for sports performance



Sport psychology is the study of people and their behaviours in a sporting arena. Recently, interest in sport psychology has increased. Athletes and coaches talk regularly in the media about how sporting success can be attributed to how focused and motivated a player is, or how well a team has been able to work together.

As a result, there is now a growing appreciation of the huge impact that the mind can have on the performance of an athlete. Sport psychologists work with coaches, athletes and teams to try to help them to reach the highest levels of health and performance using a wide application of knowledge and a range of different techniques.

Throughout this unit, you will examine a range of individual factors, including personality, motivation, stress, anxiety and arousal, that can influence an individual in their sports. After this, you will study the environment that athletes find themselves in and how the dynamics of a group or team can play a role in the outcome that an individual and teams can produce. Finally, you will apply your learning in a practical setting by assessing the psychological characteristics of individuals and deciding on methods to help them improve their performance.

Learning outcomes

After completing this unit you should:

1. know the effect of personality and motivation on sports performance
2. know the relationship between stress, anxiety, arousal and sports performance
3. know the role of group dynamics in team sports
4. be able to plan a psychological skills training programme to enhance sports performance.

Assessment and grading criteria

This table shows you what you must do in order to achieve a pass, merit or distinction grade, and where you can find activities in this book to help you.

To achieve a pass grade the evidence must show that you are able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, you are able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, you are able to:
<p>P1 define personality and how it affects sports performance See Assessment activity 17.1, page 8</p>	<p>M1 explain the effects of personality and motivation on sports performance See Assessment activities 17.1, page 8 and 17.2, page 12.</p>	<p>D1 evaluate the effects of personality and motivation on sports performance See Assessment activities 17.1, page 8 and 17.2, page 12.</p>
<p>P2 describe motivation and how it affects sports performance See Assessment activity 17.2, page 12.</p>		
<p>P3 describe stress and anxiety, their causes, symptoms and effect on sports performance See Assessment activity 17.3, page 19</p>		
<p>P4 describe three theories of arousal and the effect on sports performance See Assessment activity 17.3, page 19</p>	<p>M2 explain three theories of arousal and the effect on sports performance See Assessment activity 17.3, page 19</p>	
<p>P5 identify four factors which influence group dynamics and performance in team sports See Assessment activity 17.4, page 25</p>	<p>M3 explain four factors which influence group dynamics and performance in team sports See Assessment activity 17.4, page 25</p>	<p>D2 analyse four factors which influence group dynamics and performance in team sports See Assessment activity 17.4, page 25</p>
<p>P6 assess the current psychological skills of a selected sports performer, identifying strengths and areas for improvement See Assessment activity 17.5, page 40</p>		
<p>P7 plan a six-week psychological skills training programme to enhance performance for a selected sports performer See Assessment activity 17.5, page 40</p>	<p>M4 explain the design of the six-week psychological skills training programme for a selected sports performer See Assessment activity 17.5, page 40</p>	<p>D3 justify the design of the six-week psychological skills training programme for a selected sports performer, making suggestions for improvement See Assessment activity 17.5, page 40</p>

How you will be assessed

This unit will be assessed by internal assignments that will be designed and marked by the tutors at your centre. Your assessments could be in the form of:

- written reports
- posters
- presentations
- practical observations of performance.



Danny, a 17-year old footballer

This unit has helped me to understand that there is more to getting ready for games than just training all the time. I enjoyed looking at different aspects of psychology that can be used to benefit sport performance and how I could use these to improve my own performance, both in training and in my matches.

There were lots of practical learning activities throughout this unit like learning how to do imagery and progressive muscular relaxation with athletes. These activities have helped me to understand the different techniques and know when to use them. Assessing my own psychological skills helped me to see the areas that needed improving, and practising the different techniques that I could use to improve these areas, like imagery, were the bits that I enjoyed doing the most.

Over to you

- **Which areas of this unit are you looking forward to?**
- **Which bits do you think you might find difficult?**
- **What do you think you will need to do to get yourself ready for this unit?**

1. Know the effect of personality and motivation on sports performance

Warm up

The role of psychology in sport

Think about when you have played sport. Has there been a time when you have not played as well as you could have done, even though you had trained really hard? Has there been a time when you have got something wrong in a game even though you know how to perform the skill well? Why do you think this could be?

Personality

Personality and the potential effects it can have on sports participation and sports performance have been of interest to sport psychologists and researchers since the late 1800s. However, evidence on whether personality affects sports performance is still fairly limited and inconclusive.

Key term

Personality – the sum of the characteristics that make a person unique.

Theories

There are a number of theories and approaches that have been suggested to try to explain personality and how it can influence sports performance. The main theories you will look at are:

- Marten's Schematic View
- the Psychodynamic Theory
- Trait Theory
- Situational Approach
- Interactional Approach.

Marten's schematic view

In this view, personality is seen as having three different levels that are related to each other:

- psychological core
- typical responses
- role-related behaviour (see Figure 17.1).

The **psychological core** is what people often call 'the real you' and is the part of you that contains your beliefs, values, attitudes and interests; these aspects are seen as being relatively constant or stable. Typical responses are the usual ways that you respond to the world around you or different situations you may find yourself in. For example, you may always get angry and shout after being intentionally fouled in football because you feel that deliberate fouls are un-sporting behaviour, but you may be quiet and shy when you meet people for the first time because you don't want to overawe them. These are your typical responses to these situations and are often seen as good indicators of your psychological core.

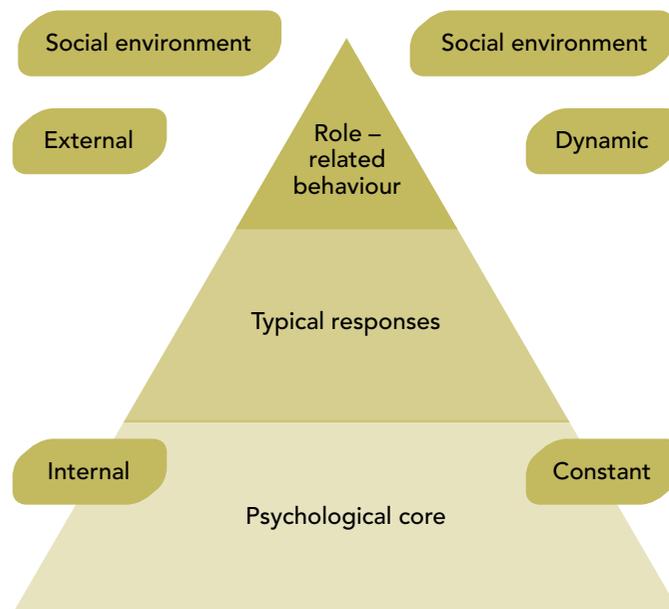


Figure 17.1: Marten's Schematic View of Personality (adapted from Weinberg and Gould, 2007)

Your **role-related behaviour** is often determined by the circumstances you find yourself in and this is the most changeable aspect of personality. Put simply, your personality changes as your perception of your environment changes. For example, in the same day you might be captaining your college sports team where you show a lot of leadership behaviours, then working as an employee at your part-time job where you will have to follow a lot of instructions.

Key terms

Psychological core – the part of you that contains your beliefs, values, attitudes and interests.

Role-related behaviour – behaviour determined by the circumstances you find yourself in.

Psychodynamic theory

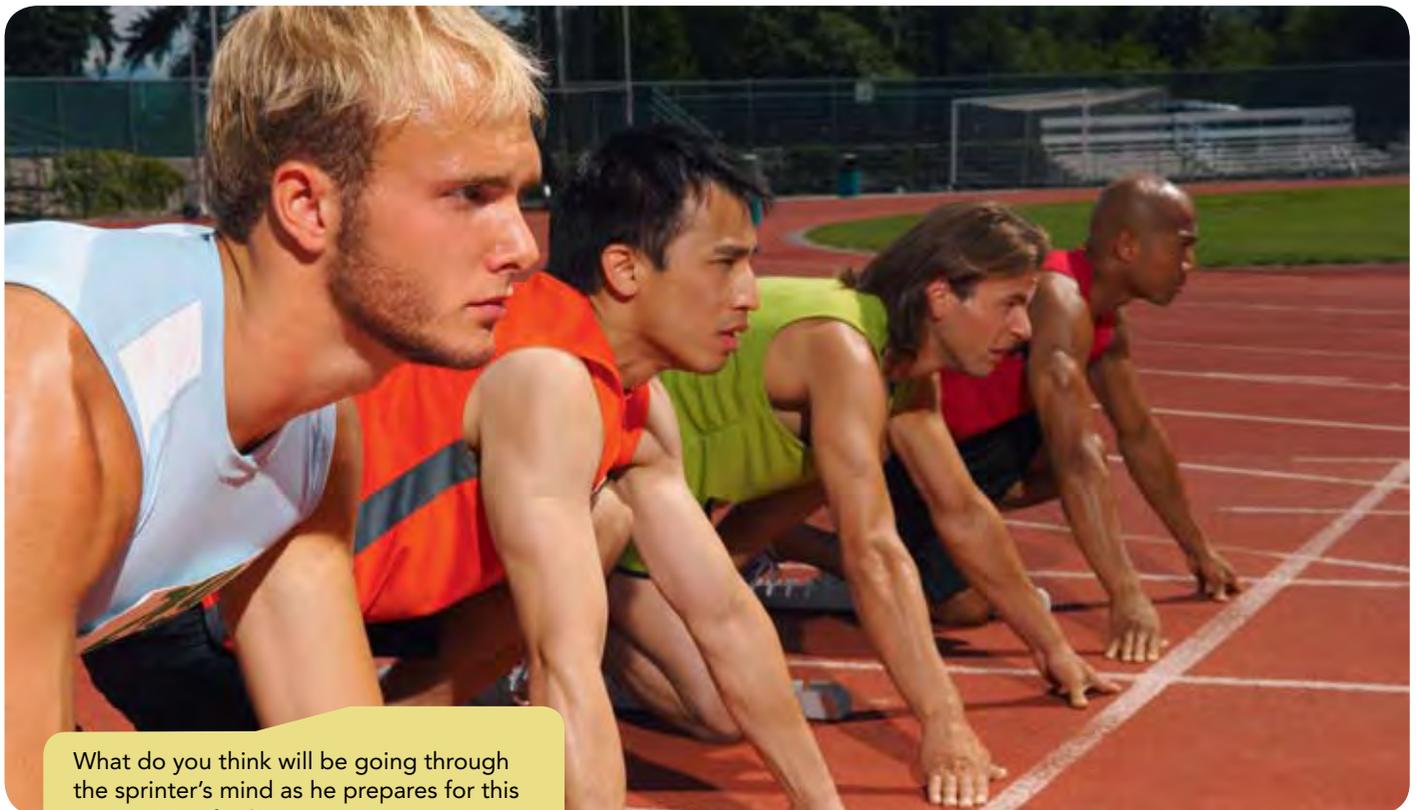
The psychodynamic approach to personality says that personality is made up of conscious and unconscious parts. The first part is called the '**id**' which stands for instinctive drive. It is the part of your personality that is unconscious and makes you do certain things without

thinking about them, for example, a sprinter on the start line in the Olympic final may feel so threatened by the expectations upon them that they respond with large levels of anxiety and their muscles automatically freeze. The second part of your personality, your **ego** is the conscious part. The final part is your **super ego**, which is your moral conscience. The effect of the ego and super ego can be seen in sport when a football player refuses to take a penalty in a penalty shoot out because they are worried about missing and letting their team down.

Rather than just looking at different parts of personality, the psychodynamic approach tries to understand the individual as a whole. This approach is not often used in sport as it focuses on the reasons for behaviour that come from within the individual and tends to ignore the athlete's environment. However, this theory is useful when sport psychologists try to explain behaviour as it helps us to understand that not all behaviour is under the conscious control of athletes.

Trait-centred views

Trait theories suggest that individuals have certain characteristics that will partly determine how they behave.



What do you think will be going through the sprinter's mind as he prepares for this competition final?

Key term

Trait – a relatively stable and enduring characteristic that is part of your personality.

Traits are relatively stable aspects of personality and early trait theorists like Eysenck and Cattell argued that traits were mainly inherited. There are two main dimensions to personality:

- an introversion–extroversion dimension
- a stable–neurotic dimension.

Introverts are individuals who don't actively seek excitement and would rather be in calm environments. They tend to prefer tasks that require concentration and dislike the unexpected.

Extroverts tend to become bored quickly, are poor at tasks that require a lot of concentration and constantly seek change and excitement. Extroverts are less responsive to pain than introverts. Extroverts are said to be more successful in sporting situations because they can cope with competitive and distractive situations better than introverts.

Stable individuals are people who tend to be more easy-going and even tempered. Neurotic (unstable) people tend to be more restless, excitable, have a tendency to become anxious and are more highly aroused.

The conclusions are that trait views are too simplistic and that personality alone cannot predict success in a sporting environment. It can, however, be used to help explain why individuals choose certain sports.

Remember

Although personality traits can be used with physiological and situational factors to try to predict who will do well in sport, there is no such thing as the right personality for all sports that will guarantee sporting success.

Situational-centred views

The situational approach is different from the trait theories approach as it says that behaviour is dependent on your situation or environment. It argues that this is far more important than traits.

There is some support for the situational approach in sporting behaviour, as individuals may be introverted – displaying characteristics such as tolerance and shyness – but may participate in a sport that requires them to be more extroverted and display characteristics like aggression in a sporting situation.

Remember

A situation can influence a person's behaviour but it cannot predict sporting behaviour. To be able to do this, you need to consider the individual's personality traits as well.

Social learning theory

Social learning theory suggests that personality is not a stable characteristic, but constantly changing and a result of our experiences of different social situations. It is unlikely that an individual will behave in the same way in different situations. The theory is that individuals learn in sporting situations through two processes: **modelling** and **reinforcement**. Modelling states that individuals are likely to model themselves on people they can relate to, like individuals in the same sport or of the same gender, and that as they observe their behaviour, they attempt to copy it. Reinforcement is important because if an individual's behaviour is reinforced or rewarded in some way it is likely that the behaviour will be repeated. Bandura, a leading psychologist, identified four main stages of observational learning that demonstrate how modelling influences personality and behaviour.

1. **Attention:** to learn through observation, the athlete must have a certain level of respect and admiration for the model they are observing. The amount of respect the athlete has for the model will depend on their status. If the model is successful, attractive and powerful they will hold the athlete's attention.
2. **Retention:** for modelling to be effective, the athlete must be able to retain the observed skill or behaviour in their memory and recall it when needed.
3. **Motor reproduction:** the athlete must be able to physically perform the task he or she is observing. The athlete needs time to practise the skill in order to learn how it should be performed.



4. **Motivational response:** unless the athlete is motivated, he or she will not go through the first three stages of modelling. Motivation is dependent on the amount of reinforcement (e.g. praise, feedback, sense of pride or achievement), the perceived status of the model and importance of the task.

Interactional view

To predict behaviour in a sporting situation, you need to consider how the situation and personality traits link and work together. This is known as the interactional approach to personality and sport behaviour.

The interactional approach is the view widely accepted by sport psychologists when explaining behaviour. This theory suggests that when situational factors are particularly strong, for example, during competitive sporting situations like penalty shoot-outs in football, they are more likely to predict behaviour than personality traits. The athlete who tends to be quiet and shy in an everyday situation is likely to run towards an ecstatic crowd screaming if he scored the winning penalty.

Personality types

Another approach in sport psychology suggests that personality traits can be grouped under two headings: type A and type B.

People with a **type A personality** tend to lack patience, have a strong urge for competition, a high desire to achieve goals, always rush to complete activities, will happily multi-task when placed under time constraints, lack tolerance towards others and experience higher levels of anxiety.

Type B personalities tend to be more tolerant towards others, more relaxed and reflective than their type A counterparts, experience lower levels of anxiety and display higher levels of imagination and creativity.

Effects on sports performance

There is no direct link between personality type and successful sporting performance. Some research has suggested that certain personality types may be more attracted to certain sports, but little says that your personality will make you a better athlete.

Remember

Introverts tend to be drawn to individual sports like long-distance running, extroverts prefer team- and action-orientated sports like football. Psychologists think that extroverts are drawn to these types of sport because they offer high levels of excitement and stimulation, and the ever-changing, and unexpected environments required to keep them interested in the activity. Athletes that are towards the unstable or neurotic end of the scale experience high levels of over-arousal during the early stages of performance, which can lead to lower levels of performance.

Athletes versus non-athletes and individual versus team sports

Research implies that there is no such thing as a universal athletic personality. However, there are some differences between athletes and non-athletes; as well as between athletes in different types of sport. Compared with non-athletes, athletes who take part in team sports are more extroverted. When compared to non-athletes, athletes in individual sports tend to be more introverted. This suggests that in order to study the differences between athletes and non-athletes, you need to consider the sports the athletes play before reaching meaningful conclusions.

Elite versus non-elite athletes

Psychologists thought that successful athletes display lower levels of depression, fatigue, confusion and anger, but higher levels of vigour. However, evidence which was used to draw these conclusions was insufficient because it was based on small numbers of athletes. More recent research shows that personality accounts for less than 1 per cent of the performance variation.

Type A versus type B

In sport, type A personalities are more likely than type B personalities to continue participating in a sport when the situation becomes unfavourable or when they are not motivated to take part.

Assessment activity 17.1

P1 M1 D1

BTEC

You are working with a youth sports team. The coach complains to you about some of his youth athletes, saying that they don't have the right personality to make it as athletes in his team.

Educate the coach about the role of personality in sport by preparing a short written report that looks at all of the different factors surrounding personality and environmental factors and their role in sports participation and performance.

1. Define personality and describe how it influences sport participation and performance. **P1**
2. Explain the different theories that try to explain the link between personality and sports participation and performance. **M1**
3. Explain how these theories try to explain that link. **M1**
4. Evaluate contrasting arguments that relate to the link between personality and sports performance. **D1**

Grading tips

- Make sure that you first describe what personality is and then give a brief overview of whether personality alone should determine whether or not people should be picked for sports teams.
- Use different theories and examples to explain how personality can influence sports performance.
- Make sure that you use a range of theories and supporting materials that give contrasting arguments so that you give as full a picture as possible to allow the coach to make an informed decision about their players.

Functional skills

By writing your report on personality and its effects on sports performance, you could provide evidence towards your **English** skills in writing.



PLTS

By exploring each of the different theories and judging their value when making your arguments, you can develop your skills as an **independent enquirer**.



Key terms

Motivation – the direction and the intensity of your effort; it is critical to sporting success.

Intrinsic – internal factors, such as enjoyment.

Extrinsic – external factors, such as rewards.

Motivation

Most definitions of **motivation** refer to having a drive to take part and to persist in an activity. A sport-specific definition is the tendency of an individual or team to begin and then carry on with the activities relating to their sport. There are two main types of motivation: **intrinsic** and **extrinsic**.

Intrinsic

Intrinsic motivation is when someone is participating in an activity without an external reward and/or without the primary motivation being the achievement of some form of external reward. Intrinsic motivation in its purest form is when an athlete participates in a sport for enjoyment. When people are asked why they play sport, if they reply with 'for fun', or 'because it makes me feel good' (or similar responses), they can be said to be intrinsically motivated.

There are three parts of intrinsic motivation:

- motivated by **accomplishments** – this occurs when athletes wish to increase their level of skill to get a sense of accomplishment



- motivated by **stimulation** – this refers to seeking an ‘adrenaline rush’ or extreme excitement
- motivated by **knowledge** – this means being curious about your own performance, wanting to know more about it and having a desire to develop new techniques or skills to benefit performance.

Extrinsic

Extrinsic motivation is when someone behaves the way they do because of some form of external mechanism. The most common forms of extrinsic motivation come through the use of tangible and intangible rewards. Tangible rewards are things that can physically be given to you, like money, medals and trophies, intangible rewards are non-physical things such as praise or encouragement.

For extrinsic motivation to be effective, rewards need to be used effectively. If the reward is given too frequently, it will be of little value to the athlete after a period of time, invalidating its potential impact on performance. A coach needs to have an in-depth knowledge of the athletes he is working with to maximise the effect of extrinsic rewards.

Extrinsic motivation can potentially decrease intrinsic motivation. If the extrinsic motivator is used as a method of controlling the athlete, generally intrinsic motivation will decrease. If the extrinsic motivator is used to provide information or feedback to the athlete, this can benefit intrinsic motivation. The way in which the athlete perceives and understands the original extrinsic motivator determines whether it will benefit or hinder intrinsic motivation.

Achievement motivation theory

Achievement motivation was proposed by Atkinson in 1964, who argued that achievement motivation comes from the individual’s personality and is their motivation to strive for success. It is this drive that makes athletes carry on trying even when there are obstacles or when they fail. Atkinson grouped athletes into two categories: need to achieve (Nach) and need to avoid failure (Naf). Everyone has aspects of both Nach and Naf, but it is the difference between the two motives that makes up somebody’s achievement motivation.

Take it further

The interaction of intrinsic and extrinsic motivation

A group of children are playing football, to the annoyance of an old man whose house they are playing outside. He asks them to stop playing but they carry on because they enjoy it so much. After a while, the old man offers them £5 each to play for him. As the children like playing anyway, they happily accept his offer. The next day, the children come back and play outside his house again. Just as before, he comes out and offers them money to play again but this time can only afford to pay them £4. The children agree to continue playing even though the amount is less than before. This pattern continues for the next few days until one day the old man comes out and says he can’t afford to pay them anymore. Disgruntled, the children refuse to play if the old man isn’t going to pay them.

1. **What motivates the children to play initially? Is this intrinsic or extrinsic motivation?**
2. **At the end of the case study, what is the motivating factor for the children? Is this intrinsic or extrinsic motivation?**
3. **What effect has extrinsic motivation had on intrinsic motivation?**

Attribution theory

In sport, **attribution** theory looks at how people explain success or failure. It helps you understand an athlete’s actions and motivations.

Key term

Attribution – the reason you give to explain the outcome of an event.



Case study: Southern City U14 rugby team

Southern City is an U14 Rugby team who have just been beaten 66–0 in their opening game of the season. When they got back to the changing rooms after the game, the coach asked the players why they thought they had lost so badly. The first player to speak said that the referee was rubbish and he gave tries that shouldn't have counted. A few players said that they lost because the other team

were all bigger than them. The next player said that they lost because the other team cheated. After a little silence, a player said that they had lost because after they conceded the first try, the team stopped putting effort in and didn't believe that they could win. What does this case study tell you about the feelings and motivations of some of the players in the Southern City team?

In the case study, players explained the outcome using attribution. Attributions provide explanations for your successes or failures and fall into one of the following categories:

- stability – is the reason permanent or unstable?
- causality – is it something that comes from an external or an internal factor?
- control – is it under your control or not?

A table of attribution theory with examples that are often given after winning and losing is shown in Table 17.1 below.

Effects of motivation on sports performance

Motivation is an essential component of successful sports performance. However, if someone is so motivated that they won't stop, this can cause problems.

Positive

Someone who is motivated to play, perform and train at an optimal level will experience increases in performance. It is the role of athletes, coaches,

managers and support staff to make sure the athlete is at optimal levels of motivation, without experiencing any negative side effects.

Negative

Being over motivated can be a big problem for athletes. Athletes are often under pressure to perform at a high level, so feel the need to train more and more. However, over-motivation and a gruelling schedule can lead to **overtraining**, **staleness** and **burnout**. Staleness can be a response to over-training. The key sign is that the athlete is unable to maintain a previous performance level or that performance levels may decrease significantly. Other signs and symptoms of staleness are that the athlete may suffer from mood swings and can become clinically depressed. Burnout happens when the athlete is trying to meet training and competition demands, and has often been unsuccessful so tries harder. When burnout occurs, the athlete finds they no longer want to take part in activities they used to enjoy. Burnout should not be confused with just dropping out because of being tired or unhappy.

Type of attribution	Winning example	Losing example
Stability	'I was more able than my opponent' (stable) 'I was lucky' (unstable)	'I was less able than my opponent' (stable) 'We didn't have that bit of luck we needed today' (unstable)
Causality	'I tried really hard' (internal) 'My opponent was easy to beat' (external)	'I didn't try hard enough' (internal) 'My opponent was impossible to beat' (external)
Control	'I trained really hard for this fight' (under your control) 'He wasn't as fit as I was' (not under your control)	'I didn't train hard enough for this fight' (under your control) 'He was fitter than I was' (not under your control)

Table 17.1: Types of attribution with examples

These negative effects of motivation affect not only players; they can also affect managers, coaches, match officials and team support staff.

Key terms

Overtraining – the athlete trains under an excessive training load, which they cannot cope with.

Staleness – inability to maintain a previous performance level.

Burnout – when an athlete strives to meet training and competition demands despite repeated unsuccessful attempts, and so tries harder. Can lead to the athlete no longer wishing to participate in activities they used to enjoy.

Future expectations of success and failure

Expectations of future success or failure are linked to attribution theory. If you attribute to stable causes (such as skill), you are more likely to have expectations of future success whereas if you attribute to more unstable causes (like luck), you are more likely to have expectations of future failure.

Take it further

Attributions

How you attribute success or failure can affect your future expectations of sports performance. Why do you think this is?

Developing a motivational climate

The **motivational climate** is the environment in which an athlete finds themselves and how this affects their motivation positively and negatively.

A motivational climate that is focused on mastery of tasks - where athletes receive positive reinforcement and there is greater emphasis on teamwork and co-operation – will help develop motivation through improving the athlete's attitudes, effort and learning

techniques. When an athlete is in an environment where there is a lot of focus on the outcome (where they feel they will be punished if they make mistakes, competition is strongly encouraged and only those with the highest ability will receive attention) this will lead to less effort and persistence from athletes and failure often attributed to lack of ability.

To develop an effective motivational climate, Epstein (1989) suggested the TARGET technique:

- **Tasks** – having a range of tasks that require the athlete to actively participate in learning and decision making.
- **Authority** – giving athletes authority over monitoring and evaluating their own learning and decisions making.
- **Reward** – using rewards that are focused on individual improvement rather than comparing levels to other athletes.
- **Grouping** – giving athletes the opportunity to work in groups so that they develop skills in a group-based environment.
- **Evaluation** – focusing on an individual's effort and improvement.
- **Timing** – timing activities effectively so that all of the above conditions can interact effectively.

Functional skills

Using ICT to independently select and use a range of theories of motivation for Assessment activity 17.2 on page 12, could provide evidence towards your skills in **ICT**.

PLTS

By asking lots of different questions to explore all of the possibilities within the case study for Assessment activity 17.2 on page 12, you could develop your skills as a **creative thinker**.

Assessment activity 17.2

P2 M1 D1

BTEC

The coach of a local handball team has asked you to come to speak to Matt, a player he is struggling with. Matt is completely focused on winning trophies for their team and gets annoyed and frustrated when the team doesn't win. When the team loses, Matt says that it was the fault of the other players and bad luck. However, when the team wins he makes a point of telling everyone how well he has played.

Matt always seems to want to play when he is playing against teams that he knows he can beat, but he really doesn't like to play against teams when the players are just as good as him.

1. Describe the different types of motivation, and how they can influence sports participation and performance. **P2**
2. Explain the different theories that can be used to explain motivation. **M1**
3. Explain some methods that could be used to increase motivational climate. **M1**
4. Evaluate the relationship between motivation and sports participation and performance. **D1**

Grading tips

- Make sure that you define motivation and the different types of motivation. Look at how both intrinsic and extrinsic motivation and influence sport performance. Describe each of the different theories of motivation and how people have tried to use them to understand motivation in sport.
- Use the attribution theory to explain how Matt's perception of success or failure can affect future expectations of sport performance. Explain how having a high need to achieve (Nach) or a high need to avoid failure (Naf) can affect sports performance and motivation to perform against certain individuals. Explain some methods the coach could use to increase motivational climate.
- Evaluate how intrinsic motivation can be affected by extrinsic motivation. Highlight strengths and limitations of each of the different theories of motivation. Discuss how and why the different suggestions to improve motivational climate can influence Matt both positively and negatively.

2. Know the relationship between stress, anxiety, arousal and sports performance

Stress

Lazarus and Folkman (1984) defined stress as: 'a pattern of negative physiological states and psychological responses occurring in situations where people perceive threats to their well-being, which they may be unable to meet'. Two terms have been introduced in sport to explain stress: eustress and distress.

Eustress is a good form of stress that can give you a feeling of fulfilment. Some athletes actively seek out stressful situations as they like the challenge of pushing themselves to the limit. This can help them increase their skill levels and focus their attention on aspects of their chosen sport. The benefit is that increases in intrinsic motivation follow.

Distress is a bad form of stress and is normally what you mean when you discuss stress. It is an extreme form of anxiety, nervousness, apprehension or worry as a result of a perceived inability to meet demands.

Key terms

Eustress – 'beneficial' stress that helps and athlete to perform.

Distress – extreme anxiety related to performance.

The effects of stress on performance

The effects of stress on performance are shown in the stress process flow diagram, Figure 17.2.

- At stage 1 of the stress process, some form of demand is placed on the athlete in a particular situation.
- At stage 2 the athlete perceives this demand either positively or negatively. It is at this stage that we start to understand how the negative perception of the demand can cause a negative mental state, a lack of self-confidence and a lack of concentration. If the demand is perceived as being too great, the athlete will feel unable to meet the demand (negative mental state and loss of self-confidence) and will then find it difficult to concentrate on what they will need to do to meet the demand.
- It is this perception that increases the arousal levels of the performer (stage 3). During this stage the athlete will experience heightened arousal, higher levels of cognitive and somatic anxiety and changes in their attention and concentration levels.
- Ultimately this determines the outcome of performance (stage 4).

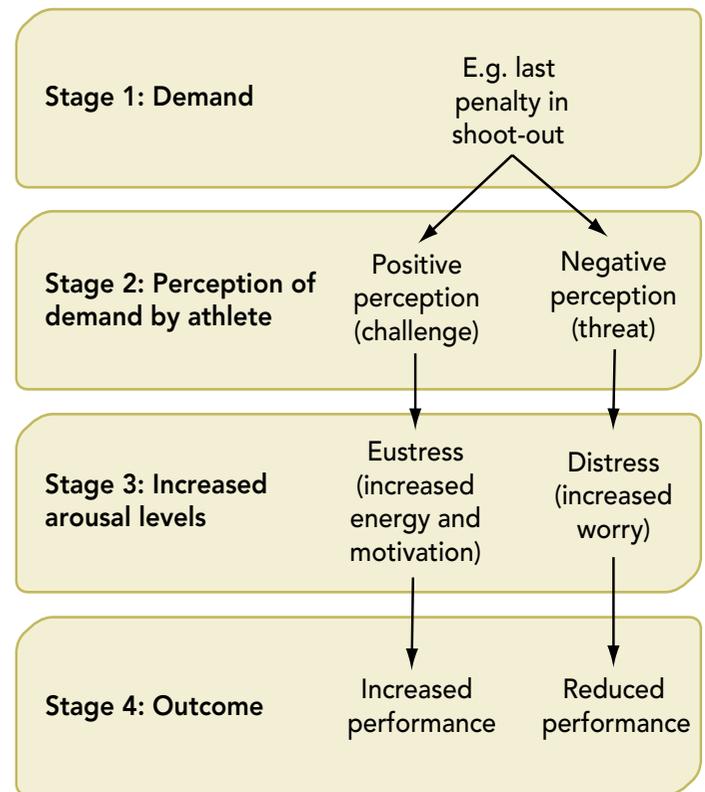


Figure 17.2: The stress process helps explain the relationship between stress, arousal, anxiety and performance



How can stress influence a snooker player even when they're trying to pot the black?

Activity: The influence of stress on performance



For the following scenario, produce an applied stress process diagram that illustrates how stress can influence performance, both positively and negatively.

Amir is playing snooker in a local tournament and has reached a break of 140 so far. He has never got this far before on a break and he is only one shot away from his first ever 147 break. How could stress influence his performance?

Causes of stress

There are a number of individualised causes of stress. It is common to have a number of athletes in similar situations yet for them to have entirely different stress responses to those situations. Some of the main causes are discussed below.

Internal causes of stress include:

- illnesses like infections
- psychological factors, i.e. worrying about something
- not having enough sleep
- being overly self-critical or being a perfectionist, e.g. type A personality.

External causes of stress include:

- the environment in which you find yourself, e.g. too noisy, too quiet
- negative social interactions with other people, e.g. somebody being rude to you
- major life events, e.g. a death in the family
- day-to-day hassles, e.g. travel to and from games, training schedules.

Remember

The key difference between internal and external sources of stress is that internal causes of stress are things that we think about whereas external sources come from the environment.



People who are significant in our lives – such as friends, family and partners – can be a source of stress. Lifestyle factors like health and finance can also be sources of stress.

Occupational causes of stress are related to your job, e.g. lack of job satisfaction or unemployment. In a sporting situation, having a disagreement with a coach or a manager and subsequently being dropped from the team could cause you to suffer from stress.

Sports environments

There are two key aspects of sport performance that cause stress: the importance of the event you are taking part in and the amount of uncertainty that surrounds it. The more important the event, the more stressful it is. This doesn't mean that you have to be playing in a World Cup Final or sprinting in the 100m final in the Olympics; the importance of the event is specific to you. For example, someone who is playing their first mid-season game after a serious injury could show the same symptoms of stress as someone who is about to go in to bat in the last innings of a baseball game when the scores are tied and their team already have two outs. On the face of it, the mid-season game against a team you should beat would not be as important as the game-saving situation the baseball player finds himself in, but it is the importance that the individual attaches to the event that is key.

Symptoms of stress

When you are in a situation you find threatening, your stress response is activated. The way you respond depends on how seriously you view the threat, and the response is controlled by two parts of your nervous system: the **sympathetic nervous system** and the **parasympathetic nervous system**.

Key terms

Sympathetic nervous system – part of the system responsible for the 'fight or flight' response.

Parasympathetic nervous system – part of the system that helps you to relax.

The sympathetic nervous system is responsible for the fight or flight response. It gives you the energy you need to confront the threat or run away from it. In order to do this, the sympathetic nervous system produces these physiological responses:

- blood diverted to working muscles to provide more oxygen
- increased heart rate
- increased breathing rate
- increased heat production
- increased adrenaline production
- increased muscle tension
- hairs stand on end
- dilated pupils
- slowed digestion
- increased metabolism
- a dry mouth.

Once the stress has passed, the parasympathetic nervous system begins to work. The parasympathetic system helps you to relax. It achieves this by producing the following responses:

- makes muscles relax
- slows metabolism
- increases digestion rate
- decreases body temperature
- decreases heart rate
- constricts the pupils
- increases saliva production
- decreases breathing rate.

Remember

A lot of people see the symptoms of stress as negative aspects when they play their sport, but without some of these responses your body would not be able to meet the demands of your sport.



Anxiety

Anxiety is a negative emotional state that is either characterised by, or associated with, feelings of nervousness, apprehension or worry. There are a number of causes of anxiety. These are largely the same as those covered earlier under the sources of stress.

There are two main types of anxiety: trait anxiety and state anxiety.

Trait anxiety is an aspect of personality and part of an individual's pattern of behaviour. Someone with a high level of trait anxiety is likely to become worried in a variety of situations; even non-threatening situations.

State anxiety is a temporary, ever-changing mood state that is an emotional response to any situation considered threatening. For example, at the start of a show-jumping event, the rider may have higher levels of state anxiety that settle down once the event begins. State anxiety levels may increase again when coming up to particularly high jumps and then be at their highest level when coming towards the final jump which, if they were to clear quickly and cleanly, would result in a win. There are two types of state anxiety:

- **cognitive state anxiety** is the amount you worry
- **somatic state anxiety** relates to your perception of the physiological changes that happen in a particular situation.

Key terms

Trait anxiety – a behavioural tendency to feel threatened even in situations that are not really threatening, and then to respond to this with high levels of state anxiety.

State anxiety – a temporary, ever-changing mood state that is an emotional response to any situation considered to be threatening.

Symptoms of anxiety

Cognitive state anxiety refers to negative thoughts, nervousness and worry experienced in certain situations. Symptoms of cognitive state anxiety include concentration problems, fear and bad decision-making.

When a performer's concentration levels drop, their performance decreases because of the number of mistakes they have made. As the performance levels decrease, the levels of anxiety increase further, as do arousal levels. These increased levels of arousal can then lead to increased levels of cognitive state anxiety, which can further increase the number of mistakes made in performance. The performer is now caught in a negative cycle that can harm performance.

Somatic state anxiety relates to the perception or interpretation of physiological changes (such as increases in heart rate, sweating and increased body heat) when you start to play sport. For example, an athlete could be concerned because they sense an increased heart rate if they have gone into a game

less prepared than normal. This increase in heart rate is actually beneficial to performance, but the athlete can perceive it as negative. The symptoms of increased somatic state anxiety range from increases in heart rate, respiratory rate and sweating to complete muscle tension that prevents the athlete from moving (known as 'freezing').

Effects of anxiety on sports performance

Anxiety can adversely affect sports performance. It is seen as a negative mental state that is the negative aspect of stress. In skills that require a great deal of concentration such as golf putting and potting a ball in snooker, anxiety can lead to lower performance levels due to reduced concentration, attention levels, and co-ordination faults. In gross motor skills, anxiety can have a negative effect on performance due to factors like freezing and coordination faults. These negative effects of stress can lead to lower levels of performance, and as performance levels decrease further this can lead to a significant decrease in self-confidence.

Some symptoms of anxiety can be beneficial for sports performance, like increased blood flow, breathing rate and respiratory rate. These are physiologically beneficial, but if the athlete believes they are happening because of their inability to meet a demand, it is this perception that makes the symptoms negative.

Negative mental state

The definition of anxiety suggests that it is a negative mental state characterised by worry and apprehension. It is suggested that if this negative mental state becomes too great (i.e. you worry too much), your performance will suffer.

Constantly worrying about an event can make you think that you are not good enough to succeed (decreased self-confidence). This can make you feel like you are less likely to win (decreased expectations of success).

Heightened cognitive anxiety means there is an increase in nervousness, apprehension or worry. One of the things athletes worry about is failing. The problem with this is that once you start to worry about it, you are focusing on it. This increases the likelihood of it happening, i.e. if you worry about losing, you are more likely to lose. Heightened fear

of failure could result in negative physiological responses like hyper-elevated muscle tension and lack of movement coordination, which will also negatively affect performance.

Arousal

Arousal is referred to as a physiological state of alertness and anticipation that prepares the body for action. It is considered to be neutral because it is neither positive nor negative. It involves both physiological activation (increased heart rate, sweating rate or respiratory rate) and psychological activity (increased attention). Arousal is typically viewed along a continuum, with deep sleep at one extreme, and excitement at the other. Individuals who are optimally aroused are those who are mentally and physically activated to perform.

Key term

Arousal – the psychological state of alertness that prepares the body for action.

Theories of arousal

The relationship between arousal and performance is demonstrated through the following theories:

- drive theory
- the inverted U hypothesis
- the catastrophe theory
- the individual zones of optimal functioning (IZOF) theory.

Drive theory

The **drive theory** view of the relationship between arousal and performance is linear. This means that as arousal increases, so does performance (see Figure 17.3 on page 17). The more 'learned' a skill is, the more likely it is that a high level of arousal will result in a better performance. Therefore, drive theory is often summarised through the following equation:

$$\text{Performance} = \text{arousal} \times \text{skill}$$

However, there is evidence to suggest that athletic performance is benefited by arousal only up to a certain point, after which the athlete becomes too aroused and their performance decreases.

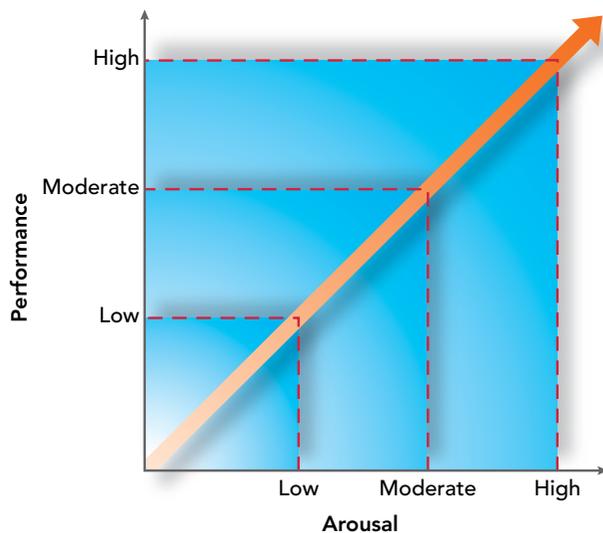


Figure 17.3: How does the drive theory explain the relationship between arousal and performance?

Inverted U hypothesis

The inverted U hypothesis differs from the drive theory. The inverted U hypothesis states that at optimal arousal levels, performance levels will be at their highest, but when arousal is either too low or too high, performance levels will be lower. It argues that at lower levels of arousal, performance will not be as high as it should be because the athlete is neither physiologically nor psychologically ready (e.g. heart rate and concentration levels may be too low). As arousal levels increase, so does performance, but only up to an optimal point. At this optimal point of arousal (normally moderate levels of arousal), the athlete's performance will be at its highest. After this optimal point performance levels will start to decrease gradually (see Figure 17.4).

Remember

The inverted U hypothesis states that arousal will only affect performance positively up to an optimal point; after this you will get a steady decrease in performance.

The inverted U hypothesis is more widely accepted than drive theory because most athletes and coaches can report personal experience of under-arousal (boredom), over-arousal (excitement to the point of lack of concentration) and optimum arousal (focus on nothing but sport performance). However, there has been some question over the type of curve demonstrated: does it give an optimal point, or do some athletes experience optimal arousal for a longer period of time?

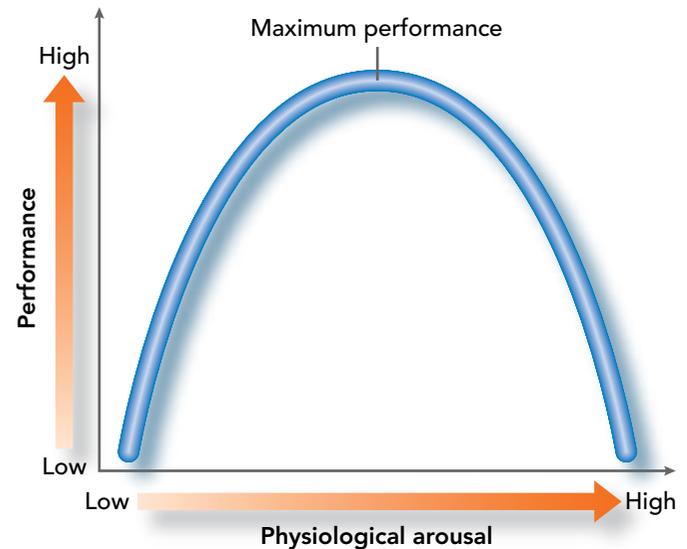


Figure 17.4: How does the inverted U theory explain the relationship between arousal and performance?

Catastrophe theory

Catastrophe theory suggests that performance is affected by arousal in an inverted U fashion only when the individual has low levels of cognitive anxiety (see graph a) of Figure 17.5 on page 18). If the athlete is experiencing higher levels of **cognitive anxiety**, and arousal levels increase up to the athlete's threshold, the player experiences a dramatic (or catastrophic) drop in performance levels (see graph b) of Figure 17.5 on page 18).

The key difference between catastrophe theory and the inverted U hypothesis is that the drop in performance does not have to be a steady decline when arousal levels become too high. Catastrophe theory does not argue that cognitive anxiety is completely negative. The theory suggests you will perform at a higher level if you have a certain degree of cognitive anxiety because your attention and concentration levels increase; it is only when levels of cognitive anxiety are combined with hyper-elevated levels of arousal that performance levels decrease dramatically.

Key term

Cognitive anxiety – the thought component of anxiety that most people refer to as 'worrying about something'.

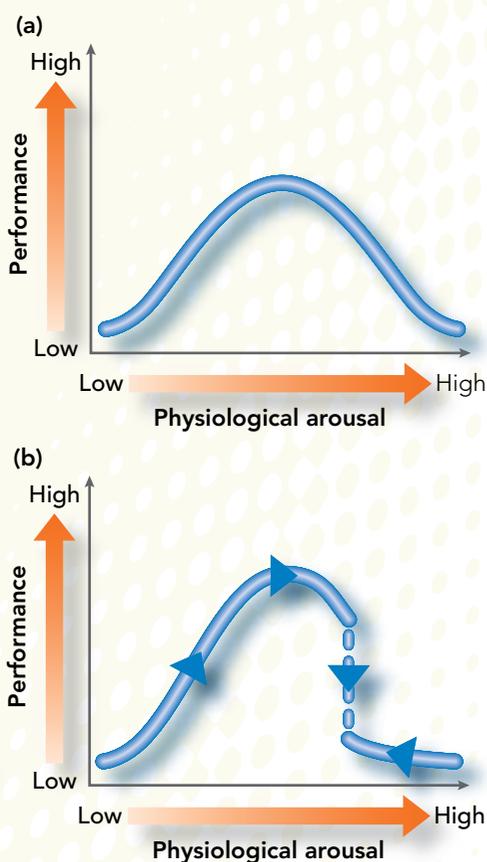


Figure 17.5: How does the Catastrophe differ from the Inverted U theory?

Individual zones of optimal functioning

Individual zones of optimal functioning (IZOF) theory states that at low levels of arousal, performance will be lower; at optimal levels of arousal, performance will be at its highest, and when arousal levels increase further, performance will decrease again. The main differences between the inverted U hypothesis and IZOF are as follows and are shown in Figure 17.6.

- Where the inverted U hypothesis sees arousal at an optimal point, IZOF sees optimal arousal as bandwidth.

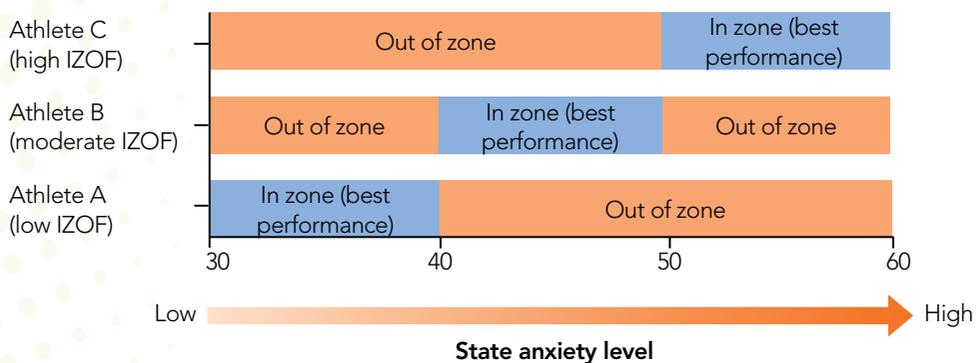


Figure 17.6: How does the IZOF explain the relationship between arousal and performance?

- Where the inverted U hypothesis sees every athlete's optimal point at a mid-point on the curve, IZOF says the optimal point varies from person to person.
- IZOF and the inverted U hypothesis are similar in that they both propose that, after the optimal point of arousal, performance decreases gradually.

Activity: Arousal in sport



In pairs, produce a poster presentation explaining the four theories of arousal. Make sure you include the following information:

- a diagram and explanation of each theory
- practical, sport-based examples of each theory to develop your points
- the key differences between each theory
- a note about which theory you think is the most likely to explain the relationship between arousal and performance and why.

Effects of arousal on sports performance

Improvements and decrements in performance level

Arousal doesn't necessarily have a negative effect on sports performance – it can be positive depending on the perception of the athlete. If the changes due to arousal are interpreted by the performer as positive, this can have a positive effect on performance or prepare the athlete for their event (psyching up the performer). But, if the changes are viewed as negative,

this can negatively affect performance or preparation for performance (psyching out the performer). Research carried out by Jones, Swain and Hardy in the 1990s suggests that if a coach can get the athlete to view the symptoms of anxiety and arousal as excitement rather than fear, performance will generally be facilitated.

Changes in attention focus

During heightened states of arousal, the attentional field, which focuses attention and concentration, becomes narrowed. This means that the more aroused you become, the lower the number of relevant cues you can concentrate on. For example, in a game of netball, when at optimal states of arousal, the Centre will be able to focus on the opposing player in possession of the ball as well as her position on the court and the position of other players. During heightened states of arousal, the centre may be able to focus only on the opposition player who has the ball and may disregard other important cues. Just as a heightened a state of arousal can narrow the player's attention, it can also broaden it to the point where performance is decreased. In this scenario, the netball player would be concentrating on irrelevant information, like crowd noise, as well as the relevant game cues.

Increases in anxiety levels

Increases in arousal levels can lead to an increased awareness of symptoms of state anxiety, which leads to

increases in both somatic and cognitive state anxiety. Whether this becomes a positive or negative influence is dependent on how the individual reacts.

Choking occurs in high-pressure situations, such as important events like waiting to putt in the Open. It is an extreme form of nervousness that negatively affects performance. It can be more apparent in the presence of significant others (e.g. parents, peers) or large audiences.

Key term

Choking – the whole process that leads to decreased performance, not just the decreased performance itself.

Functional skills

Selecting, comparing, reading and understanding texts and using them to gather information, ideas, arguments and opinions for Assessment activity 17.3 could provide evidence towards your **English** skills in reading.

Organising your time and resources and prioritising the work that you need to do for Assessment activity 17.3, will help you to develop skills as a **self-manager**.

Assessment activity 17.3

P3 P4 M2

BTEC

You are working as an assistant to a sport psychologist and you have been asked to produce an educational poster that will help sports performers and coaches understand the relationships between stress, arousal, anxiety and sports performance.

1. Describe stress and anxiety. **P3**
2. Describe the causes, symptoms and effects of stress and anxiety. **P3**
3. Describe three different theories of arousal and the effect on sports performance. **P4**
4. Explain three different theories of arousal and the effect on sports performance. **M2**

Grading tips

- Prepare some coach and athlete friendly notes that describe stress and anxiety, their causes, symptoms and effects on performance; using sport based examples wherever possible.
- Describe three theories of arousal that you think provide the best explanations for the relationship between arousal and performance. Follow this up by describing the positive and negative effects of arousal on performance.
- Use sport based examples and advice for coaches and athletes to explain the different theories of arousal and the positive and negative effects of arousal on performance.

3. Know the role of group dynamics in team sports

Group processes

Groups or teams

There must be interaction between individuals in order for them to be classified as a group. This is characterised by communication over a period of time. The individuals need to get on (interpersonal attraction) and there needs to be some form of collective identity – the members of the group must perceive themselves to be a distinct unit that is different to other groups. The group must have shared goals, targets, norms and values, and be prepared to achieve these goals collectively. All of these characteristics are common in teams, but there are some key differences between a group and a team.

The main difference relates to the pursuit of shared goals and objectives, both within teams and for the individual.

For a group to be classed as a team, the members need to depend on each other and offer support to each other in order to try to achieve team goals, and the members will interact with each other to accomplish these goals and objectives.

Stages of group development

For a group of people to become a team, they must go through four developmental stages (Tuckman, 1965):

- forming
- storming
- norming
- performing.

All groups go through all stages, but the time they spend at each stage and the order in which they go through the stages may vary.

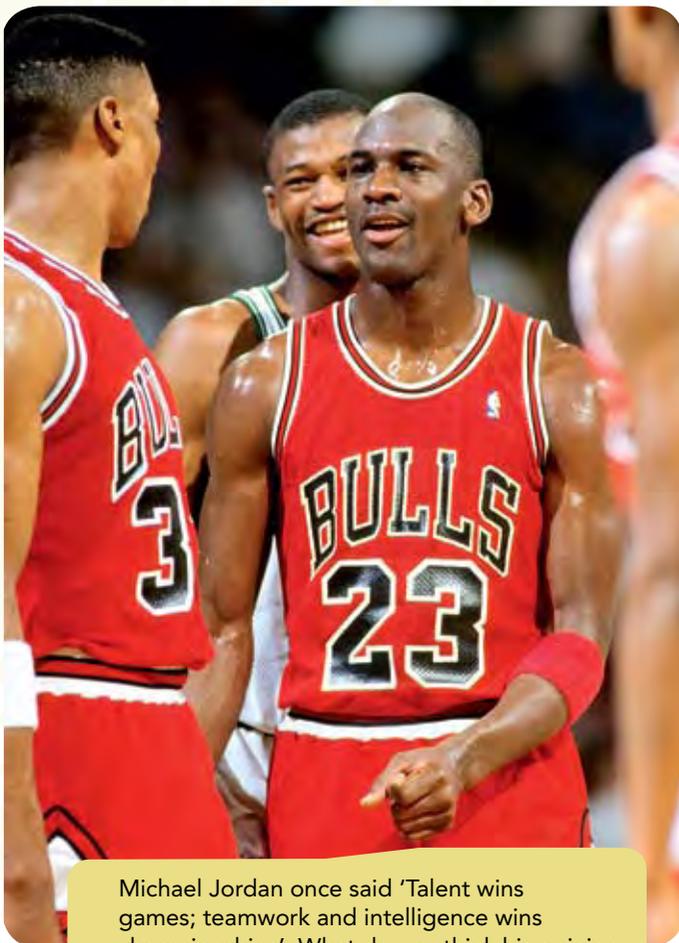
Once a team has progressed through the four stages, it does not mean that they will not revert back to an earlier stage. If key members leave, the team may revert back to the storming stage as others begin to vie for position within the team.

Forming

During the forming stage, group members familiarise themselves with other group members, get to know each other and try to decide if they belong in that group. During this stage, group members start to assess the strengths and weaknesses of other members, and start to test their relationships with others in the group. Individuals will get to know their roles within the group and will make decisions about whether or not they feel they can fulfil (or want to fulfil) their role within the group. Formal leaders in the group tend to be directive during the forming stage.

Storming

During the storming stage, conflict begins to develop between individuals in the group. It is common for individuals or cliques to start to question the position and authority of the leader, and they will start to resist the control of the group. Often, conflicts develop because demands start to be placed on the group members and because some individuals start to try to acquire more important roles. During the storming stage, the formal leader in the group tends to take



Michael Jordan once said 'Talent wins games; teamwork and intelligence wins championships'. What do you think his opinion is on the importance of team cohesion?



on more of a guidance role with decision-making and helps the team to move towards what is expected in terms of professional behaviour.

Norming

During the norming stage, the instability, hostility and conflict that occurred in the storming stage is replaced by cooperation and solidarity. Members of the group start to work towards common goals rather than focusing on individual agendas, and group cohesion begins to be developed. As group cohesion develops, group satisfaction increases (due to satisfaction from achieving tasks) and levels of respect for others in the group start to increase. In the norming stage, the formal leader will expect the group members to become more involved in the decision-making process, and will expect the players to take more responsibility for their own professional behaviour.

Performing

The performing stage involves the team progressing and functioning effectively as a unit. The group works without conflict towards the achievement of shared goals and objectives, and there is little need for external supervision as the group is more motivated. The group is now more knowledgeable, and able to make its own decisions and take responsibility for them.

Steiner's model of group effectiveness

Steiner's model was put forward to explain group effectiveness. It is described as:

$$\text{Actual productivity} = \text{potential productivity} \\ - \text{losses due to faulty group} \\ \text{process}$$

Actual productivity refers to how the team performs (the results they get and the level of performance they put in). Potential productivity refers to the perfect performance the team could produce based on the individual skill and ability of each athlete in the team and the resources available. Losses due to faulty group processes relate to the issues that can get in the way of team performance, preventing the team from reaching its potential performance. Losses are normally due to two main areas: **motivational faults/losses** and **coordination faults/losses**.

Activity: Motivational and coordination losses in volleyball

In a volleyball team, two players seem to be putting in little effort. When they are setting, they don't appear to be on the same wavelength as the other players on the team, and when they are blocking they don't seem to be putting a great deal of effort into their jumps. The other players on the team appear to be working harder to try to make up for this. However, despite their efforts, there is little interaction between spikers and setters.

1. **Where are the coordination losses in this scenario?**
2. **Where are the motivational losses in this scenario?**
3. **What do you think would be your role as the coach to improve these faults?**

Key terms

Motivational faults/losses – occur when some members of the team do not give 100 per cent effort.

Coordination faults/losses: – occur when players do not connect with their play, the team interacts poorly or ineffective strategies are used. Generally, sports that require more interaction or cooperation between players are more susceptible to coordination faults or losses.

Ringelmann effect

The Ringelmann effect is a phenomenon whereby as the group size increases, the individual productivity of the people in the group decreases, often by up to 50 per cent. It has been assumed that the Ringelmann effect is caused not by coordination losses but by motivational faults or losses. The Ringelmann effect can occur when people are not as accountable for their own performance – as the group gets larger, athletes can 'hide' behind other athletes and not get noticed.

Social loafing

Social loafing refers to when group members do not put in 100 per cent effort when they are in a group- or team-based situation. This is generally due to losses in motivation. Losses in motivation that cause social loafing

are most evident when the individual contributions of group members are not identified or are dispensable. It can occur when some players seem to be working harder than others. Individuals who display social loafing often lack confidence, are afraid of failure and tend to be highly anxious. It is often the case that players who display social loafing do not feel they can make a useful contribution to overall team performance, which can be why they don't want to participate.

Interactive and coactive groups

Interactive teams require team members to work with each other in order to achieve a successful performance. Their successful performance is dependent on interaction and coordination between members.

Coactive teams require individuals to achieve success in their individual games, events or performances to achieve overall team success. There is no direct interaction between team members during the performance.

Cohesion

Cohesion is a dynamic process that is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives:

- **Social cohesion** relates to how well the team members enjoy each other's company. In recreational sport, all of the players may get on well with one another and enjoy playing the game regardless of whether they win or lose.
- **Task cohesion** relates to how well group or team members work together to achieve common goals and objectives.

Although both types of cohesion influence performance to a certain degree, task cohesion is more closely related to successful sporting performance.

Creating an effective team climate

Team climate is a term that is used to describe how well the different players in the team get on. Creating the team climate is the responsibility of both the coach and the team.

To help build an effective team climate, the coach should:

- communicate effectively
- ensure everybody knows their role
- keep changes to a minimum
- encourage a group identity

- set both group and individual goals
- get to know their athletes.

Team members can also help to build an effective team climate by:

- being responsible for their own activities
- resolving conflict quickly
- trying as hard as possible
- getting to know each other
- helping each other.

Factors affecting cohesion

Carron's (1982) conceptual model of cohesion explains factors effecting cohesion (see Figure 17.7 on page 23). It says four factors can affect team cohesion:

1. environmental
2. personal
3. leadership
4. team.

Environmental factors

Groups that are closer to each other (in terms of location) and smaller tend to be more cohesive as the members have greater opportunities to interact and form relationships.

Personal factors

The individual characteristics of group members are important in group cohesion. If players are motivated to achieve the group's aims and objectives, are from similar backgrounds, have similar attitudes and opinions and similar levels of commitment, there will be more satisfaction among group members and the group is more likely to be cohesive.

Leadership factors

Leadership style, behaviours, communication styles and compatibility of the coach's and athlete's personalities are key leadership factors that affect cohesion.

Team factors

If the team can stay together for a long period of time, experiences a range of successes and failures together and be involved in the decision-making process, the group is more likely to be productive and cohesive.

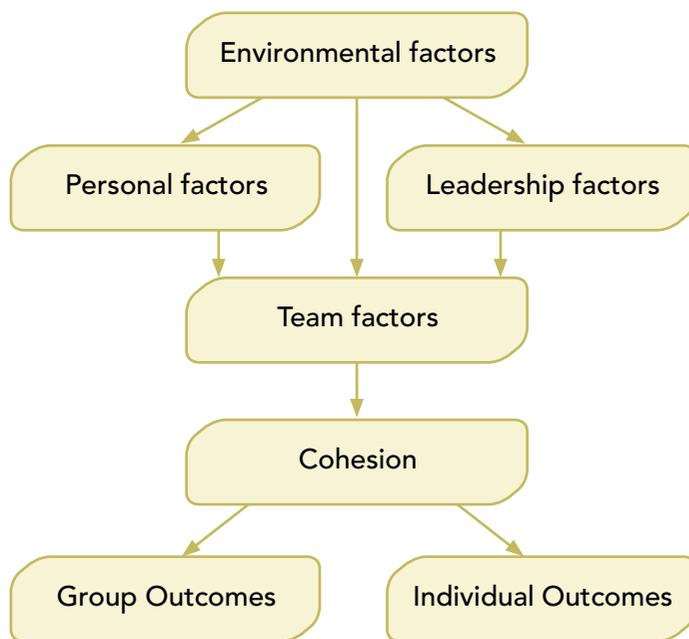


Figure 17.7: Carron's Conceptual Model of Cohesion (adapted from Carron, 1982) How can the different factors influence cohesion, according to this theory?

Relationship between cohesion and performance

It is easy to say that the greater the level of cohesion, the higher the level of performance. Interactive sports like football and volleyball require direct interaction and coordination between players so cohesion (especially task cohesion) is important. Coactive sports, alternatively require little, if any, direct interaction or coordination. Cohesion has a greater influence on performance in interactive sports than it does on coactive sports, such as archery or golf.

Leadership

Qualities and behaviour

The best leaders can match their styles, behaviours and qualities to different situations. The following qualities will contribute to making a good leader:

- **Patience** – a good leader gives athletes time to develop their skills.
- **Self-discipline** – the leader should lead by example. If the leader expects players to always display professional standards, the players expect the same of the leader.

- **Intelligence** – a good leader is expected to come up with ideas and formulate plans, e.g. new tactics, to improve team performance.
- **Optimism** – the leader needs to remain positive and enthusiastic at all times, even when everything is negative, to motivate team members
- **Confidence** – to build confidence in the players and other colleagues, the leader needs to display confidence in themselves. A good leader needs to give the people they work with the responsibility and capabilities to make decisions, and support them in the decisions they make.

Prescribed versus emergent leaders

Leaders are either prescribed or emergent.

- **Prescribed leaders** are those who are appointed by some form of higher authority. For example, Fabio Capello was appointed England manager by the FA.
- **Emergent leaders** are those who achieve leadership status by gaining the respect and support of the group. These leaders generally achieve their status through showing specific leadership skills or being particularly skilful at their sport. For example, John Terry emerged within the Chelsea team and became the leader of the team before he was appointed captain. He emerged because of his impressive performances, gaining the respect of others.

Theories of leadership

The four main theories of leadership are trait, behavioural, interactional and multi-dimensional. They are outlined below.

Trait theory

Trait theory (often referred to as the great man theory) suggests that there are certain personality characteristics that predispose an individual to being a good leader. It suggests that leaders are born, not made. This theory says that leadership is innate and a good leader would be good in any situation, not just his or her current domain. This approach has not had a great deal of support since the late 1940s and it is now generally accepted that there is no definitive set of traits that characterise a good leader.

Behavioural theory

Behavioural theories of leadership argue that a good leader is made, not born, and that anyone can be taught to be a good leader. The behavioural theory has its roots in social learning theory, and says people can learn to be good leaders by observing the behaviours of other good leaders in a variety of situations, reproducing those behaviours in similar situations and then continuing them if they are reinforced.

Interactional theory

Trait and behavioural theories to leadership place emphasis on the personal qualities of a coach. The interactional theory considers other factors that could affect the effectiveness of leadership, mainly the interaction between the individual and their situation.

Two main types of leader are identified through the interactional theory:

- **Relationship-orientated leaders** are focused on developing relationships with individuals in the group. They work hard to maintain communication with members; always help to maintain levels of social interaction between members and themselves; and develop respect and trust with others. Relationship-orientated leaders are more effective with experienced, highly skilled athletes.
- **Task-orientated leaders** are more concerned with meeting goals and objectives. They create plans; decide on priorities; assign members to task; and ensure members stay on task, with the focus of increasing group productivity. Task-orientated leaders are more effective with less experienced, less skilled performers who need constant instruction and feedback.

Different athletes will have a preference for task-orientated or relationship-orientated leaders. In principle, a leader who gets the right balance between providing a supportive environment and focusing on getting the job done is the most effective leader. It is a leader's role to get to know their performers so they know where to concentrate their efforts.

Multi-dimensional model

The multi-dimensional model says the team's performance and satisfaction with the leader will be highest if the leader's required behaviours, preferred behaviours and actual behaviours all agree. This means that if the leader is required to act in a certain way in a certain situation and does so, and the group like the way the leader has acted, the group or team are more likely to be happy with their leader and higher levels of performance are likely to occur. This is shown in Figure 17.8 below.

- The behaviour required by the leader at the time is generally determined by the situation the leader is in and should conform to the norms of the group.
- The preferred behaviour is mainly determined by the people within the group or team. Their preferences are generally determined by factors such as personality of the athletes, experience of the athletes, skill/ability of athletes and non-sport related aspects like age and gender.
- The actual behaviour is determined by the characteristics of the leader, the situational factors and the preferences of the group.

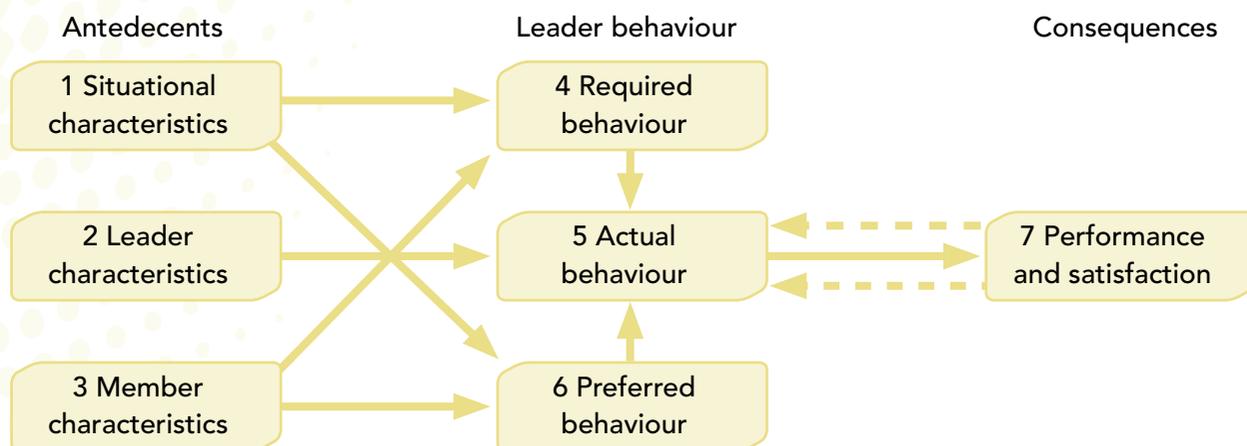


Figure 17.8: The multi-dimensional model of leadership (Chelladurai, 1990). How do the different leadership factors interact to influence performance?

Styles of leadership

Autocratic

Autocratic leaders have firm views about how and when things should be done. They tend to be inflexible with their approach to the group. This type of leader dictates to the group who does what tasks and when to do them, and often dictate how the task should be done. They use phrases like 'do this', or 'do it how I said'. The leader does not seek the views and comments of people within the group, and rarely gets involved on a personal level with members of the group. This means members tend to be passive. When working with this type of leader, group members can stop working or work more slowly when the leader is not there, and have a tendency to become aggressive towards each other.

Democratic/consultative/group

This type of leader makes decisions only after they have been through a process of consultation with group members. They encourage the involvement of the group, adopt a more informal and relaxed approach to leadership and listen to ideas relating to the prioritisation and completion of goals and objectives. They are likely to use questions such as 'How do you think we can do this?', and 'Do you think this could work?'

Democratic leaders maintain their status as leader by making the final decision based on the information collected from group members and their own thoughts and ideas. Generally, when the leader is not present, group members tend to continue working towards agreed goals and do not become aggressive towards each other when things start to go wrong.

Assessment activity 17.4

P5 M3 D2

BTEC

Imagine you are an assistant coach at a sports team. You have been watching one of your team's games trying to look at the different factors that can influence group dynamics and performance. You have been asked to prepare a presentation for the manager and coaches about your observations of the match, commenting specifically on the key factors you have identified that influence group dynamics and sports performance.

1. Identify four factors that influence group dynamics and performance in team sports. **P5**
2. Explain four factors that influence group dynamics and performance in team sports. **M3**
3. Analyse four factors that influence group dynamics and performance in team sports. **D2**

Grading tips

- You need to identify four factors which influence group dynamics and performance in team sports, these could be aspects of group processes, cohesion and leadership.
- You then need to follow this by explaining each of the different factors that you have identified.
- You must then say how and why the different group dynamics affected performance in that way.

Functional skills

By presenting the different factors that can affect group dynamics and team performance, you could develop your speaking and listening skills in **English**.



PLTS

If you communicate the results of your observations effectively, you could develop your skills as a **reflective learner**.



4. Be able to plan a psychological skills training programme to enhance sports performance

Although it is important for developing sports performance, some people don't practise their **psychological skills** as much as their physical skills. Have you ever walked off the field of play in disgust, having lost a game you thought you should have won? Have you ever turned up to a game and thought, 'I can't be bothered today'? Have you ever got to a crucial point in a game and your performance has sunk without you being able to explain why? These are situations where effective **psychological skills training (PST)** programmes might have helped you.

PST is the acquisition and development of a range of psychological skills that are designed to improve performance over a period of time. PST programmes involve three main phases:

- education – teaching the athlete why PST is beneficial
- acquisition – learning different psychological skills
- practice – providing opportunities to use techniques in competition.

PST programmes require you to conduct baseline assessments, plan the programme, take part in the programme, conduct reassessments and review the programme.

Key term

Psychological skills – qualities that the athlete needs to obtain through the PST programme.

Remember

Many coaches and sport psychologists use psychological skills training (PST) programmes to help sports performance.



Assessment for PST

Before deciding on the aims and objectives of the PST programme, you should perform an initial assessment of the psychological strengths and areas for improvement in your athlete. This can be achieved through:

- interviews – semi-structured interviews are often best
- questionnaires – to assess levels of different psychological factors in sport and the athlete's current psychological skills
- performance profiling – to help you to understand the athlete's and the coach's perception of performance and skills.

A good way of assessing your client's current psychological strengths and areas for improvement is to use a combination of methods. The use of self-assessment questionnaires is useful because motivation and adherence problems can occur if the athlete doesn't have an input into the PST programme at all stages.

Psychological strengths and weaknesses of the individual

As part of your PST programme, you should carry out an initial assessment to identify the current strengths and areas for improvement for the athlete you will be working with. There are a number of methods that you can use, but some common questionnaires can be found below.

Activity: Athletic coping skills inventory



Below is a copy of the ACSI-28 (Smith et al., 1995). Complete the questionnaire and analysis as follows:

- Read each statement and tick the response you most agree with (honestly!). Remember, there are no right or wrong answers and you shouldn't spend too much time on any statement.
- Work out your score for each subscale using the scoring system. Each scale has a range from 0 to 12, with 0 indicating a low level of skill in that area and 12 indicating a high level of skill in that area.
- Add up each subscale score to get a total score for psychological skills. Your total score will range from 0 to 84, with 0 indicating low levels of psychological skills and 84 signifying high levels of skill.

Question	Almost never	Sometimes	Often	Almost always
1. On a daily or weekly basis, I set goals for myself that guide what I do.				
2. I get the most out of my talent and skill.				
3. When a coach or manager tells me how to correct a mistake I've made, I can take it personally and can get upset.*				
4. When I'm playing sports, I can focus my attention and block out my distractions.				
5. I remain positive and enthusiastic during competition.				
6. I tend to play better under pressure because I can think more clearly.				
7. I worry quite a bit about what others think of my performance.*				
8. I tend to do lots of planning about how I can reach my goals.				
9. I feel confident I will win when I play.				
10. When a coach or manager criticises me, I become more upset rather than feel helped.*				
11. It is easy for me to keep distracting thoughts from interfering with something that I am watching or listening to.				
12. I put a lot of pressure on myself by worrying about how I will perform.*				
13. I set my own performance goals for each practice or training session.				
14. I don't have to be pushed to practice or play hard; I give 100%.				
15. If a coach criticises me, I correct the mistake without getting upset about it.				
16. I handle unexpected situations in my sport very well.				
17. When things are going badly, I tell myself to keep calm and it works for me.				
18. The more pressure there is during a game, the more I enjoy it.				
19. Whilst competing, I worry about making mistakes or failing to come through it.*				
20. I have my game plan worked out in my head long before the event begins.				
21. When I feel myself getting too tense, I can quickly relax my body and calm myself.				
22. To me, pressure situations are challenges that I welcome.				
23. I think about and imagine what will happen if I make a mistake.*				
24. I maintain emotional control regardless of how things are going for me.				
25. It is easy for me to direct my attention and focus on a single object or person.				
26. When I fail to reach my goals it makes me try even harder.				
27. I improve my skills by listening carefully to advice and instruction from coaches and managers.				
28. I make fewer mistakes when the pressure is on because I concentrate better.				

Use the following scale to calculate your skills:

For statements that **do not** have an asterisk (*) next to them:

- almost never = 0
- sometimes = 1
- often = 2
- almost always = 3.

For statements that have an asterisk (*) next to them:

- almost never = 3
- sometimes = 2
- often = 1
- almost always = 0.

Coping score (sum your scores for statements 5, 17, 21 and 24). The higher your score on this scale, the more likely you are to remain calm, positive and enthusiastic when things go badly. You are more likely to be able to overcome setbacks in a performance situation.

Coachability score (sum your scores for statements 3*, 10*, 15, 27). The higher your score on this scale, the more likely you are to be receptive to guidance from your coaches or managers, and to concentrate on using their instructions to benefit your performance, rather than getting upset and taking the comments too personally.

Concentration score..... (sum your scores for statements 4, 11, 16, 25). The higher your score on this scale, the less likely you are to become distracted

by different things. You are also likely to focus on important aspects of your sport performance.

Confidence and achievement motivation..... (sum your scores for statements 2, 9, 14, 26). The higher your score on this scale, the more likely you are to give 100% in both competitive and training situations. You are also more likely to be confident in your skills and abilities, as well as being motivated by challenges.

Goal setting and mental preparation score (sum statements 1, 8, 13, 20). The higher the score on this scale, the more likely you are to set yourself effective goals and produce appropriate plans to achieve your goals. You are more likely to plan out your sport performance effectively.

Peaking under pressure score (sum scores for statements 6, 18, 22, 28). The higher your score for this scale, the more likely you are to find high-pressure situations challenging. It is likely that you will use them to help performance, as opposed to viewing them as threatening and allowing them to hinder performance.

Freedom from worry score (sum scores for statements 7*, 12*, 19* and 23*). The higher your score on this scale, the less likely you are to put pressure on yourself by worrying about performance, making mistakes and what others think about your performance (particularly if you perform badly).

Total psychological skills score (sum all of your subscale scores). The higher your score on this scale, the higher the level of psychological skills you have.

Activity: Competitive state anxiety inventory 2 (CSAI-2)



The CSAI-2 (Martens, Vealey and Burton, 1990) looks at anxiety in a competitive situation. Each of the scales (cognitive anxiety, somatic anxiety and self-confidence) range from a score of 9 to 36, with 9 indicating low levels of anxiety or confidence and 36 indicating high levels of anxiety or confidence.

Using the questionnaire below, assess your levels of cognitive state anxiety, somatic state anxiety and self-confidence:

- Complete the questionnaire during sport or think about a sporting situation you have been in.
- Read each statement and tick the appropriate number to the right of the statement (1 = not at all, 4 = very often).
- Indicate how you feel/felt at this moment in time. There are no right or wrong answers.
- Do not spend too much time on any one statement.
- Calculate levels of cognitive anxiety, somatic anxiety and self-confidence using the scoring system.

	Statement	1	2	3	4
1	I am concerned about this competition.				
2	I feel nervous.				
3	I feel at ease.				
4	I have self-doubts.				
5	I feel jittery.				
6	I feel comfortable.				
7	I am concerned I may not do as well as I should.				
8	My body feels tense.				
9	I feel self-confident.				
10	I am concerned about losing.				
11	I feel tense in my stomach.				
12	I feel secure.				
13	I am concerned about losing.				
14	My body feels relaxed.				
15	I am confident I can meet the challenge.				
16	I am concerned about performing poorly.				
17	My heart is racing.				
18	I'm confident about performing well.				
19	I'm worried about reaching my goals.				
20	I feel my stomach sinking.				
21	I feel mentally relaxed.				
22	I'm concerned that others will be disappointed with my performance.				
23	My hands are clammy.				
24	I'm confident because I mentally picture myself reaching my goal.				
25	I'm concerned I won't be able to concentrate.				
26	My body feels tight.				
27	I'm confident of coming through under pressure.				

To score the CSAI-2, add up all of the numbers you circled for the scores as outlined below to get a score for each of the different levels. Statement 14 is reverse scored (e.g. 4 = 1, 3 = 2, 2 = 3 and 1 = 4).

Cognitive state anxiety score (sum 1, 4, 7, 10, 13, 16, 19, 22, 25)

Somatic state anxiety score..... (sum 2, 5, 8, 11, 14, 17, 20, 23, 26)

Self-confidence (3, 6, 9, 12, 17, 18, 21, 24, 27)



Activity: Sport competition anxiety test

The Sport Competition Anxiety Test (Martens, 1977) was designed to assess levels of competitive trait anxiety. Although SCAT is a useful measure, it is a personality measure that shouldn't be used without taking into account an individual's situation.

Use the questionnaire below to assess your levels of competitive trait anxiety.

- Read each statement and choose the letter that describes how you usually feel when competing:

A = hardly ever

B = sometimes

C = often feel this way.

- Tick the letter corresponding to your choice.
- Remember that there are no right or wrong answers. Try not to spend too much time on each question.

If you score high on the SCAT, this is an indicator that you are less likely to control anxiety and more likely to be nervous in competitive situations. If you score low on the SCAT, you are less likely to become nervous in competitive situations and more likely to cope with anxiety.

		A	B	C
1	Competing against others is socially enjoyable.			
2	Before I compete, I feel uneasy.			
3	Before I compete, I worry about not performing well.			
4	I am a good sports person when I compete.			
5	When I compete, I worry about making mistakes.			
6	Before I compete, I am calm.			
7	Setting a goal is important when competing.			
8	Before I compete, I get a queasy feeling in my stomach.			
9	Just before competing, I notice that my heart beats faster than usual.			
10	I like to compete in games that demand considerable physical energy.			
11	Before I compete, I feel relaxed.			
12	Before I compete, I am nervous.			
13	Team sports are more exciting than individual sports.			
14	I get nervous waiting to start the game.			
15	Before I compete, I usually get uptight.			

Work out your SCAT score using the following scale:

Disregard statements 1, 4, 7, 10 and 13

For statements 2, 3, 5, 8, 9, 12, 14, 15, A = 1 point, B = 2 points, C = 3 points.

For statements 6 and 11, C = 1 point, B = 2 points, A = 3 points.



Activity: Sport anxiety scale

Smith, Smoll and Shutz (1990) used the multi-dimensional model of anxiety to design the Sport Anxiety Scale (SAS) so that they could measure levels of trait anxiety. The SAS measures worry and concentration disruption (cognitive anxiety) and somatic anxiety to give a total trait anxiety score.

Using the questionnaire below, assess your levels of trait anxiety as follows:

- Read each statement and circle the number that best describes how you usually feel prior to or during competition:

1 = never
2 = somewhat
3 = moderately
4 = very often.

- Remember that there are no right or wrong answers. Try not to spend too much time on each question.
- It's really important that you share your true reactions to the sport setting, don't be ashamed of admitting it if you feel nervous or worried!

		1	2	3	4
1	I feel nervous.				
2	I find myself thinking about unrelated thoughts.				
3	I have self-doubts.				
4	My body feels tense.				
5	I am concerned that I may not do as well in competition as I could do.				
6	My mind wanders during sport competition.				
7	While performing, I often do not pay attention to what's going on.				
8	I feel tense in my stomach.				
9	Thoughts of doing poorly interfere with my concentration during competition.				
10	I am concerned about choking under pressure.				
11	My heart races.				
12	I feel my stomach sinking.				
13	I'm concerned about performing poorly.				
14	I have lapses in concentration because of nervousness.				
15	I sometimes find myself trembling before or during a competitive event.				
16	I'm worried about reaching my goal.				
17	My body feels tight.				
18	I'm concerned that others will be disappointed with my performances.				
19	My stomach gets upset before or during performance.				
20	I'm concerned I won't be able to concentrate.				
21	My heart pounds before competition.				

Calculate your different values using the scales below:

Somatic trait anxiety score (sum statements 1, 4, 8, 11, 12, 15, 17, 19, 21)

Worry score (sum statements 3, 5, 9, 10, 13, 16, 18)

Concentration disruption score (sum statements 2, 6, 7, 14, 20)

Trait anxiety score (sum scores from three scales above)

- The somatic anxiety scale ranges from a score of 9 to 36, with 9 being low somatic anxiety and 36 being high somatic anxiety.
- The worry scale ranges from a low level of 7 to a high level of 28.
- The concentration disruption scale ranges from a low of 5 to a high of 20.
- The overall trait anxiety levels range from a low of 21 to a high of 84.

These questionnaires are good objective measures of an individual's psychological state and can be used in real situations. Don't forget that one of the best ways to help the athlete you're working with is to get to know them; talking to your athlete is a good way to discover their psychological strengths and areas for improvement. After your initial assessments with the athlete, you should complete a needs analysis. This is a document that

outlines their main strengths and areas for improvement; how you can help them improve; and some initial suggestions of what they can do to improve. The needs analysis allows you to make your PST programme more effective by personalising it to your athlete. From this needs analysis, you can put together the aims and objectives of the PST programme in conjunction with the athlete, managers and coaches.

Needs analysis	
Client's name	
Sports psychologist's name	
The following initial assessment were undertaken (<i>name the assessment methods and state what they were used for</i>)	
1
2
3
Results from assessment 1
Results from assessment 2
Results from assessment 3
Your main strengths are
Your main areas for improvement are
Your could improve your performance by using the following techniques

Figure 17.9: Example of a needs analysis form. [AUTHOR TO FILL IN WITH DETAILS TO MAKE IT INTO AN EXAMPLE]

Activity: Producing a needs analysis



Using the initial assessments you completed for the activities on the previous pages, produce a needs analysis for your partner using Figure 17.9 on page 32 to help you. Remember to report the results of your initial assessments to highlight the athlete's strengths and areas for improvements.

Identifying psychological demands of sports

Before starting to plan your PST programme, you need to identify the demands of the particular sport you are examining. Performance profiling is one way of doing this.

Performance profiling

Performance profiling has five main stages.

- **Stage 1: Identify and define key qualities for performance.** Introduce the idea by asking the client what attributes they think are important for top performance. When using performance profiling in a sports setting, the athlete could be asked to think of an elite performer and write down the athlete's qualities. Table 17.2 highlights some prompts that can be used with different clients.

It will be useful for the client to record and define the qualities necessary for performance in a table format. This helps the client and practitioner to develop an

understanding of what the terms mean. To avoid misunderstanding the practitioner must make sure the definitions used are devised by the client. They should aim for 20 key qualities. Tell them that there are no right or wrong answers.

- **Stage 2: Profile the practitioner's perceptions of the client's levels and profile the client's perceptions of their levels.** This is an assessment by you and the client of the current level of performance. You and the client write the 20 key qualities in each of the blank spaces around the outside of the circular grid. Each quality is given a rating from 0 to 10 (See Figure 17.10 on page 34).
- **Stage 3: Discuss the practitioner's and the client's profiles.** In this stage, you are using the results, interpreting the results of the performance profiles by identifying perceived areas of strength and areas for improvement. When looking at the two profiles (shown in Figure 17.10 on page 34), if there are large differences between levels (a large difference is classed as two points or more), this should lead to a discussion between you and the client about why the different levels have been given.
- **Stage 4: Agree on goals and how they will be achieved.** You and the client need to agree on what you would like the client to achieve (i.e. set the benchmarks for each of the qualities). The results are used to set the goals to be achieved through the PST programme. Normally, each of these desired benchmarks will be at level 10 – any target level below this on the client's behalf would suggest that there is some form of resistance to achieving the ultimate level of performance.

Psychological	Physical	Attitudinal/character	Technical*
Confidence	Strength	Weight control	
Concentration	Stamina	Discipline	
Relaxation	Endurance	Determination	
Visualisation	Flexibility	Will to win	
Emotional	Power	Positive outlook	
Control	Speed		
Motivation	Balance		
	Reaction time		

Table 17.2 Examples of athlete qualities

*Technical skills are sport specific

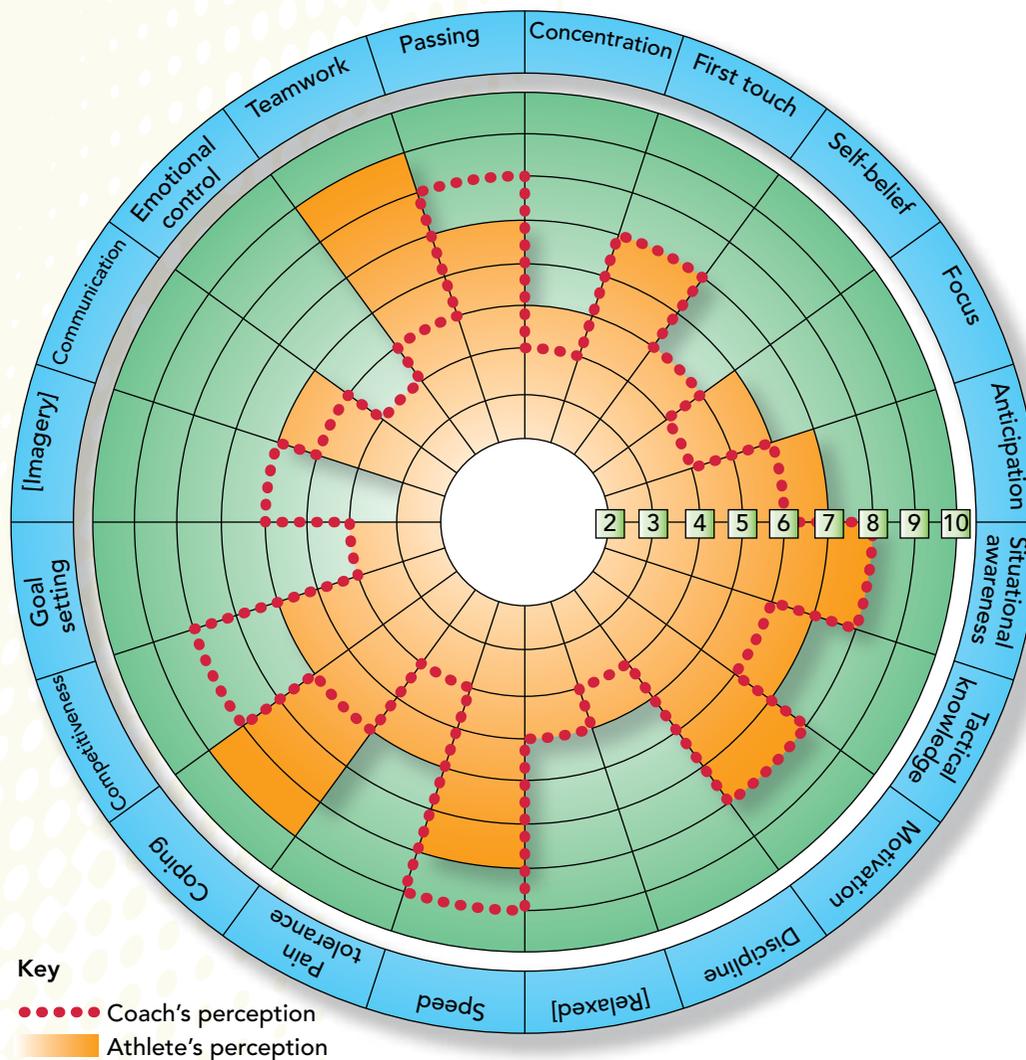


Figure 17.10: How can performance profiling benefit both the coach and the athlete?

Activity: Identifying differences of opinion



Using the profiles in Figure 17.10, identify which qualities have a mismatch in terms of the athlete's and the coach's opinions of performance levels.

- **Stage 5: Repeat the profiling to monitor progress.** Performance profiling can be repeated on a number of occasions to assess the client's progress. The aim is that the client will gradually progress further towards the outside of the scale (closer to the rating of 10). If the client does not make the desired progress, you and the client

need to discuss why progress is not being made. Usually this is because the training programme didn't take into account a quality (errors in design of programme), you have different views on the importance of a quality (errors in communication and understanding) or the client has not put in the effort to achieve the improvements in performance.

Plan

The planning stage of a PST programme comes after conducting your needs analysis with the athlete. The strengths and areas for improvement you have identified will help you decide on the aims and objectives of the PST programme. During the planning stage you should consider the aims and objectives, targets, content, resources required and any other considerations relating to the athlete's personal circumstances.

Current situation

The current situation of the athlete can be assessed in a number of ways including inventories and questionnaires (such as ACSI-28, CSAI-2, SCAT and SAS), performance profiling and interviews. These help you get a picture of the athlete's current situation, which can be summarised in the needs analysis form.

Aims and objectives

The aims and objectives of the PST programme are what you and the athlete want to achieve through the programme.

Action plan to address aims and objectives

When you have decided on the aims and objectives of the PST programme, you should work with the athlete to prioritise them. The biggest areas for improvement or the skills that are most important to the athlete's performance are given the highest priority. After you have prioritised the aims and objectives, you need to produce SMART targets.

When producing a plan for any PST programme think about how much time should be spent on different aspects of the programme. If you are introducing new skills to the PST programme, then 15–30 minute sessions, in addition to physical practice sessions, 3–5 times a week are beneficial. Gradually, the aim is to move away from needing distinct sessions to allow the psychological skills to be integrated with normal practice, however this only becomes possible when athletes become more proficient in their new skills.

Daily and weekly content of the plan

The daily and weekly content should be decided by the consultant, coach and athlete together. This means the daily and weekly content has been decided on objectively and takes into account their different perspectives. Including the athlete in the decision of the daily and weekly content increases their motivation to adhere to the programme, as they will have invested time and effort in its design. The athlete will feel like they are in control which benefits motivation. Another important reason behind the inclusion of both the athlete and the coach is to ensure the daily and weekly content is manageable. You can also show how the PST programme fits with the normal training routine.

Psychological skills

Think about all of the times that you have heard an athlete being interviewed after they have lost a game and they have talked about losing focus or cracking under pressure. At some point during their career, all athletes will suffer from some form of lack of mental preparation or make an unlikely mistake. This is where Psychological Skills Training becomes important.

Motivation

Helping the athlete to increase their motivation to optimal levels is one of the most important aspects of the consultancy role of a sports psychologist.

Goal setting

Using the acronym SMARTS will help to set the right type of goals. SMARTS stands for:

- **Specific.** Goals should show exactly what needs to be done
- **Measurable.** Goals should be quantifiable
- **Action orientated.** You should have to do something to achieve the goal
- **Realistic.** Goals should be within your reach
- **Timescale.** There should be a reasonable timeframe
- **Self-determined.** There should be input from the person for whom the goal is intended.

There are three types of goals:

- Outcome goals
- Performance goals
- Process goals.

Outcome goals

Outcome goals focus on the result of the event, like winning a table tennis match. This type of goal is often the least effective when it comes to motivation as your goal achievement is dependent on your opposition as well as the athlete themselves. For example, an athlete could run a personal best in a 400m event but still finish last and if the outcome goal is always to win, then this could negatively influence their motivation, even though performance is improving. Spending too much time thinking about this type of goal just before or during competition can increase anxiety and decrease concentration, which can reduce motivation. However, this type of goal can improve short-term motivation. Think about when

you have lost to somebody that you really wanted to beat. It probably spurred you on to train harder so you could beat them next time.

Performance goals

Performance goals focus on the athlete's performance and involves comparing their current performance to previous performances, so they are independent of other athletes and can give the performer a greater sense of control over the goal. Having greater control over goal achievement can be very beneficial for the athlete's motivation. An example of a performance goal would be improving pass completion percentage in football from 78% to 85%.

Process goals

Process goals are based around what the athlete has to do to be able to improve their performance. An example of this type of goal would be a basketball player wanting to improve their jump shot accuracy by making sure they release the ball at the height of the jump. This type of goal is useful for improving motivation as it gives a specific element of performance to focus on, which facilitates learning and development.

The key to using outcome, performance and process goals successfully is knowing which to use and when. It is hard for an athlete to focus on achieving process and performance goals without having a long-term outcome to aim for. Some studies have shown that using a combination of all three types of goal is better than using any single type of goal alone when wanting to improve motivation. There should also be a logical progression from short-term goals through to long-term goals.

Remember

The main reason athletes give for using goals is to help to provide direction and focus towards a task.



Performance profiling

Consider the use of performance profiling within any psychological skills training programme you design as it is one of the most common and effective techniques in sport psychology. As the athlete has a lot of control over the performance profiling process, this technique can be useful when wanting to increase motivation.

Arousal control

Progressive muscular relaxation

Muscle tension is one of the most uncomfortable and devastating symptoms of an over-aroused state and can severely hinder performance due to losses in coordination. It can lead to an increased risk of injury due to vastly decreased flexibility.

Progressive muscular relaxation (PMR) is an easy-to-use technique that helps reduce muscle tension. It increases an individual's awareness of their levels of muscle tension and, through the relaxation phase, helps distinguish between a state of tension and relaxation.

The technique involves tensing and relaxing groups of muscles in turn over the whole body. The process involves tensing a muscle group for five seconds, releasing the tension for five seconds, taking a deep breath and repeating. It is called progressive muscular relaxation because the athlete progresses from one muscle group to the next until all muscles have been tensed and relaxed.

Mind to muscle relaxation

The aim of mind to muscle relaxation is to train the muscles to recognise tension so they can be released and a relaxed state can occur. Common examples of mind to muscle relaxation techniques include imagery, PMR and autogenic training.

Autogenic techniques

Autogenic training is a type of self-hypnosis that help to develop feelings of warmth and heaviness. This programme of self-hypnosis, uses a series of sentences, statements or phrases to focus attention on the different feelings the athlete is trying to produce.

A normal autogenic programme has six stages:

- Heaviness in the arms and legs, e.g. my left leg feels heavy.
- Warmth in the arms and legs, e.g. my right leg feels warm.
- Regulation of cardiac activity, e.g. my heart rate is normal.
- Regulation of breathing, e.g. my breathing rate is normal.
- Abdominal warmth, e.g. my abdomen feels warm.
- Cooling of the forehead, e.g. my forehead is cool.

Autogenic training is not used as widely as other techniques of arousal regulation simply because it takes several months to learn effectively and each session can last a long time.

Breathing control

When you start to experience increased pressure in sports situations, an automatic tendency is to hold your breath. Unfortunately this increases factors that are detrimental to performance, for example, muscle tension. The best time to use breathing control is in a sporting situation that lets you take a break.

Psyching up techniques

Psyching up techniques are frequently used to increase arousal levels for competition. Some of the more common techniques are discussed below.

1. Acting energised

How many times have you seen an American football player butt helmets with a team mate? What about when a tennis player wins a key point in tennis and screams at the crowd? These are examples of a technique known as acting energised. These actions have different common characteristics and involve the combination of quick and forceful movements, positive thinking and strong emotional releases.

2. Energising imagery

In the same way that imagery can be used to reduce arousal and anxiety, it can also be used to increase arousal. This can be achieved through the use of high-energy images of competition (e.g. a hard tackle in rugby), playing well (e.g. crossing the finish line first in a race) and high levels of effort (e.g. being able to lift a new weight in the gym).

3. Using music

The use of music increases arousal. Music can narrow a performer's attention and divert it from tiredness. Exciting music can increase body temperature, heart rate and breathing rate, all of which improves sport performance.

4. Imagery

This requires the athlete to think about an elite performer in their sport and remember how they have performed a particular skill. Visualising themselves performing that skill in their sport before trying to copy what they did will help the athlete to perform the skill. This is one example of imagery and how it is used by athletes to help them improve their technique.

Imagery can be used in other ways by athletes. Imagery is a polysensorial and emotional creation or recreation of an experience that takes place in the mind. It should involve as many senses as possible, as well as recreating emotions experienced through the activity you take part in. The most effective imagery uses the following senses:

- **Polysensorial** – involving as many of your senses in the imagery process.
- **Kinaesthetic** – concentrating on the feel of the movement.
- **Visual** – concentrating on the different things that you can see during the movement.
- **Tactile** – concentrating on the sense of touch throughout the movement.
- **Auditory** – concentrating on the different sounds that you associate with a sporting movement, e.g. hitting the sweet spot on a cricket bat.
- **Olfactory** – concentrating on the different smells that you associate with a sporting action, e.g. the smell of freshly cut grass on the first game of the season for your football team.

There are two main types of imagery in sport and exercise: **internal imagery** and **external imagery**.

Key terms

Internal imagery – imagining yourself doing something and concentrating on how the activity feels.

External imagery – imagining yourself doing something as though you are watching it on a film so that you can develop an awareness of how the activity looks.

Take it further



Imagery

Research the following theories behind imagery use and then try to justify why you would use imagery with athletes. Be sure to use coach-friendly terminology. You might find it useful to try to give some examples of how to apply the theory to different athletics events.

- Psychoneuromuscular Theory
- Symbolic Learning Theory
- Bioinformational Theory
- Attention–Arousal Set Theory

5. Mental rehearsal

Mental rehearsal is one aspect of imagery. It is a strategy for practising something in your mind before performing the task. The difference between mental rehearsal and imagery is that mental rehearsal does not take into account how the skill is rehearsed, or what senses and emotions are used throughout the skill. It is the cognitive rehearsal of a skill without any physical movement.

Using mental rehearsal in the lead up to, during, and after competition, as well as in practice settings, benefits skill practice and development. It gives the athlete the opportunity to practice 'what if' scenarios to assess whether something different would work in the same scenario. This is often combined with replaying the performance in their mind. The athlete goes through previous performances to detect errors using mental rehearsal.

Although not as effective as physically practising a skill, mental rehearsal is more beneficial than not practising the skill at all. It helps to develop neuromuscular patterns associated with different movements. It is important to rehearse both good and bad movement patterns so that you can get to know the difference between the two to develop the appropriate neuromuscular responses.

6. Controlling emotions

A cricket player is preparing to go out and bat in the Ashes Test series. He starts to visualise situations in the past where he has been bowled out against Australia and then starts to breathe deeply and change the image from being bowled out to successfully striking the ball and scoring combinations of quick singles, 4s and 6s. One of the benefits of using imagery is that you can imagine things that have gone wrong in previous performances (such as

missing penalties, being bowled out, experiencing poor officiating). Then you can imagine yourself coping with these negative influences in a number of ways and being able to perform the task successfully.

7. Concentration

A golfer is waiting to putt to win the Masters at Augusta. He concentrates on the feel of the putter in his hand, the distance between the ball and the hole, the changes in the ground, the feel of the movement when he goes to stroke the ball and smell the green. He closes out any noises from the crowd so that he can listen to the contact of the club on the ball. A key aspect to concentration is being able to focus on relevant cues in your environment (e.g. things that directly affect your sports performance) and being able to close out factors that don't directly affect your sport performance (e.g. crowd noise and banners). By imagining what you want to achieve and what you need to be able to do to achieve it, you can prevent your attention from focusing on irrelevant aspects, and focus instead on relevant aspects.

8. Relaxation

A sprinter is in the start position in the final of the women's 100m at the Olympic Games. In this example, the athlete would imagine emotions associated with relaxation and, together with other techniques such as breathing exercises, could more effectively control anxiety, arousal and stress levels.

Activity: Relaxation imagery



Ask a friend to measure your heart rate and write it down before you read the following relaxation imagery script.

Imagine yourself on a beautiful sandy beach. You are alone and everything is peaceful. Notice how the sand meets the clear blue water. Above, you can see only clear blue sky. You are walking towards the water and can feel the sand under your feet and between your toes. You can hear the waves as they reach the shore and you step into the sea. You can feel the cooling sensation on your feet and around your ankles and calves as you enter the water. Everything feels perfect. You can feel the warmth of the sun on your back and shoulders. You are completely relaxed and calm.

Record your heart rate again. Have you relaxed?

9. Pre-performance routines

These are routines that performers go through before a competition to help them focus attention, increase arousal or decrease arousal. Think about when you have seen a tennis player at Wimbledon before an important game serve. You will see them close their eyes, take a deep breath, bounce the ball and then start the serve. This is an example of a pre-performance routine.

Confidence building

Sports psychologists work with athletes to build up their confidence. For example, if a football player has been taking penalties for her team on a regular basis but keeps missing them, this could knock her confidence. A sport psychologist could work with the player, asking her to remember having a strong support foot placement, striking the ball hard, thinking about where exactly the ball should go, seeing the ball hit the back of the net and thinking about the joy experienced when scoring a goal. The sport psychologist would do this because when an athlete can picture themselves performing well in their mind, it helps to promote a sense of mastery, and increases their belief in their own ability to perform a task.

Self-talk

The main focus of self-talk is to convince yourself that you are good enough to play or perform well. Self-talk helps the athlete to build self-confidence. This should be done quite frequently. Everyone has, at some point, said to themselves 'Come on!' or 'You can do this!' when performing. It can be very effective.

For example, if a cricket player is having a very unsuccessful innings, and every ball he goes for he hits incorrectly or misses, he could find himself leaving balls he would normally attempt. If the player

were to start saying to himself 'Think back to when you scored 100 against Australia. You concentrated on the flight of the ball, you watched the spin, you took into account the position of the fielders and you struck the ball well most times.' This would help his performance greatly, as he is concentrating on successful performances rather than negative ones.

Positive thinking

This is often used with other techniques such as imagery and PMR in order to increase the confidence of athletes during PST sessions. It is used regularly by athletes in different sports during the event to improve performance.

A golfer has a problem missing putts during important events and this has greatly knocked his confidence. He seems to miss most putts that are more than about six inches. When he approaches the shot the next time in competition, he automatically thinks 'Oh no, I hope I don't miss this one as well.' Positive thinking would be good here because the athlete would change the negative thought into a positive one. He could do this by thinking more about times when he has been successful in performance. Using phrases such as 'I can do this, I've done it a million times before. Relax.' After the event, the golfer could use imagery techniques to imagine putting from distances while using the positive thoughts to further enhance confidence.

Changing self-image through imagery

Imagery can be used to change self-image through increasing confidence. Through imagery, the athlete will be able to experience the feelings of success and will be able to come up with strategies as to how they can be successful in performance. As the performer sees that they can complete the performance successfully (if only in their minds), their levels of self-confidence will increase.

Assessment activity 17.5

P6 P7 M4 D3

BTEC

1. Based on the initial assessments and needs analyses you have conducted for the earlier activities **P6**, produce a six-week plan for a PST programme. **P7**
2. Explain the programme to your client. **M4**
3. Justify why you have selected the different PST activities. **D3**

Grading tips

- Show evidence of assessing the current psychological skills of your performer by keeping all of your methods of assessing skills and the needs analysis form.
- Identify your performer's key areas for improvement and decide on six weeks' of psychological skills training that will help the performers develop these areas. Remember that the areas to develop may not always be the areas that have the lowest values on results.
- Provide an explanation of the design of the programme and of each of the activities that will be completed by the athlete as part of their skills training programme.
- Justify the design of the programme and the activities by saying how they will benefit the athlete and providing supporting evidence.

Functional skills

By working out all of the scores for each of the subscales on the different questionnaires and then comparing these to norm data for the different tests, you could develop your **maths** skills.



By designing a psychological skills training programme and providing suggestions for your athlete to progress with their psychological skills training programme, you could develop your skills as a **reflective thinker**.



Mark Johnson

Sports Psychologist



Mark works as a sport psychologist for an athletics club. One of Mark's key job roles is working with young athletes to help them develop their psychological skills.

'Sport presents lots of opportunities for young athletes to learn psychological skills alongside the physical skills that are required for their sport. Like most skills, some people manage to learn psychological skills more quickly than others do, but if you are prepared to spend the time to learn how to use the skill then it will be really beneficial for you.'

'One of the big advantages of teaching psychological skills alongside physical skills is that it can help athletes and their support teams (e.g. coaches and sport psychologists) to develop even better relationships because they will spend more time with each other. This can benefit the athlete's performance as the coach and the sport psychologist will develop more trust in each other's opinions and values which means that they can offer a better level of service to the athlete. One of the good things about working in this way is that I get to spend more time with the athletes and I can observe them more in competition and training. If I can do that, I get to see which athletes are developing well and which athletes are still struggling with things like stress, arousal and motivation.'

'One of the common problems that I face is when young athletes have low levels of motivation during their winter training. Often it is cold and dark, so some of the athletes don't really like to go to training and sometimes don't try very hard.'

Think about it!

- What techniques could you use to increase the motivation of the young athletes during winter training?
- How do you think these techniques would help to increase motivation?

Just checking

1. What is personality and how does it affect sports participation and performance?
2. What are the main theories that have tried to explain the relationship between personality and sports participation and performance?
3. What are the main arguments of each of these different theories and which is the most widely supported?
4. What is motivation and what are the different types of motivation?
5. What is the attribution theory and what are the different types of attributes we give?
6. What is stress and what are the different sources of stress?
7. What is the stress process?
8. What is arousal and what are the different theories that try to explain how arousal affects performance?
9. What is anxiety and what are the different types of anxiety?
10. What are Tuckman's stages of group development?
11. What is cohesion? Explain the key factors that can affect team cohesion.
12. What are the two main ways that team cohesion can be assessed?
13. What are some of the tools that you can use to plan and review a PST programme?
14. What are some of the different skills that you can incorporate in a PST programme and which areas of psychology will they benefit?

Assignment tips

- Research tips - try to use as much supporting information as you can for this unit, this will be helpful in achieving higher grades in some cases. The Internet is full of websites based on sport psychology, you might want to try these:

Athletic Insight (www.athleticinsight.com)

Mind tools (www.mindtools.com)

Zone of Excellence (www.zoneofexcellence.ca).

- Practice using the techniques. The key to being a good sport psychologist is knowing how to suggest and use different techniques with people based on the needs analysis. Try using some techniques in your own sport so that you become familiar with them.