

What is stress?

Stress in sport is an important factor for sportspeople to overcome because at times the competitions and matches can become too much for them.

Stress is known in a person when they form tension mentally and physically and have gone into a state of strain or suspense. Stress is anything that can cause a person react invariably, however each person responds differently to stress.

However stress should not be deemed as a negative aspect of life, this is because it can provide sportspeople the mental and physical energy to motivate them to go out and perform.

Types of Stress

There are two types of stress these are known as Eustress and Distress.

Eustress is known as the better stress, the stress which provides us mental and physical energy which leads us in a direction to move forward and get things done. It also provides us with a sense of fulfilment and happiness when being challenged mentally or physically.

For a footballer Eustress can be felt in an international game when they are singing the national anthem with a stadium full of 70,000 fans chanting it with them, this can provide the footballers great fulfilment knowing and having that feeling of all of those people behind them to do well.

Eustress in footballers can be felt right throughout all levels when their team scores a goal, this provides all of the teams players a sense of direction and energy to go on and win the game, this Eustress is necessary for footballers as this is what motivates players to win games the feeling of fulfilment.

Distress is known as the bad stress it can provide performers with a sense of discomfort, which can then lead to illnesses and even worse depression. Distress is at the state when the performer or person has come to the point when they have too much stress, for a long period of time distress can seriously damage a person's health by causing coronary heart diseases, high blood pressure, ulcers, impotence, substance addiction, mental health problems even to the extent of suicidal tendencies.

Distress in football can seriously affect their confidence within the game and their performance however it does depend on the experience, the

importance of the competition, the quality of the opposition and the size of the crowds.

All of this can affect the footballer by causing them to "freeze" in the game, this is known as when a footballer avoids receiving the ball, dribbling the ball, striking the ball and just general interaction in play. This is because when footballers are stressed they do not have the motivation or fulfilment to perform or carry out the desired actions.

Responses to Stress

With stress there are three types of responses an individual can carry out, these are:

- Physiological
- Psychological
- Behavioural

Physiological Responses

In psychology physiological responses to stress relate to how an individual reacts to stress, a common quote used is the "fight or flight" response, so if an individual feels someone is behind them when walking home in the dark, our body will react by initiating the "fight or flight responses" The responses could either be to run as fast as possible to get home or to turn around and investigate what is going on behind them.

Symptoms of stress can be:

- An increased heart rate
- Faster breathing
- Headaches
- Butterflies in the stomach
- Tightness of chest and pains.
- Dry mouth.
- Continuous colds and illnesses.
- Muscular aches and strains.
- Persistent sweating.
- Skin irritations or infections.

For a sports performer this could relate to them when they are entering a intensifying moment in their game like a penalty kick; they begin to sweat more, their heart rate increases, which could increase their blood pressure making their muscles tense up. The players who opt not to take a penalty this is their physiological response to this stress by choosing to walk away and not take a penalty, the players who choose to take a penalty are physiologically responding to the stress by opting to arise

above the stress of taking a penalty, however they could still go through the symptoms of stress which may be the reason why some players miss scoring penalties.

Psychological Responses

This is a response caused by the individual interpreting the stressor after recognising it, for an example when an individual is about to sit an important exam they'll begin to get butterflies and nervous they then interpret exams as something they don't like or something which the individual is not good at and doesn't provide a positive feeling.

However if the same questions in the exam were given to the individual in a non exam environment, that individual would probably feel less tense and able to produce better results.

Symptoms for psychological responses to stress are:

- Reduced concentration
- Less interested
- Unable to make decisions
- Sleep disturbances.
- Making mistakes
- Unable to relax
- Quick losses of temper
- Loss of sense of humour
- Loss of self-esteem
- Loss of enthusiasm

From a sports performers view, psychological responses to stress can have the most affecting symptoms upon their game this is because if they relate a bad thought with their game they will find it difficult to carry out that activity positively.

For an example if a long distant runner had to compete at a competition where there were no supporters their wanting that individual to win, this individual will gain a negative vibe because usually they are used to having large amounts of supporters their chanting their name, however this time other competitors names are being chanted, psychologically the individual's concentration is automatically reduced because they begin to think about the supporters instead of their competition, this also may make them feel a lack of enthusiasm because they do not feel motivated enough to run because they have no one to cheer with them if they win.

Behavioural Responses.

Behavioural responses to stress occur in an individual when they carry out actions to either make them feel like it is helping them cope with stress or makes them feel more relaxed and comfortable.

Symptoms are:

- Talking, eating and walking quickly
- Interrupting conversations
- Increased smoking, drinking and eating.
- Fidgeting
- Lethargy
- Moodiness
- Grudge bearing
- Accidents and clumsiness
- Poor personal presentation
- Nervous habits

For a sports performer they can carry out behavioural stress symptoms even within a game, for an example if a referee gives a unjustifiable penalty against a defender, this defender could become moody and angry towards the referee, and they even may bear a grudge against this referee for further matches, which will make the player even more stressed because before every game if the player knows that same referee if refereeing their game they are going to link it back to that incident.

Sports performers can even take up bad eating patterns whereby they are so stressed they cannot find the right time to eat, therefore they begin to loose muscle mass and weight and start to become lethargic and are unable to perform to their best ability.

Causes of Stress

There are endless causes of stress for individuals and also very varied, this is because each stress is specific to that individual, and different types of people will react differently to stressful situations, for an example two sprinters in the Olympics walking up to their blocks, both will react differently, some tend to walk around their area shaking their legs bouncing on the spot, some carry out short specific movements to their activity, some may feel butterflies, some may feel very in their "zone", some may feel less concentrated these are all ways of dealing with stress. Sources of stress can be divided into four categories these are known as:

- Internal: These causes of stress are related to the past, memories or experiences, current injuries, past injuries and our own internal feeling of our own self-worth.

For a sports performer this type of stress can be triggered by previous injuries because that player remembered how stressful it was to come back from an injury, when they go back to the same location of where their injury occurred this may make them react differently and become stressed.

- External: These causes of stress occur in the environment of the individual, this can be competitions, the noise or chants of the crowd, an individual's opponents, the weather, transport problems.

For a sports performer these can all be aspects of their game which can cause severe stress symptoms this is because they are causes of stress which are out of our control we cannot prevent them, it's us or the individual just thinking they are a problem which is generating a stressful process, for an example an opponent which you know is better than you can be a stressful process for a sports performer because feelings of self-worth can decrease you begin to feel you are not good enough and you feel why bother if you know they are better than you.

- Personal Factors: These causes of stress are related to the people we frequently share our lives with such as family, friends, partners, personal factors also include factors such as money, health and living accommodation.

For a sports performer these personal factors could either be a death or a confrontation, these can have a severe affect upon sport performers especially if they depend on support from these close friends or family and if a stress occurs around them this will have a sudden impact upon their game and can sometimes result in the performer quitting due to the demand and stress it has on their surrounding close companions.

- Occupational Factors: This is either the job, or studying we carry out, or for some people both these will include the people you work with or the team mates you are in a team with, and your relationship with coaches and managers.

For sports performers this can be the most stressful cause of stress this is because it is deemed to be the most important thing to have a good relationship with your

surrounding team mates and coaches as you depend on these to perform well, and it can be stressful for a sports performer when they change clubs or if they generally cannot click with their team mates and this could cause their confidence to decrease making their performance lacking in enthusiasm making it appear from the coaches point of view that they do not want to play. This can be very stressful for the performer because they just want to concentrate on their game however they can't do this if they are unable to bond with their team mates and work well with them.

The sympathetic and Parasympathetic Nervous systems

The sympathetic Nervous System

This system provides the individual with the motive to confront the stress or to run from the stress, it releases stress hormones known as adrenaline and cortisol into the bloodstream. Once these hormones reach around the bodies muscles they produce the following symptoms:

- Increase adrenaline rush
- Increased heart rate
- Increased breathing rate
- Increased metabolism
- Increased heat production
- Increased muscle tension.
- Dry mouth
- Dilated pupils
- Hairs on skin stand on end and cause goose pimples.
- Digestive system slows down.
- The working muscles attract all blood away from internal organs.

All of these symptoms for a sports performer can be beneficial as it provide them with energy and drive to perform well, however over a long period of time these symptoms can fatigue the performer quickly and make them feel lethargic because of the constant metabolism increase, they also would require much more consumption of cholesterol to synthesise the adrenalin there this would increase a sports performers blood cholesterol levels which could cause coronary heart disease.

The Parasympathetic Nervous system

This is the nervous system which occurs after the stress has passed; it is the nervous system which activates the hormones to cause a relaxation response this allows the individual to overcome the stress as the body conserves energy to make the individual feel less fatigued.

The following symptoms will be felt during the Parasympathetic nervous system is activated:

- Decreased adrenaline production
- Slower heart rate
- Slower breathing rate
- Slower metabolism
- Lower body temperature
- Muscle relaxation
- Dry skin
- Smaller pupils

For sports performers even though it is an advantage that this nervous system makes the individual feels less stressed the reduced adrenaline production and slower heart rate can also have an adverse affect whereby the performer can become less motivated and loses enthusiasm for their sport.

There is a point where a sports performer can become too relaxed because their muscles are not contracting strong enough and it could cause injuries, for an example if a footballer goes into a challenge weakly and relaxed their opponent will be applying a severe force into their limbs and could cause the individual's legs to gain an injury.

What is Anxiety?

Anxiety is an unpleasant state of emotion whereby the individual's hormones produce feelings of worry, apprehension and fear.

Anxiety can be seen as having a negative impact upon performers to cause symptoms of stress and cause too much arousal for a performer whereby they feel too anxious and nervous to perform to their best possible ability, however anxiety levels can be different for each individual also the cause of feeling anxious can be diverse for every individual.

Types of Anxiety

Trait Anxiety

Trait anxiety is associated with an individual who suffers severely with anxiety, they are very prone to anxiety and it is seen to be part of their personality.

Individuals who express high amounts of trait anxiety tend to react dramatically to situations which are not perceived as being threatening. For sports performers if they express high amount of trait anxiety they will experience high amounts of anxiety within their personality and they will worry about many situations within their sport, this can be very lethal to their performance as they may become very insecure and worry about every part of their game.

If a coach or manager has an athlete who expresses high amounts of trait anxiety they can carry out questionnaires before their performances just to see if they are calm enough to perform to their best.

For the sports performer themselves this can be very frustrating as they will be anxious about situations where people would deem as non-threatening and the sport's performer can be portrayed as being not stable enough to perform even if they have great potential.

State Anxiety

State anxiety is felt by an individual in a specific situation which relates to them it can be expressed in two different ways:

- Cognitive anxiety = anxiety which can cause negative thoughts.
- Somatic anxiety = Physiological responses

For different individuals the responses will be specific to their own situations for an example a footballer taking a penalty, different individuals will react differently to their anxiety of taking a penalty some

will miss penalties because of their severe state anxiety however others will react composed and able to deal with anxiety that comes with taking a penalty.

Competitive Anxiety

Competitive anxiety is activated when a performer has the pressure of having to succeed in a challenging situation, athletes either act physically (somatic) and mentally (cognitive) to competitive anxiety these symptoms can have a negative impact upon a sports performer's performance which would not reflect their true ability.

Competitive anxiety can affect performers:

- Attention
- Reactions
- Information processing

If all of these factors are effected this may seriously cause the performer to become stressed because they are not performing to how they know they can play, this may cause them to become "worked up" and then they are carrying out a vicious cycle.

If a sports performer suffers severely from anxiety or high trait anxiety (A-TRAIT) they are more likely to be prone to more stress therefore they will be unable to perform to their best, however to enable to overcome this there are ways athletes can train there brain to think positively, this is known as mental imagery.

What is Arousal?

Arousal is associated as being in a state of preparedness of the body to carry out desired actions; it can range from being in a deep sleep or extreme excitement, arousal activates various organs under control of the nervous system, the degree of arousal reflects the a number of physiological indicators such as blood pressure, heart rate, muscle tension and respiration rate.

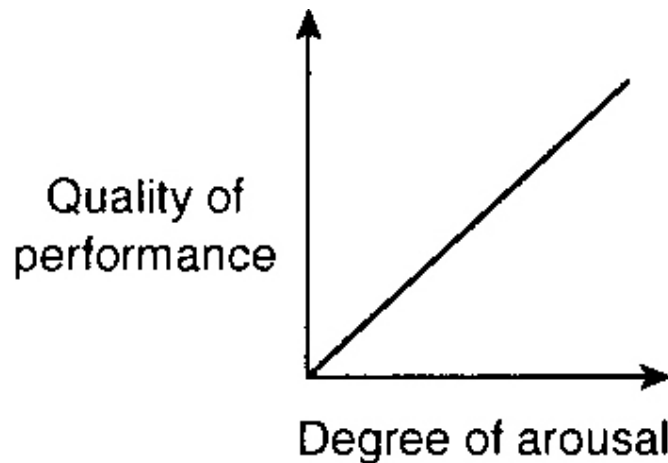
The relationship between arousal and performance are defined through different theories, these theories are:

- Drive Theory
- The inverted U hypothesis
- Catastrophe Theory
- IZOF theory

Drive theory

This theory was derived from Hull, his theory was based around the fact that he thought "The more you are aroused, the better you will perform" this was further investigated by Spence and Spence.

This theory frequently used the Performance level graph:



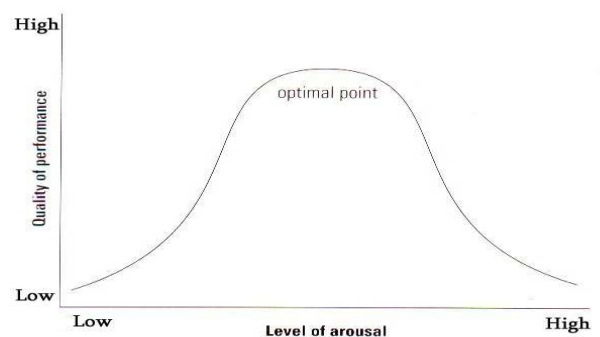
They portray the theory in a linear fashion and are described in a straight line, an individual's performance also depends on their skill level, if they have a high amount of skill they will be able to increase their arousal levels.

This is because when an individual learns a skill the dominant response will be exaggerated much greater and more positively, however for a less experienced performer their skill levels will decrease to enable them to produce a higher level of arousal.

For a sports performer certain performers cannot perform to their best possible ability if their arousal levels are high, whereas some performers need their arousal levels to be higher than normal to provide them a burst of energy and motivation.

Inverted U hypothesis

This theory was derived from Yerkes and Dodson Law, its theory is based around denying the Drive theory however the Inverted U hypothesis approves that arousal does have a positive impact upon performance but only to a certain extent, because the Inverted U hypothesis theory derives that past a certain point of arousal the performance levels can falter and decline.



The optimal point is where the arousal levels are at the best point to provide a peak performance and is often known as the "Zone" because in this point of arousal everything runs smoothly and goes well.

For sports performer's this type of theory can be affective especially at a top level because their arousal levels need to be at the perfect point to ensure they are not under aroused so that they have no enthusiasm to perform, and if they are over aroused they can become too aggressive and loose composure within their performance.

The only fault in this theory is that every optimum point can vary for different individuals it all depends on their personality and how certain situations can affect them.

Catastrophe Theory

The catastrophe theory was developed by Yuri Hanin who discovered that individual sports performers have their own level of state anxiety which enables them to still perform effectively and produces their best performance, performers find that if they are not within their "zone" they will not perform to their optimum however each individual needs to discover their optimum functioning zone to produce their best performance.

IZOF theory

This theory was based around the catastrophe theory it is known as the Individual Zone of Optimal Functioning training, this theory allows performers to find their level of state anxiety which is most comfortable for them.