Over arousal / anxiety

Hockey - Disguise pass

C1 – Over-arousal and Anxiety Disguise pass from left back to centre mid-field:

Arousal is the state of general preparedness of my body for action; it involves physiological and psychological factors. Anxiety however is the negative aspects of feeling stress and the worries of the possibility of failure. The four types of anxiety are trait, state, somatic and cognitive. Trait anxiety is an enduring personality trait, giving a tendency to view all situations as threatening. State however is anxiety felt in a particular situation. Cognitive anxiety is the thoughts and apprehension I would feel before an event. Somatic is the physiological signs for example, increased heart rate and nausea. During the performance of this skill composure and optimum arousal is vital. If I exceed my optimum level of arousal and lose my composure, the disguise pass won’t be performed accurately or efficiently. Arousal is the state of general preparedness of the body for action, involving physiological and psychological factors. Regarding my disguise pass, it determines if I’m ready physically to perform the skill but also if my mind is concentrated of the correct performance. In most game situations the pressure to win or even avoid a loss is high; but within a game there are singled-out situations where the pressure to perform a skill increases. The result of mis-performing the skill can result in turn over ball, giving possession to the opposition. The physiological signs that are a response to my increase levels of arousal are known as somatic signs. These consist of increased heart rate, sweating, increased muscle tension and nausea. Each of these indicates my levels of arousal are rapidly increasing, they also affect my performance. I feel the level of arousal is a result of increased anxiety. Because this is a difficult skill to perform correctly, my cognitive anxiety peaks. This means general nervousness, apprehension or worry that I have about my lack of ability to complete the skill successfully over-whelms my mind. This triggers arousal levels from being under-aroused with low levels of adrenaline to a definite increase in the hormone adrenaline which is a somatic indicator of increased arousal. However it is the psychological or cognitive signs that also affect the performance. These consist of increased anxiety, tension, negative self-talk, and inability to concentrate and fear/anger of failure. These can be triggered by the presence of supporters, audience, coach, teammates and rivals. Being over-whelmed by the situation I lose the ability to control levels of arousal. This is known as the catastrophe theory; this is the theory that predicts a rapid decline in performance resulting from the combination of high cognitive anxiety and increasing somatic anxiety. The theory proposes that my performance is enhanced when cognitive anxiety is high but somatic is low, but when both cognitive and somatic anxiety is high my performance suddenly deteriorates. Following the decrease in performance I try to regain control by decreasing arousal and anxiety. However my performance won’t immediately return to a suitable level; it will remain low and gradually increase when both anxiety and arousal reach lower levels. It is also possible that my performance continuous to deteriorate as I’m no longer at optimum arousal. This leads on to the inverted U theory; which suggests optimal performance occurs when I reach an optimal level of arousal. This will entail high cognitive anxiety but low somatic anxiety; however just before I perform the skill my somatic anxiety will spike and cause catastrophe deterioration. The reason this applies to me and not Richard Mantell is simply due to my level of skill; performing the disguise slap is not habitual to me and therefore I need a greater proportion of attention when performing the skill. Higher levels of arousal distract that attention away from the performance. For Richard increasing levels of arousal don’t distract him from performing the skill. Also this skill requires a certain level of control; although it is a gross skill the requirement for accuracy means over arousal would distract from the performance. I would need to be at optimum arousal to perform the skill accurately but also with power.

C2 – Over-arousal and Anxiety Disguise pass from left back to centre mid-field:

In order to avoid the catastrophe theory and mis-performing the skill I need to overcome my levels of anxiety. As regards to the catastrophe theory I must control my somatic anxiety above all else; as this is the main cause of over-arousal. Somatic anxiety is the physiological responses I get from increased anxiety, these coupled with the cognitive signs (i.e. negative self-talk) will cause arousal to peak and performance to decline. This type of anxiety is state; I know this because it’s not my personality to feel nervous at every situation, which is what trait anxiety suggests. State anxiety is anxiety felt in a particular situation – performing the disguise slap. There are a number of methods to control anxiety for both cognitive and somatic; as I must concentrate on controlling somatic I will focus on those.

Bio-Feedback: The first known method is called bio-feedback; this is the monitoring of a physiological variable which is affected by somatic anxiety. I would be attached to a number of different electrical apparatus that will display information on each symptom of somatic anxiety.

• Pulsometer – measures Heart Rate

• Electromyography – measures muscle tension

• Galvanic Skin response – measures sweating

• Sphygmomanometer – measures blood pressure

• Spirometer – measures breathing rate

In practice/training I would have to use these monitors and learn to reduce each physiological variable by trying to think positive or pleasant thoughts, thus reducing the anxiety state associated with that skill. The most common one to use is the heart rate monitor; as increasing heart rate is the easiest way to tell if somatic anxiety is increasing. I would strap the pulsometer to my chest and watch the results and try to lower my heart rate, thereby controlling my somatic anxiety. The problems with this however is that I would have to divert attention away from the performance of the skill in order to lower my heart rate.

Breathing Control: This focuses on regulating breathing to distract from the anxiety inducing situation. The first step is to learn “deep breathing” or “diaphragmatic breathing” as this causes a relaxation response. When I do this the air enters my nose and completely fills my lungs thereby raising the lower belly. The problem with this however is that I am in the middle of a match with factors such as fatigue and increased breathing rate, which means I won’t be able to breathe deeply and therefore not control somatic anxiety.

Imagery and Visualisation: Imagery is creating mental images to escape the immediate effects of stress and visualisation is the process of creating a mental image of what you want to happen. Relating this to my situation, I would use imagery to create an image of a “happy and peaceful place”, somewhere I feel safe and not stressed. This however may distract me completely from the skill in hand. Imagery is useful in a training situation to rehears the event/performance in my mind before/during the practice of the skill. I would use visualisation in order to picture the perfect model or performance; this diverts my attention away from negative thoughts and anxiety of performing the skill incorrectly. I can use this to picture how I want the performance to feel and how I want it to happen; I do this to imagine the intended outcome of the skill.

Progressive Muscular Relaxation: This technique of overcoming anxiety is useful for relaxing my body when my muscles become tense. Once again, couple with breathing rhythm PMR alternates tension and relaxation of muscles, progressively reducing tension in the whole body.

Goal Setting: This is a technique used to control anxiety by directing attention away from stress and towards the achievable target or outcome. I would use outcome goals to focus my mind on making the pass successfully, to a teammate and with enough power, and not on how I’m going to perform the skill. Seeing as though the anxiety stems from nervousness to perform the skill, I should focus on the outcome of the performance instead of the details of performing.

# Horseriding-Turning in the air

## C1: Cause – Anxiety

For this particular skill I suffer from anxiety. Anxiety affects my performance negatively and is caused by my perception that my ability is not good enough. This causes me to worry, lose focus and experience negative thoughts. My anxiety is caused by task importance (when competing in a major competition), losing or fear of failing, perceived inaccuracy of an officials decisions, fear of becoming injured, lack of self-confidence or efficacy, audience effects and evaluation apprehension.

Anxiety is categorised into trait anxiety (personality trait to tend to react to situations in an anxious way) and state anxiety (emotional reaction to a situation they are experiencing as threatening). Trait anxiety is a continuing personality trait, giving a tendency to view all situations as threatening. This type of anxiety is a purpose or developed behavioural nature that impacts a performer to notice a wide range of potentially non dangerous situations as threatening and I respond to these with state anxiety reactions which are disproportionate to the magnitude of the situation. When I am competing against other people in a jump off, we may all have the same technical skill and when we are in the jump off we are all put under identical pressure of having to make a turn in the air over the same jump to win. However we will all have completely different state anxiety reactions to the situation because of our different personalities (our levels of trait anxiety). I have high trait anxiety and I find all situations threatening therefore I experience more state anxiety than would be expected in a situation. I perceive making a turn in the air over a jump in a jump off as threatening as it could cause me to make an error which will then impact on what my horse will do, it could knock a pole or stop at the fence. I am very nervous in jump offs as I am worried about making an error so I do not like riding into a jump at an angle to then make a turn in the air over it. I achieve optimal performance at low levels of arousal whereas others in my class or elite performers may be able to tolerate high levels of anxiety and so they require high arousal which enables them to make turns in the air in order to get the fastest jump off time and win. This is linked to the inverted U theory, which is a model that describes the relationship between arousal and performance. This theory would suggest that my peak is at a lower level of arousal due to my high level of trait anxiety. State anxiety is characterised by a subjective, consciously perceived feeling of apprehension and tension, along with or related with stimulation or arousal of the autonomic nervous system. My level of state anxiety changes from moment to moment in a jump off. I have a slightly raised level of state anxiety, making me feel nervous and making my heart pound before making a turn in the air over a jump. This becomes a lower level once I have completed a turn in the air and then becomes extremely high again near the end of the course and making more turns in the air.

Anxiety shows itself in two ways. One is through cognitive anxiety which is the psychological aspect, where thoughts, nervousness, apprehension or worry that a performer has about their lack of ability to complete a task successfully. For example, when I am in a jump-off I doubt my own abilities and will often find myself asking questions such as “I’m not sure I can do this” or “I haven’t trained hard enough for this”. The other is somatic anxiety which is the physiological symptoms of anxiety, where a performer feels that they may physically be unable to cope. I have somatic anxiety and this causes my heart rate to increase because of the adrenaline of being in the jump off, sweaty palms which reduces my level of grip I have on my reins, muscle tension which can cause me to not give with my hands and for my body to become stiff and un-supple which will affect my aids to my horse and my horse’s actions and the feeling of nausea. This all is caused by my anxiety and this means that my horse will be able to sense my nerves and this can then cause my horse to be nervous.

## C2: Corrective measure – Imagery and progressive muscular relaxation

There are several techniques in which I could improve my cognitive anxiety and performance. They all involve me redirecting my thoughts away from the cause of the stress (turn in the air) and this will reduce the cause of any anxiety. One way would be through the use of imagery and visualisation. Imagery is based on concept that the best way to reduce stress is to change the environment; however, you can obviously not do this when competing. So this is why imagery could help to relax me by using my imagination to recreate a specific situation that I find relaxing. This could be a scene or place which I remember as being safe and peaceful. I would need to bring all of my senses to this image e.g. sounds, smells, kinaesthetic senses and touch. I would imagine this scene when I am jumping in a jump off and it will help to relax me and lower my cognitive anxiety levels. I could also picture that I’m at home training at turning in the air. This image will help to increase my confidence and lower my anxiety as I know that I can perform this skill. The imagined place will be used as a retreat from all of the stress and pressure e.g. the crowd. It can also be used the other way round when I am training at home by me imagining that I am at the oncoming event. I could use imagery as a rehearsal, allowing me to run through the event in my mind to reinforce good habits. It will allow me to practice in advance of the event, preparing myself for anything unusual which might occur so that I am prepared to react in dealing with the situation. This will enable well learned responses. It will also allow me to pre-experience achieving my goals helping to give me the self confidence that I need in order to turn in the air in a jump off at a tight angle. Visualisation is a process of creating a mental image of what someone wants to happen or feel. So, visualisation will also help to control my cognitive anxiety as it will help me to lock on to the perfect performance as a way of focusing on controlling my performance. By me creating a mental image of what I want to happen and feel will divert my attention away from the causes of my cognitive anxiety. It will depend on my previous learning of perfect movements. Again, by me imagining the intended outcome of the competition, I will be able to help myself to rest and create a feeling of inner calm. I will be able to use this technique of creating a mental image of what I want to happen and feel. This is to imagine the intended outcome of my turn in the air. I will need to step back into previous success, so that I know what to imagine and visualise. With mental rehearsal my mind and body will become trained ready for the actual performance of the imagined skill in the jump off. I will need to practice imagining and visualising scenes and repeated visualisation will allow me to build on my experience and give me confidence. Another technique that could help me would be self talk, as this would help me to stop asking myself the questions “I’m not sure I can do this” and “I haven’t trained hard enough for this”. Self talk is developing positive thoughts about ones actions (it must remain positive), thus taking my mind off of the cause of anxiety.

There are also several techniques for controlling somatic anxiety. One is progressive muscular relaxation. It will be helpful for relaxing my body when my muscles are tense causing me to give my horse the wrong aids for the turn in the air which can cause my horse to become unbalanced and change direction. Progressive muscular relaxation switches between tension and relaxation in muscles of body parts, this is linked with a breathing rhythm as a way of reducing tension in my whole body. In progressive muscular relaxation I will tense a group of muscles so that they are tightly contracted and then hold them in a state of serious tension for a few seconds. Then I will relax my muscles normally before consciously relaxing the muscles even further so that I am as relaxed as possible. By tensing my muscles first I will be able to relax my muscles more than I would be able to in the situation where I tried to relax them directly. My success will depend on learning to concentrate systematically on tension reduction in muscles starting at the edge and working towards the centre of my body. Therefore this technique will be able to improve my performance of this skill as it will help me to relax my body when my muscles are tense, preventing me giving my horse the wrong aids for the turn in the air.

Another control of somatic anxiety that I could use would be breathing control, which is where I would use diaphragmatic breathing as a way of focusing on becoming relaxed as it causes a relaxation response. The first stage of this process would involve me learning to breathe deeply. When I breathe deeply the air coming in through my nose will fully fill my lungs, and my lower belly will rise. Deep abdominal breathing will encourage full oxygen exchange, this will slow my heart rate down and lower or stabilise blood pressure. I will need to find a quiet comfortable place to sit/lie; i will need to take a normal breathe, then a deep breath. I should breathe in through my nose allowing my chest and lower belly to rise and fill my lungs. I will need to let my abdomen expand fully and then breathe out slowly through my mouth. Once I have perfected the stages above I can try regular practice of breath focus. I will need to sit comfortably with my eyes shut and can try to blend the deep breathing with imaginary. It will also work well with progressive muscular contraction. This again will help me to distract my mind from the anxiety causing situation as I will be concentrating on slow, deep breathing.

Downhill biking – camber

**C1 off Camber - Over arousal and anxiety**

A performer’s level of arousal can have significant effects on their performance. Both high and low levels of arousal can have a negative impact on a rider’s ability to perform at their best both psychologically and physiologically. Arousal can be defined as simply a state of heightened physiological activity. Meaning ones senses and physical attributes are working at a heightened level. When riding an off cambered section, a rider will need to have a stable but heightened level of arousal. Having a low level of arousal when carrying out this skill could have negative consequences. Riding an off cambered section requires intense concentration and a strong core. If a rider was under aroused, they may feel lethargic or flat in their performance, making them more prone to making mistakes or slipping off line.

Trait is part of our overall personality and relates to a tendency to see all situations as threatening. Someone with high trait anxiety would become extremely anxious when faced with a difficult obstacle, for example an off cambered section that contains wet and slippery roots, someone with high trait anxiety would react in an anxious way that is disproportionate to how prevalent the actual danger is. For example slipping on the roots could result in injury, but this is a risk most riders are willing to take. Someone who feels anxious about injuring themselves may go slower over that section and subsequently lose time.

State anxiety is the feeling of anxiety that is felt in a certain situation, and can be portrayed in both somatic and cognitive anxiety. It comes across as a result of our consciously perceived feelings of apprehension and tension; therefore it changes in different situations. It will be important for me to avoid experiencing start anxiety when racing, as this will consequently have a detrimental effect on my performance. It is however normal to feel nervous prior to my race run, meaning state anxiety in that situation would be okay.

There are both somatic and cognitive signs that show high levels of arousal. Somatic signs include increased heart rate, increased breathing rate, sweating, headache, dry mouth and nausea. If experienced, some of these could result in a drop in performance or concentration, especially headaches or nausea, which would impede concentration. Therefore it is important to combat and make sure that I do not become over aroused. Anxiety can lead to over arousal, and could also lead to me experiencing state anxiety when about to start my run or enter an off cambered section

The levels of arousal that a performer experiences and the affect that has on their performance has been researched to give theory’s on arousal. Yerkes and Dodson (1908) initially developed a model called the inverted U hypothesis. This shows that performance will improve as arousal increases up to a certain point, where the performance starts to worsen as arousal still increases. Therefore it is also shown that there is an optimum point of arousal whereby the performer will be at their best. It is therefore important to me to make sure that in my preparation I try to reach my optimum level of arousal without becoming over aroused. My optimum point of arousal will differ from other people. Most specifically my skill level will determine my optimum level of arousal. Someone in the cognitive stage will have a low optimum point and will become over aroused quickly. An elite performer however, will have a much higher point of optimum arousal and could therefore tolerate higher levels of arousal.

It has been found that the inverted U hypothesis has potential flaws. The catastrophe theory is a development of the inverted U. This theory shows that performance increases steadily with arousal up to a certain point. However, after this the level of performance will drop dramatically, and the performer will experience a huge drop in performance. This theory also combines the relationship between somatic and cognitive anxiety and states that when somatic anxiety is low, performance is enhanced, however when they both are high, performance deteriorates rapidly. It is therefore extremely important for me to not enter this stage before my race run and especially when about to enter a difficult off cambered section, which requires high levels of concentration and constant small changes to body position.

The nature of the skill that I am carrying out which in this case is off cambered sections means that my optimum level of arousal will be different. Gross and fine skills require different levels of arousal in order for performance to be at its highest. For example, a rugby player would need much higher levels of arousal than archery for optimum performance due to the fact that it requires gross and highly physical movements. In my case, when riding an off cambered section. I would need to use a mixture of both gross movements with finer elements. Therefore my optimum level of arousal would be at a level where the finer movements are not hindered by over arousal.

**C2 off camber – cognitive and somatic techniques**

When entering an off cambered section in a race run or even in practice, I am required to exhibit high levels of concentration towards the section. Riding an off cambered section is very technical and requires constant slight changes in body position. The ability to make these changes effectively and appropriately is dependent on me being able to concentrate solely on the task at hand. Becoming over aroused can have a detrimental effect on my ability to do this. And could lead to an easy mistake which would lose me time. The tensing of muscles when over aroused could also result in mistakes and the hindering of my movements.

For me to be riding an off cambered section at my peak performance, I need to be performing in my zone of optimal functioning. This is the area between the upper and lower levels of arousal whereby optimal performance can take place. This means that I need to be able to raise my levels of arousal up to a certain point. This for me is easy and I sometimes go over this point and become over aroused, therefore I need to be able to lower my arousal levels using appropriate and proven techniques.

Management techniques will assist me in improving my personal sporting performance, specifically when riding an off cambered section. I will need to use both cognitive and somatic techniques in order for these methods to improve my performance.

**Imagery:**

A good way of reducing stress is by the performer changes the environment that is causing the stress. However, in my case, when on the start line for a race run I cannot change the environment. Therefore I need to use imagery to help relax me in these situations. Imagery involves using my imagination to recreate a moment or situation in my head that to me is relaxing. This is done without input from anyone else and should be made up by me. It can be somewhere I’ve been before that I found relaxing or it can be made up. It is also important that I make full use of my senses, by imaging just an image it would make it harder for me feel like I am in that place; therefore I should utilize my sense of smell and sound. Imagining the sounds of waves breaking on the beach and the smell of salty air will help me to imagine I am there, and hopefully reduce my stress levels. This obviously can’t be done during my race run, meaning I will use this technique as I am preparing for my run.

**Visualisation:**

Visualisation is a technique that involves mental rehearsal to imagine the perfect performance. This helps by boosting my confidence as I am imagining the perfect outcome. I can use this technique prior to my race run to rehearse myself riding the off cambered section successfully. Not only will this stop my arousal levels from becoming too high, it will also allow me to rehearse my line, and remember certain obstacles on the off camber section that could potentially lose me time for example protruding rocks or wet roots. Visualisation can also help build experience, therefore giving me confidence in my ability, which will help to lower my levels of arousal and anxiety.

**Self-talk:**

Unlike visualisation and imagery, self-talk is a somatic technique that helps to improve confidence and psych myself up, whilst at the same time keeping my arousal levels optimal. In order to utilise this technique effectively, I need to become more aware of my thoughts during training and practice. I should always remember to take note of times when I start to use negative self-talk or doubt my ability. And subsequently swap these with positive attitudes and outlooks. Self-talk is something that I can use whilst in the middle of my run. When coming up to an off cambered section, instead of doubting my ability to hit it with speed whilst remaining on my line, I should tell myself that I am capable and have both the ability and skill to ride it quickly and successfully. I should always make sure that before using this in competition, the self-talk that I use is pre rehearsed. If it was not, then I may have to think about what I am saying to myself, which would distract me.

**Breathing control:**

Breathing control is a somatic technique which helps to distract the mind from the situation that is causing anxiety. It is especially useful as it helps to calm one’s self down and alleviate the symptoms of over arousal or anxiety. This technique would involve me having to learn how to breathe deeply. To breathe deeply, I would concentrate on breathing through my nose and trying to fully fill my nose, causing the lower belly to rise. This deep breathing technique encourages full oxygen exchange, meaning heart rate can be slowed down and blood pressure stabilized. I would use this technique before my race run in order to help calm myself down and stop any physiological symptoms from occurring. Using this technique alongside a cognitive technique such as imagery could help further alleviate any symptoms or negative thoughts.

By using these techniques together, and combining both the cognitive and somatic aspects, I will be able to lower my levels of arousal if need be. This would have a greatly positive affect on my performance, and would help me to avoid making mistakes on off cambered sections, where time can easily be lost. It would also help me to stay within my optimum point of arousal and avoid a sudden drop in performance as the catastrophe theory states.

Judo - O Soto Gari

**C1 Effects of anxiety during before and during performance:**

When performing O Soto Gari I suffer from anxiety. Even though I can execute this throw well and with considerable speed and strength, it is very easy to counter therefore using this to win the competition can be risky. As well as this, before the competition I suffer from anxiety as this is the negative aspect of experiencing stress. The negative aspect of anxiety stems from both the pressure of performance and the possibility of failure; which causes me to doubt my ability meaning that my lack of confidence and self-efficacy can cause a poor performance.

Anxiety is seen to have two components – cognitive and somatic anxiety. Cognitive anxiety are the thoughts, nervousness, apprehension or worry that the performer has about their lack of ability to complete as task successfully. Before a competition I tend to have high levels of cognitive anxiety rather than somatic anxiety as I do get extremely nervous before my performance and doubt my ability to win the match. Before my performance negative thoughts occur such as believing that ‘I can’t do it’ or that ‘I haven’t trained enough’. However techniques such as imagery or visualisation could help me to reduce these negative aspects of anxiety. Additionally, somatic anxiety is the physiological response to a situation where the performer feels that they may be unable to cope. The main signs of somatic anxiety that are interpreted negatively are an increase in heart rate, sweaty palms, muscle tension and feelings of nausea. When I am in a competition I usually experience somatic anxiety including an increased heart rate and muscle tension, these both increase at the start of a competition and tend to slightly decrease as I become more comfortable in the situation, however the somatic signs of anxiety do not stop completely when in competition.

Moreover, anxiety can be further split up into state and trait anxiety. Trait anxiety is an enduring personality trait, giving the tendency to view all situations as threatening. It can also be defined as a motive or acquired behavioural disposition, which predisposes an individual to perceive a wide range of objectively non-dangerous circumstances as threatening; and to respond to these with state anxiety reactions disproportionate in intensity and magnitude of the objective danger. Therefore according to these definitions I believe that I do have a high level of trait anxiety, and to test this I could take a questionnaire such as the State Trait Anxiety Inventory (STAI) Spielberger, 1970. This method of self-report would give an indication of both my levels of state and trait anxiety. This would be beneficial when trying to overcome somatic and cognitive signs of anxiety as I would know whether to work specifically one type of anxiety. However I believe I have more trait anxiety as I do tend to perceive competitive situations as threatening becoming anxious that I could possible fail in a match. As a result of having high levels of trait anxiety, I also experience more state anxiety to deal with the threatening feeling I get when competing and performing O Soto Gari. State anxiety however, is only felt in a particular situation, and is an emotional state or reaction to the situation I perceive as threatening. Although this type of anxiety is characterised by a subjective, consciously perceived feeling of apprehension and tension, along with or related with stimulation or arousal of the autonomic nervous system. Throughout the competition my level of state anxiety fluctuates causing signs of cognitive and somatic anxiety to increase. My heart rate increases as before I start the competition and during when I attempt to apply O Soto Gari to earn the score of Ippon resulting in winning the match. However this level of state anxiety is much higher when actually in competitions rather than practice fights during training.

**C2 Methods of controlling somatic and cognitive anxiety using imagery, visualisation and breathing control.**

To improve my performance and reduce the cognitive and somatic signs of anxiety whilst performing I could use a variety of techniques both cognitive and somatic. The cognitive techniques for controlling anxiety include imagery, visualisation, though stopping and self-talk whereas the somatic techniques involve biofeedback, breathing control, centring and progressive muscular relaxation. These techniques could all help me to reduce the signs of anxiety when performing O Soto Gari – even though I am very confident when executing this throw because it is simple, I still get nervous before entering the competition and applying this throw as it can be easily counted by the opponent therefore these techniques would be beneficial to reduce anxiety created by the pressure of the competition.

Firstly using imagery by creating mental images could help me to escape the immediate effects of stress and anxiety. By changing the environment that causes stress can help to reduce signs of anxiety although you cannot do this whilst in the sporting environment this method would be valuable to stimulate relaxation and reduce nervousness when competing. Furthermore imagery involves manipulating the environment that causes stress. By using my imagination to recreate a relaxing situation; that could be a scene, place or event in which I remember as peaceful, safe and ultimately relaxing can also aid the reduction of anxiety leading up to a competition. Also the scene should also include all senses so that the technique becomes effective by doing this I am removing all negative attachments to the environment and I am therefore creating a more positive reaction to the anxiety allowing me to perform this technique effectively when under the stress of the environment. Moreover creating a positive reaction towards performing this skill in competition can increase my confidence especially when it becomes successful meaning that I am more likely to try and use this throw in future competitions. As well as this using imagery during training allows me to run the skill through my mind enabling me to mentally rehearse each stage of throwing so that I am ready for anything unusual that may occur so I am prepared in adapting the skill to fit the unstable situation.

Similarly, Visualisation is the process of creating a mental image of what I would like to happen and feel at the time of both the competition and during the throwing stages of O Soto Gari. Utilising this technique is a way of focusing on controlling my performance of the skill to therefore lock in the hope of locking in the perfect performance for future reference. Alike imagery this technique would be used during training and involves creating a mental image of what I would like to feel when performing this throw. Ultimately this is used to divert my attention away from the causes of anxiety and to help block any anxious thoughts I have about an upcoming competition; and performing this throw as it can be easily countered when not executed correctly. Practicing repeatedly what I would like to feel and happen during the execution of this throw would help to reduce signs of cognitive anxiety, as repeated mental rehearsal of this skill would train both mind and body to be ready for the actual performance of the imagined skill. Also repeated mental rehearsal will help to build up my experience of the skill which will therefore increase the confidence I have when trying to apply th skill in competition. This increased confidence will reduce my cognitive anxiety that stems for the pressure of the environment and help me to become more confidence in executing this skill under the pressure of the environment.

Other cognitive techniques that could be useful in controlling my anxiety would be attentional control and cue utilisation which involves maintaining concentration on the appropriate cues. Thought stopping and self-talk would also help to reduce cognitive anxiety in the build up to a competition as developing positive thoughts about the execution of O Soto Gari under the pressure of competition would increase my confidence to try this throw. Whereas thought stopping to condition the mind to think of alternatives to anxiety causing negative thoughts would also be beneficial to increase confidence and reduce cognitive signs of anxiety. However personally I feel that using the combination of imagery and visualisation during training would be the most beneficial way of reduce my cognitive anxiety surrounding the competition and the executing of this skill.

Furthermore, to control somatic anxiety I would use the technique of breathing control as this uses diaphragmatic breathing as a means of focusing on relaxation and is a common feature of several techniques. It distracts the mind from the anxiety inducing situation by focusing on the physiological aspect. The first step I would need to learn is to breathe deeply or diaphragmatic breathing. When learning to breathe deeply it can feel extremely unnatural as the air that comes in through the nose fully fills my lungs causes the lower belly to rise; this is unnatural as body image has a negative impact on respiration in our culture – meaning that a flat stomach is considered attractive, so people tend to hold in their stomach muscles. This therefore interferes with deep breathing and gradually makes a shallow ‘chest breathing’ seem normal, which increases tension and anxiety as it limits the diaphragm range of motion with the lowest part of the lungs not getting a full share of oxygenated air making you feel short of breath and anxious. Therefore using breathing control encourages full oxygen exchange when using deep abdominal breathing, this is very beneficial trade of incoming oxygen for outgoing carbon dioxide which slows the heart rate and stabilised blood pressure which is considerably increased during competitions. Breathing control also helps to concentrate on slow deep breathing to disengage from distracting thoughts and sensations. Once I have learnt all the stages of breathing control such as holding the stomach in, finding a comfortable place to sit or lie down in, taking a first normal breath in then trying a deep breathe by breathing in slowly through your nose allowing the lower belly to rise as you fill your lungs. All of this helps to reduce somatic anxiety and with regular practice this method becomes effective in relaxing the body before performing in a competition.

Additionally, progressive muscular relaxation (PMR) could also help to reduce somatic signs of anxiety. This is a useful in stimulating relaxation in muscles that are already tense as this technique involves alternating periods of tension and relaxation in order to reduce tension in the lower body muscles. To successfully perform progressive muscular relaxation there are three stages, firstly I would have to tense up a group of muscles such as my lower body muscles and hold them in a state of extreme tension for a few seconds, then I would relax the muscles normally before consciously relaxing the muscles even further in order to fully relax the already tensed muscles. This would be beneficial is controlling any somatic signs of anxiety and helps to reduce any tension before going into competition. However relaxation must be progressive and therefore start the process at the extremities of the body before moving towards the centre of the body. Although this will help to relax the muscles success depends on learning and practicing this routine in order to systematically reduce tension in the muscles. Furthermore this technique could be coupled with other techniques such as breathing rhythm as this would help to progressively reduce tension.

Climbing – Placing protection

**Where to Place Passive Protection (Traditional Climbing Only) - Tom Randall, professional rock climber, works for a large climbing company: Wild Country.**

**C1: High Levels of Anxiety**

When rock climbing I am constantly affected by stressors and am required to deal with them in order to maintain focus and continue climbing safely. Especially when placing protection, as this tends to be done when I am a fair distance from the last piece of protection, the fall factor is larger and so are my anxiety levels. Anxiety is often defined as the negative aspect of experiencing stress. Orlick wrote in his book, ‘Mental Training for Athletes’: “When an athlete’s performance suffers in an important event, it is often because of too much worry about the outcome… being solely concerned with winning causes an increase in anxiety”. Anxiety comes in two forms; state and trait anxiety. Trait anxiety is referred to as the stable, innate level of anxiety individuals have on the whole which effects state anxiety – state anxiety being an emotional state which triggers the reaction of someone in a situation perceived as threatening. Arguably trait anxiety cannot be altered but state anxiety can. Two further categories of anxiety are somatic and cognitive anxiety. Cognitive anxiety is the psychological aspect whilst somatic anxiety is my personal reaction to the physiological responses, e.g. “I’m sweating too much” or “I feel week”. As a product of my fear of falling, my cognitive and somatic, state anxiety levels trigger higher levels of arousal. Arousal is the state of heightened psychological activity that, in turn, affects physiological aspects of an individual. Under arousal causes a flat feeling in performance, low motivation. My challenge here though is preventing over arousal which can cause undesired somatic responses such as sweating, tunnel vision and loss of open thinking and problem solving. The optimal level of arousal is known for being the level of arousal that gives the performer optimal performance benefits. Some theories attempt to create generic patterns for this such as the Inverted U Hypothesis. This theory suggests performance will increase with arousal to an optimum point where it will the symmetrically decrease.

Unfortunately this theory does not apply equally to people of different skill levels, e.g. beginners in the cognitive stage and elite performers in the autonomous stage. It also does not apply to all sports, e.g. gross sports such as rugby often require higher levels of arousal as fine sports such as archery and rock climbing require lower levels.

Contrary to some theories arousal, especially Trait theory, the Zone of Optimal Functioning suggests optimal arousal is bespoke to the activity. Rock climbing involves a fair number of motor units but is, in general, a fine skill due to the precise balance, accuracy and coordination required. As anxiety levels are usually high, thus affecting arousal levels too, I often find myself over-aroused and fumbling with gear when in fine positions and my temptation to break climbing etiquette in order to be safer, for example by calling "tight" and falling off on purpose instead of spending longer searching for gear placement, is increased.

Due to high anxiety, and in turn arousal levels, my most dominant response is not my desired response, especially for this skill where I am yet to reach the autonomous phase for all aspects of it and as I occasionally suffer from social inhibition. For example, I will place gear as high as possible rather than where it is strongest and doesn't get in the way of my hand or feet placements. My anxiety levels are directly affected by self talk and often manifest as a result of negative or ineffective self talk. This can cause me to make ineffective decisions when placing protection, or avoid placing protection at all and purposely fall. Self talk when full of anxiety often causes me to blame extrinsic factors when a situation does not go as planned, making it harder for me to see how to improve and shifting responsibility to luck.

**C2:** **Cognitive and Somatic Anxiety Control Techniques: Self Talk, Imagery and Breathing Control**

My corrective measure for this is to control anxiety by managing 'self-talk' or 'inner dialogue'. This will often involve lowering anxiety levels and increasing my objective understanding of the situation.

Self talk, also known as inner dialogue, is the voice many people hear in their head. It is often a manifestation of the ego but can be voluntarily controlled. When a performer experiences high levels of anxiety it becomes obvious that self talk is being heavily influenced by the performer's ego in attempt to seek comfort. This often results in reactionary behaviour, hoping, wishing and strong emotional behaviour. Ineffective self talk is commonly found to satisfy the ego rather than the initial intent of the performer, for example I occasionally find myself placing protection more frequently than needed in order to feel safe as a result of my inner dialogue, when in reality this behaviour is ineffective as I am often safer than I see myself as and placing gear frequently consumes a lot of time and fatigues my muscles more. By controlling self talk I can shape what I say to myself into directional phrases such as questions. For example, rather than "My arms are too short to reach that" I could say "How can I shift my body to reach that hold?". Giving direction to my self talk immediately allows me to realise what opportunities I have available. Expressing possibility is crucial too as it helps prevent learned helplessness and complete loss of focus. An example of hindering self talk that has to possibility may be "I have to...". This implies I have no choice and shirks responsibility. The reality is that I am responsible for my actions here and I always have choices available and picking the most efficient choice is my aim. Using active, power words rather than passive statements helps draw attention away from the effect of stressors and focuses it towards the task, for example I sometimes say "Be careful" when it would be more ideal to say "pay attention to...". Sometimes even thinking of a stressor can trigger a multitude of ineffective thoughts and negative feelings that increase anxiety levels and divert my attention away from placing protection. An example of this may be when I am taking a hand off the rock and picking up a nut to place, I sometimes say "Don't fall" when saying "Focus on fine balance" would be more beneficial. Avoiding loaded words such as "failure”, “good” or “bad" also helps. Instead of using loaded language, being specific and objective allows me to precisely focus on tasks and makes me give my focus to the performance and not the outcome (e.g. focusing on balancing when placing gear rather than making it to the end or falling off).

Below is an exercise I could use to intentionally practice managing self talk:

*Delay and Disassociate Exercise*

•This is an exercise that exaggerates good practice in order to overcome ineffective self talk

•Best done on a route outside comfort zone (upper end of current skill)

•Best done on well-protected route to ensure safety

•When in a moment of a likely fall, as soon as my inner dialogue tries to comfort me (e.g. "Grab the quickdraw" or "shout tight!") simply wait - delay the response

•Now do something else, something non-habitual such as shout "two foot slack!"

•By delaying and disassociating, I am destroying the habit and reinforcing positive self-talk

Another anxiety controlling technique I will practice is known as ‘imagery’. It’s a cognitive anxiety controlling technique that aims to relax and stimulate all of my senses. It involves changing the perception of the environment I am currently in so the environment is now perceived as relaxing and within my comfort zone. This helps me lower my anxiety levels, thus having a direct impact on lowering arousal and increasing my focus and decision making ability. By stimulating as many senses as possible I am maximising the amount of links in my brain being made in relation to this new perceived environment, thus aiding recall ability and optimising the effectiveness of this technique. For example I may be half way up a cliff face, waiting for the rock to dry, and suffering from high levels of anxiety due to the challenging grade of the next climb. Whilst my attention is not required by anything else I may mentally create an environment such as sitting in a sunny grass field where I can ignore stressors and lower anxiety levels to an optimum point before committing to the hard route ahead.

Breathing control is a somatic anxiety controlling technique that aims to maximise the efficiency of my breathing so a lower breathing rate can be achieved, thus lowering anxiety, whilst maintaining my necessary Vo2. Breathing is typically an autonomous process but can be controlled and directly affects anxiety. Breathing rate autonomously changes due to the effects of exercise such as increased proprioceptor movement, increased blood acidity, etc. Breathing is also affected by anxiety levels; high anxiety levels tend to cause fast, shallow breathing that continues to increase anxiety levels as well as serving as an inefficient method of oxygen intake. Intentionally controlling breathing can help avoid larger oxygen debts that require EPOC to recover from, rather than relying on reactions in the body – this is known as preparatory breathing. Breathing control involves using intercostal muscles and the contracting the diaphragm, thus flattening it and creating a larger thoracic cavity, to fully expand my lung capacity. Slower and deeper breathing, focusing on pushing the diaphragm down and the lungs outwards, helps lower anxiety through physiological changes such as decreased heart rate as well as increase vital capacity. Extended exhalations have also been shown to directly reduce anxiety levels. I intend to practice breathing control in every training session as these are low-anxiety and low-arousal situations that can be used for me to better ingrain and practice autonomous breathing control – this way I will be able to execute this technique whilst in more challenging situations under higher levels of anxiety in the future.

Rugby - Dropkick

**C1- High arousal during drop Kick**

The dropkick takes place at the start of the game or after the opposition has scored, this means there is a lot of pressure on the kick to be performed correctly. Arousal is defined as the heightened state of psychological activity; at the start of the game my arousal is naturally very high as I have already ‘psyched’ myself up for the game in the warm up and the team talk. I am aware that I am experiencing high levels of arousal through my somatic signs; somatic signs are physiological such as my heart rate and breathing rate having increased and also my cognitive signs such as my concentration being increased, tension in my muscles and negative self-talk. Self-talk is my personal reaction to physiological experiences such as “I can’t do this” and “I’m not good enough”. Due to the high levels of over arousal which I am experiencing at this point anxiety has started to form. Anxiety is defined as the negative aspect of experiencing stress usually when the performer is over aroused. Anxiety comes in two forms; trait and state. Trait anxiety is the innate form of anxiety where your personality has a tendency to react to a situation. Trait anxiety is stable within all conditions and cannot be changed; state anxiety can be however and is the reaction to a situation often characterized by subjective, consciously perceived feelings of apprehension and tension.

For a performer to perform at their best they need to be within their zone of optimal functioning; this is shown in the Inverted U Theory initially developed by Yerkes-Dodson (*diagram 7*). According to the model, performance will improve as arousal increases, up to a certain point (zone of optimum functioning) before performance starts to decrease past over arousal. For myself in the game, if I am outside my optimal zone, either under or over, the restart may not reach the desired ten metre distance it needs or the kick will not go to where my teammates are expecting. Although the Inverted U-Hypothesis is the mostly recognized theory it unfortunately does not apply to all situations or skill levels. If the performer is a beginner and not as skilled their arousal needs to be lower because otherwise they will not be able to concentrate and performance will deteriorate; although I am not a beginner Ronan is still of a higher skill level so is able to cope with higher levels of arousal than myself (the arousal levels of different performers is shown in *diagram 8*. Another problem with over arousal is attentional narrowing may occur; attentional narrowing is when the performer is so tightly occupied with one aspect of the game that they may miss other, more important cues. For example, at the kick off, my anxiety may be so high that I do not scan the pitch for a better kick option where the space is or where my teammates are, instead I may carry on with the original call when it might not be the best or most sensible option to choose.

*Diagram 7: ‘Inverted U’ Curve*

*Diagram 8: Optimum arousal at different stages of learning*

To increase my performance I need to be able to control my arousal levels which will in turn control my anxiety levels to give me the required performance and sense of control I need to kick an effective kick off. There are a variety of different techniques available which I can use to do this.

**C2- Cognitive and somatic anxiety control techniques self-talk, breathing control and biofeedback**

I can use a mixture of both somatic and cognitive techniques to control the levels of arousal in my body and reduce the chance of anxiety affecting my play. These are positive self-talk, breathing control and biofeedback.

Self-talk is a cognitive technique and it will be used to help combat the negative self-talk that I experience before the restart. Self-talk happens all around us in everyday life and therefore in sporting situations; it can be thought of as the “running commentary” of your life. An individual’s thought affects their emotions which affects actions so if you have negative thoughts you will feel negatively emotional and consequently your actions/behaviour/performance will suffer; TEA time (thoughts, emotions, and actions). Changing self-talk patterns in sport doesn’t happen overnight; it takes a long time for the performer to change their mental state so much that it becomes habitual. When it becomes habitual you can control arousal subconsciously so you can concentrate of the technique of the skill more. Reinforcement and repetition of the self-talk is vital for the long term development of the self-talk, continuing the same positive thoughts during training and personal practise without letting negative thoughts creep back in if anything goes wrong maintains the effectiveness of the technique. Training the mind over time also allows for better self-talk as you can use long term phrases like “I have trained and prepared hard for this, I’m ready” and “I’ve practised this hundreds of times” rather than “I’m not ready”, “this won’t work” if self-talk has not been practised long enough. Self-talk must also be believable and realistic to allow the performer to believe. The connection between the words said and the belief I have is the ultimate goal. Self-talk is a useful technique to use when you become fatigued or concentration starts to wander. This is useful for rugby as the restart can happen at any time during the game, whether it is to start the game off or during the 79th minute. If fatigue has kicked in towards the end of the game self-talk can be useful for calming me down so I can concentrate on the skill. Similarly concentration can wander off during the game and self-talk could be used to “snap” back into a positive frame of mind. Most important of all is that the self-talk remains positive and focuses on self-motivational content; the use of active, powerful phrases rather than weak, passive phrases help maintain control of the situation; rather than using “be careful of the wind” use “pay attention to the wind”. When I am walking up to take the restart using a pre-planned mantra like “my time to shine” places you in a comforting environment and positive state of mind as it has been practised before, soothing emotions and improving the actions.

The second technique is breathing control; breathing control differs from positive self-talk and attentional control because it is a somatic technique which affects physical components of anxiety. Breathing control is used to have a calming effect on the performer and focuses on regulating breathing to distract from the anxiety inducing situation. Because rugby is a physical and challenging activity breathing rate is normally quite high increasing the importance of controlling techniques, especially because the restart is a closed skill and requires precision. Breathing can also be increased due to anxiety levels, likely to be highest at the start of the game, when the scores are close near the tail end of the game and depending on the task difficulty. As a kicker I should be able to keep calm and not be affected by increased anxiety as this will hinder performance. Although breathing and breathing rate is a mainly autonomous process it can be changed and influenced by the individual. During breathing control it is important to breathe deeply rather than the use of short shallow breaths; when breathing deeply, you should feel the breath originate in your low abdomen; your diaphragm lift and your lungs expand. Breathing deeply oxygenates your muscles so they can work harder, build strength and move faster. When anxious, breaths tend to be short and shallow which do not get the required amount of oxygen into the body. The intake of oxygen during deep breaths can also help EPOC (excess post exercise oxygen consumption) and help remove lactic acid from the muscles freeing them up to work better. One example of breathing control consists of the inhale (2 counts) then the hold (2 counts) followed by the exhale (4 counts); this is designed to increase energy intake and keeping the mind in the body. Because the restart follows a break in play the execution of the technique can be done during this time gap. Just like the other techniques to fully become familiar it takes time; this can be done during training situation so I will be comfortable in a match situation. After a certain amount of practise the breathing control becomes autonomous allowing me to not lose concentration.

The final technique is biofeedback. Biofeedback uses the monitoring of a physiological variable that is affected by the somatic anxiety, usually this is heart rate but sweat, blood pressure and muscle tension can also be measured. In biofeedback the participant is attached to probes and a monitoring device where they can see the measurements; they are then actively involved in reducing the physiological variable using various techniques. Once a technique has been found it can then be practised during training so when I become over aroused during a game it can be used the techniques to reduce the anxiety. Since biofeedback is conducted in a laboratory environment it is impossible to conduct during a game; therefore it must be practised before the game. It is also important that the correct technique is chosen for the specific physiological variable since one technique my not be of use for a different variable. Different athletes also use different techniques as everyone else is different so there are no written rules for biofeedback; it therefore takes a long time to practise. As a kicker it is very important for me to be able to control my anxiety levels as a small miskick can have huge effects on direction; over arousal and anxiety can cause this to happen.

There is a range of different techniques that I can use to control my anxiety, whatever the technique I choose it is vital for me to practise it before I use it in a game environment. Controlling the arousal will greatly improve my game as I am therefore able to make more rational decisions where less mistakes will made band the team and myself has greater confidence resulting in an improved chance of winning.

Volleyball – Deep powerful serve

**C1 – Increased levels of Anxiety**

When playing volleyball a reason for my inconsistent serving is due to my increased levels of anxiety. One of the reasons I become anxious is due to the pressure from the spectators and team mates as I feel I need to be reliable and get the serve in as my team will have worked hard to win the point.

Anxiety is the negative aspect of experiencing stress. Anxiety is when I begin to worry and in result that unpleasant feeling I experience because of the fear of the possibility of failing and not delivery the powerful serve that everyone would expect.

Anxiety can be categorised into two types’ state anxiety and trait anxiety. Trait anxiety is a motive or acquired behavioural disposition that predisposes an individual to perceive a wide range of objectively non-dangerous circumstances as threatening and to respond to these with state anxiety reactions disproportionate in intensity and magnitude of the objective danger. I believe I have a high level of trait anxiety as I tend to panic when it comes to take the serve in an important game, especially if it is a match point.

State anxiety is the emotional reaction I have to a situation that I experience as threatening. This state is characterised as subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system. I notice that throughout the match my levels of state anxiety change from moment to moment. My state anxiety is at its peak just before I am about to serve. When I am preparing myself, getting into position and choosing where it is best to serve the ball due to weaknesses of the opposition. I can feel my heart rate quickly starting to increase and I get the feeling of butterflies in my stomach especially whilst waiting for the whistle to go so I can serve the ball. At this stage the sports hall is completely silent making me feel like there is even more pressure on me to succeed as everyone is watching. If I don’t manage to control it I often buckle under the pressure. This will often lead me to possibly serve out because I have made contact with the ball in the wrong place or I have not hit it with enough power. This could be due to the fact I threw it up in the wrong position and therefore I had to rush the footwork. These consequences happen regularly for me throughout the game especially if it is an important game such as national finals and U18’s matches. I fail to control my levels of anxiety, however it doesn’t tend to happen in a local league match as I don’t experience the same about of pressure which would increase my levels of state anxiety.

Then there are two ways of displaying anxiety: cognitively and somatically. Cognitive anxiety is the thoughts, nervousness, apprehension or worry that I have about the lack of ability to complete a task successfully. When preparing to take a serve in volleyball I become very nervous and often have negative thoughts such as ‘I can’t do it’, ‘it’s a man’s height net’ and ‘I can’t serve it that far’ all of these thoughts play a contributing factor into how reliable the delivery of my serve is. I am more likely to have negative thoughts when serving if I have not been playing at my best throughout the match so far, leading to the thoughts of never being able to serve it in. The more negative my thoughts are, the more likely I am going to serve the ball out.

Somatic anxiety are the physiological responses to a situation where I feel that I may be unable to cope; symptoms include increased heart rate, sweaty palms, muscle tension and feelings of nausea. Depending on the circumstances of the match, this will have an impact on my level of somatic anxiety. If I am playing an important match then I begin to get nervous in the warm up and when I am waiting for the initial whistle to go to start the match. I often get sweaty palms and I can feel my heart rate quickly increase. However, as the match continues I begin to settle down and so do my anxiety levels but when it becomes near to set points my heart rate starts to increase again and the reliability of my serve deteriorates, as I don’t feel that I have control over my levels of anxiety.

**C2 – Different method of control my somatic and cognitive anxiety.**

There are many ways in controlling my somatic and cognitive anxiety. For cognitive there is Imagery, visualisation, attentional control (cue utilisation), thought stopping and self-talk. For somatic there is Bio- feedback, breathing control, centering and progressive muscular relaxation. However the ones that I am going to explore and use are for reducing cognitive anxiety is thought stopping and then for somatic anxiety breathing control.

Thought stopping can be used to block an unwanted thought before it escalates or disrupts performance. The technique can help to create a sharp refocus of attention, keeping me engrossed in the task at hand. Thought stopping is conditioning the mind to think of alternatives to the anxiety-causing the negative thoughts which for me would be the pressure of getting the serve in and waiting for the whistle to blow. It is a relaxation technique and uses a simple physical or mental ‘action’ (e.g. clenching a fist, or imagining a picture of sign) as a means of switching my attention into a controlled mental state and hence reducing cognitive anxiety. So when I start to have negative thoughts such as ‘I can’t serve it over’ and ‘I can’t do it’ I need to think of something distinctive and memorable for example a large red stop sign. When I have thought of the image or action of what I am going to use to prevent the negative thoughts I will need to practice it. I am going to imagine a large stop sign, so now every time I begin to think negatively I need to picture it. I have to hold this image for a few seconds this gives me time to divert my attention from those negative thoughts and then as soon as I have finished I should be ready to serve the ball. Thought stopping involves conditioning, in that I condition my mind to think of a large red stop sign instead of the negative thought; as the conditioned image fades so does the attention on the anxiety-causing stimuli.

My somatic technique is breathing control. This is using a diaphragmatic breathing as a means of focusing relaxation. Breathing control focuses on an aspect of physiology to distract the mind from the anxiety- inducing situation. It is a common feature of several techniques, as it causes a relaxation response. The first step I will need to undertake is learning to breathe deeply. Deep breathing is also called ‘diaphragmatic breathing’. When I breathe deeply, the air coming in through my nose fully fills my lungs, and the lower belly rises. When first practised, deep breathing seems unnatural, one reason for this is that body image is a negative impact on respiration in our culture. A flat stomach is considered attractive, so people tend to hold in their stomach muscles. This interferes with deep breathing and gradually makes shallow ‘chest breathing’ seem normal, which increases tension and anxiety. Shallow breathing limits the diaphragm’s range of motion. The lowest part of the lungs doesn’t get a full share of oxygenated air. This can make us feel short of breath and anxious, which is what I experience when playing volleyball. Deep abdominal breathing encourages full oxygen exchange: that is, the beneficial trade of incoming oxygen for outgoing carbon dioxide. Not surprisingly, it can slow the heart rate and lower or stabilise our blood pressure. Breathing control will also help my concentration on slow, deep breathing and help me to disengage from distracting thoughts and sensations. It is especially helpful if you tend to hold your stomach in. When practicing this I will need to find a quiet, comfortable place to sit or lie down. Firstly I will take a normal breath. Then I will try and take a deep breath; by breathing in slowly through my nose, allowing my chest and lower belly to rise as you fill my lungs. Let my abdomen expand fully. Then breathe out slowly though my mouth. Once I have learnt the steps of deep breathing I will need to practice it so that whenever in a game I feel the pressure mounting and my anxiety levels increase I can use this technique to calm myself down, resulting

Athletics – Javelin

**C1 Javelin – Over Arousal**

Arousal is defined as the state of general preparedness of the body for action, involving physiological and psychological factors. When I am at the beginning of my javelin run up I often suffer from high arousal levels, which can cause my performance to decrease or increase depending upon how I interpret arousal. If I perceive the arousal as a negative feeling then I will often perform far worse and feel flat and not motivated for the throw. If I perceive the anxiety as positive then I will feel ‘pumped’ and ready for the performance. I however suffer from over arousal, which can leave me over excited and unable to perform to my potential. This over arousal can cause me to travel at too great a speed meaning I may step over the line or be unable to plant properly over the final steps. It will also increase muscles tension preventing me from moving as easily and increasing the energy I use.

This can be explained by the ‘inverted U hypothesis’.



The ‘inverted U hypothesis’ suggests that your performance will steadily increase with arousal, up to a certain point and then will steadily decrease after this point. The zone of optimal arousal varies among people. An elite performers zone of optimal functioning is likely to be higher than my personal zone of optimal functioning, due to less experience and rehearsal of these skills. An autonomous performer is likely to have a higher optimal arousal point than a performer in the cognitive stage. This means that I will have a fairly high optimal arousal however I would still exceed it faster than an elite performer resulting in a poor throw or inefficient run up.

Performance

Arousal

Cognitive

Associative

Autonomous

At optimal arousal irrelevant information is more easily filtered away without suffering from attentional narrowing. This will allow me to focus fully on my throw and not suffering from distractions from a crowd for example.

An elite performer is more likely to be able to perform better at over arousal. This is because a dominant response occurs at over arousal, as there is often an inability to concentrate and increased tension. This will be different for autonomous, associative and cognitive performers. Zajonc suggested that the dominant response occurs during over arousal. For experienced players this was known as social facilitation and the dominant response is the correct response due to motor programmes having been developed. This will reinforce this response and performance will improve allowing them to reach the elite level they are at. For performers in the associative and cognitive stage then it is known as social inhibition, which is where a less experienced performer will perform is incorrectly as the dominant response is not the correct response due to no motor programmes having been developed. This will result in the incorrect response being reinforced and their performance will deteriorate. However when I am over aroused my dominant response is often incorrectly causing me to perform the skill incorrectly and this response is reinforced. This could lead to a throw that is not reaching my potential at the end of the run up due to technique being poor. This is due to increased tension meaning that I cannot fully extend my legs during the run up, which results in larger amount of energy used during the run up to achieve the same speed. This leaves me at a disadvantage in comparison to my competitors.

The catastrophe theory is a development of the ‘inverted U hypothesis’ and is also relevant to me. This suggests that arousal increases up to an optimal point and then there is a dramatic decline in my performance, both somatically and cognitively. This will result in huge distances being lost due to the sudden collapse in technique.

A elite performer or someone in the autonomous stage is far more likely to experience ‘Peak flow experience’ as they are more likely to use evaluation apprehension to reach their optimal arousal. This will result in huge improvements as they are ‘In the zone’ and performing to the best of their capability. They can ignore other pressures and let their body deliver what it knows best and all that matters is the performance. This varies for me as due to me not being in the autonomous stage in all aspects of the skill I do not have a feel for the perfect technique limiting me the opportunities to experience ‘Peak flow experience’ meaning that I will not see huge improvements until I have improved my technique.

**C2 Javelin – Somatic and Cognitive Anxiety Controlling Techniques**

I have recently taken part in the State-Trait Anxiety Inventory self-report questionnaire and discovered that I have high anxiety levels in both state and trait anxiety. State anxiety is the emotional reaction to a specific situation that someone may experience as threatening even though it may not be (Stage fright). Trait anxiety is personality trait that means you will generally act in an anxious way in every situation. This means that being able to lower my anxiety levels will be extremely beneficial to me and could improve my run up and throw potentially much further. This will allow me to focus on the run up in the competition to prepare myself perfectly for the throw ahead.

During a javelin throw competition there are constant changes within the environment; these can include officials, the crowd and the distance I am trying to beat (Competitors distance, qualifying distance or just personal best). Zajonc proposed that when the presence of something increases, in this case the audience, then so does arousal. This can result in me becoming very over aroused and unable to compete at a high standard.

To control arousal levels, anxiety and stress I will ‘Breathing Control’ as this will allow me to lower my arousal levels to reach my zone of optimal functioning. This gives me an advantage over other competitors, as I am able to bring my arousal levels down to my zone of optimal functioning allowing me to perform at, or near my best. Arousal levels can be brought down by several somatic and cognitive techniques.

Benefits of decreasing cognitive arousal to ‘optimal arousal’ include an increased focus and concentration, heightened awareness of cues in environment and narrowing of attention. This will allow me to focus more on technique and the throw allowing me to develop minute skills that could result in a much better throw.

Imagery

The first cognitive technique for controlling anxiety and stress is imagery. Imagery involves manipulating the environment that is causing stress by taking you away from the stressful stimuli and recreating a situation that is very relaxing, where I feel safe and no anxiety or stress has occurred. I would imagine area that is often associated with positive emotions and feelings that will allow me to interpret the arousal as a positive thing making me feel ready for the throw (Training track). However this does take practice to think of your ‘happy place’ and to be able to use the technique to it’s full potential. My attention will also narrow to a point where all that matters is the event and I will be able to filter away irrelevant information such as the changing situations (Audience). This would occur before the throw to make sure that optimal arousal is likely to be reached. This technique is used by elite performers to mentally practice (Train) their event when they are unable to train prior to a competition. It is very good for javelin proven by Steve Backley who suffered from a series of injuries running up to the world championships, restricting him from training. Through imagery and mentally practicing, he was able to gain a silver medal. This has helped me due to just overcoming a 6 month long injury I had been unable to train. So the opportunity to maintain a feel for the event through imagery has allowed me to get back to training at a much quicker rate.

Visualisation

Visualisation also involves mental rehearsal but instead you have an image of a perfect performance and use this to control the performance. This diverts attention away from the cause of anxiety and blocks out anxious thoughts. I could use this by watching a perfect model of a javelin run up so then I could ‘copy’ the perfect performance as I would have it in my mind from there perspective. This perfect performance would be rehearsed in my head eventually being stored in my long term memory and can be recalled during a competition. This will train my body and mind ready for the actual performance of the run up. Being able to visualise the run up will give me confidence in my performance meaning the anxiety and stress will be minimised.

Having high level of cognitive anxiety can be beneficial if accompanied by a low somatic anxiety as this can result in a successfully performed run up.

Biofeedback

Biofeedback is a somatic technique for controlling anxiety and stress. I would be attached to a monitoring machine for a time, which measures my heart rate, muscles tension, sweat, blood pressure and breathing rate. This data would come up on a monitor. This is predominantly used to decrease heart rate as this has been increased by anxiety. I would watch the monitor and attempt to slow down my heart rate by calming my body down. If I repeat this over and over, I will be able to sub consciously lower my heart rate during a javelin competition decreasing anxiety.

Breathing Control

Breathing control is using breathing as a way to control my arousal levels. It involves focusing on breathing to distract you from the anxiety inducing situation or stimulus.

It is performed in several steps:

The first step would involve me learning how to perform ‘Deep breathing’

This would include making sure air comes through my nose and that my lower belly will rise. Although this may seem unnatural when first practiced, it will help to reduce anxiety levels. Breathing through my nose will encourage full exchange of oxygen meaning that there will be a beneficial trade of incoming oxygen for outgoing carbon dioxide within my body which will result in slowing heart rate and stabalising blood pressure.

The actual process once practice goes through 5 stages:

1) I should sit or lie down (To allow me to be comfortable and relaxed)

2) I would breathe in slowly through my nose

3) Making sure that my chest and lower belly rise during inhale

4) I should let my abdomen expand

5) Breathing out slowly through my nose (Possibly mouth if it feels more natural)

These techniques all create a state of mind in which I am not over aroused and anxious. They allow me to be relaxed and aroused meaning that I will have the ability to concentrate on my run up, perfecting it to increase the potential throw after the final steps.

Horseriding – jumping a fence on an angle

Jumping a fence on an angle

C1

Cause- Anxiety

When I am jumping a fence on an angle my anxiety has a negative effect on my performance. Anxiety is the negative aspect of experiencing stress. I tend to suffer from anxiety more when there are factors such as a big audience, the importance of the event being high, riding when owners or team selectors are watching. This is known as evaluation apprehension.

There are different types of anxiety, they are as follows…

* State
* Trait
* Cognitive
* Somatic

Trait anxiety is the personality of an individual. It is likely that they will react to certain stimuli in an anxious way. I tend to suffer from trait anxiety when I am jumping a big fence on an angle as I sometimes see it as threatening. I see it as this because I worry about not performing it correctly and effectively and therefore potentially not winning the competition. Like me if a person has a high level of trait anxiety they will perform better when the arousal levels are low. Whereas a performer who has a low level of trait anxiety will perform better when arousal levels are higher.

State anxiety is a person’s emotional reaction to a situation that they are experiencing as threatening. There tend to be different levels of state anxiety depending of the stage of the competition. For example my state anxiety will be elevated when I am planning on jumping a fence on an angle. . It will then begin to drop as I am approaching the fence, it will then increase as I am about three strides away from taking off.

Cognitive anxiety is the psychological aspect. For example when I am planning to jump a fence on an angle I doubt my ability in being able to jump it on an angle. I also remember negative thoughts from the past, for example getting my line wrong when jumping on an angle and either having the fence down or having a refusal. I also have concerns whether I have walked a good line and if it is possible.

When I have several horses at a competition and have had an early start I tend to suffer from somatic anxiety more. This is the physiological aspect. For example I doubt my ability to stay strong the whole way round a course. For example I start thinking that I feel weak and unfit.

C2

Corrective measure- Anxiety Controlling Techniques

To control my anxiety levels wen I am jumping a fence on an angle I use several different techniques. There are several different techniques to control both cognitive and somatic anxiety.

To control cognitive anxiety some of the techniques that I could use are…

* Imagery
* Visualisation
* Attentional Control (Cue utilisation)
* Thought stopping
* Self-Talk

The techniques to control somatic anxiety are…

* Bio-Feedback
* Breathing Control
* Centering
* Progressive Muscular relaxation

For all of the above techniques to be effective when I use them I need to practice them in similar settings. For example when I am training I need to apply pressure to myself and jump a fence on an angle and use one of these techniques. Now that I have been able to practice these techniques due to the knowledge I have gained through TASS I will be able to use the most effective one for me in certain situations. I have also been able to put them into practice in competitions and then analyse if they work or not with the Team GB lifestyle and sport psychology coaches.

Imagery and visualisation is used because they are thought to be the best way to control stress when the environment cannot be changed. When I am jumping a fence on an angle I will not be able to change the environment so being able to imagine and visualisation it will help me control my anxiety and stress. For example I will paint a picture or imagine being in a place that I find particularly relaxing, peaceful and where I feel safe. I may also use imagery or visualisation in the run up to a big event. I will mentally imagine jumping the fence on an angle and will visualise the perfect image. I may also visualise back to when I jumped a fence on an angle and executed it well. This will help provide me with confidence and self-belief that I can do it again. It will also help to remind me of what I did to enable me to jump it well.

To help me control my cognitive anxiety I may also use attentional control. This is using selective attention to help focus on the important cues. This will reduce the number of likely errors that are caused through distraction. When I am jumping a fenced on an angle I will be focusing on only the fence itself, not the people around me, the noises, or previous fences that I have jumped. To make this effective I will need to refine and perfect my selective attention.

Another method that is used to help prevent cognitive anxiety is thought stopping. This technique would not be effective for me and my sport. Thought stopping is a relaxation technique using a simple physical or mental action. I would not be able to physical actions due to them affecting my horse and the way I ride. I would also not be able to effectively use a mental action due to having to be thinking one step ahead of my horse and remain focused the whole time.

I also use self-talk to help reduce my cognitive anxiety when I am jumping a fence on an angle. This is a technique that is used to take your mind off anxiety. It is very effective when a person is fatigued or their concentration strays. When using self-talk it must be positive. Some athletes plan what they are going to say when they are suffering from cognitive anxiety. When I am coming into a fence that I am jumping on an angle and I start to doubt myself I will use self-talk to prevent me doing this. For example I may tell myself that I have trained and practiced to do this and I will succeed.

When I am trying to control my somatic anxiety I may use bio-feedback. This is the monitoring of physiological variable that are affected by somatic anxiety. These include things such as…

* Heart rate (Pulsometer/ Heart rate monitor)
* Muscle tension (Electromyography EMG)
* Sweating (Galvanic skin response GSR)
* Blood pressure (Sphygmomanometer)
* Breathing rate (Spirometer)

When the monitors show that my somatic anxiety is increasing I will then have the knowledge of what causes this and therefore will come up with strategies to prevent this occurring again. For example when I am four strides out from the fence my muscle tension may increase which therefore may cause my horse to being tight and tense. Having the knowledge of this will help me try and stay relaxed four strides out from the fence by using self-talk or imagery.

To control my somatic anxiety I may also use breathing control. This focuses on regulating breathing which will help distract me from anxiety. In order for me to be able to do this effectively I need to learn and practice how to deep breathe. To do this correctly I need to sit or lie down. I will then breathe in through my nose, allowing my lower belly and chest to rise. I will also let my abdomen expand. I will then breathe out slowly through wither my mouth or nose depending on what feels more natural. Before I go in to the ring to jump I may use deep breathing to help me stay calm and relaxed, which will therefor help my concentration.

Another technique that I could use to help reduce my somatic anxiety is centering. This is a technique that is used to try and interrupt a stressful situation and to regain concentration. To be successful it is essential that the person breaths are slow. It also involves deep abdominal breaths. To be able to use this effectively when I need it I will have to practice it to be able to develop an automatic relaxing response to centering.

Another technique I can use to help me to reduce my somatic anxiety feeling I may use progressive muscular relaxation (PMR). This is when you relax your muscles when they are tense. It involves alternating tension and relaxation in muscles. It is also done alongside breathing rhythm. The process to do this involves tensing up a group of muscles to extreme tension for a few seconds. Followed on from this the muscles will be relaxed normally and then consciously relax the muscles even further. When doing this it will start at the extremities of the body and begin to move inwards. When I am preparing to jump a fence on an angle I may use this technique to help me stay relaxed. I will do this before I am going in to the ring to jump as it will help avoid the build-up of somatic anxiety.

Kayaking – High brace

**C1: High Anxiety and Arousal Levels**

Arousal is a state of heightened psychological activity.

The Drive theory is a theory showing a linear relationship between arousal and performance. It tells us that as arousal raises so does the quality of performance. However, the Inverted U theory was developed to counter this due to its many limitations. These limitations are factors such as the skill being used; gross or fine. It claims that as arousal raises so does the dominant response reaction. However, cognitive performer may perform better with lower arousal levels as their dominant response may not be correct for a certain skill.

Figure 2: Shows the Inverted U Theory.

There are two different types of arousal which can be experienced at several levels; cognitive and somatic. Cognitive arousal is the psychological aspect of arousal. These can be things such as increased focus and concentration, heightened awareness of cues in the environment or it could be negative signs such as tension, negative self-talk or limited/difficulties sleeping. Somatic arousal is physical factors of arousal: increase heart rate, sweating and headaches are all symptoms. The most widely accepted theory of arousal is the Inverted U theory. This suggests that your performance will increase with your arousal until a particular point. This is your optimum point of arousal known as the zone of optimal functioning. This is where your arousal levels are at the perfect point allowing you to feel ready to participate in the activity, but not too over aroused that you become really nervous and show cognitive and somatic signs of over arousal. If you go beyond this point, you will have passed your optimum level of arousal and your performance level will steadily decrease due to over arousal.

The Catastrophe theory is based upon the Inverted U theory but what happens when over aroused varies. This is because the Inverted U suggests a gradual decline whereas the Catastrophe theory suggests that there is a steep decline. However, this is more of a model to predict human behaviour rather than explain it.

A high level of anxiety could be beneficial as long as there are slow somatic signs that occupy it. However, this is most likely to occur in the days leading up to the event. As the event approaches, somatic anxiety increases to a peak. This normally declines once performance begins because they become focused on the task in hand rather than the outcome of the activity itself; although if the somatic anxiety doesn’t decrease it can lead to the Catastrophe theory. This is because the performer becomes over aroused and consequently over thinks each skill and movement, creating a tunnel effect resulting in the performer missing important cues as they have reduced their attentional field.

Figure 3: Shows the Catastrophe Theory.

A performer is able to regain and compose them after undergoing the Catastrophe theory. If the performer notices the somatic and cognitive signs of arousal and are able to notice when they become over aroused, they would be able to undergo some recovery techniques to allow them to completely reduce their arousal levels and shortly after climbing back up the arousal ladder to their optimal point.

When Berman is performing, he is at his optimum level of arousal, both cognitively and somatically, allowing him to focus on the relevant aspects whilst paddling such as reading the water and foreseeing the need to perform a high brace. This could be dues to his social facilitation, which I may not have. Being an elite performer, he is more experienced and the correct response has been reinforced through years of practice and competing. When Berman feels that his arousal levels are rising, through social facilitation, he is able to take steps to reduce his arousal and consequently his dominant response is more likely to occur.

When I am performing, I become over aroused. I know this as I have both Somatic and Cognitive signs of arousal such as headaches, sweaty/clammy hands and physiological signs such as anxiety and apprehension along with negative self-talk.

Attentional field

Low Arousal High Arousal

This reduces my ability to perform to a high standard as I cause myself to narrow my attention, blocking out not only the irrelevant cues but the relevant cues as well; resulting in me focusing on only one aspect rather than all the aspects I need to be aware of. This one aspect could be a rock ahead of me. Only focusing on this one cue could cause me to miss several others, potentially putting myself or others I am paddling with in harm’s way.

When at my optimal point of arousal, my reaction times are also faster and more effective. I immediately perform the correct dominant response, helping my paddling to become effective and efficient. However, when over aroused, my reaction times are slower and I am more likely to perform the wrong stroke or skill as a result.

As Berman performs his high brace, he reaches his optimal point of arousal, putting him in a position where his reactions times are as fast as they could be, he’s always choosing the correct dominant response and he is able to filter away irrelevant information without suffering from attentional narrowing.

**C2: Cognitive and Somatic Anxiety Control Techniques: Self Talk, Imagery and Breathing Control**

When performing, I need to be able to control my anxiety and stress through techniques which would help me relax both cognitively and somatically. I intend to reach the optimal state of relaxed concentration. This includes the need to be alert and attentive without attentional narrowing, allowing me to notice applicable cues and I am able to react to them. It also helps me to avoid excessive muscle tension, which would hinder my performance.

My high anxiety levels can be controlled and corrected by self-talk or inner dialogue. Self-talk or inner dialogue is the voice which you hear inside your head. Sometimes, this is a negative voice telling you that you are unable to do something. However, other times, it can help you manage the position you are in and allows you to see your situation more clearly. When someone experiences very high levels of anxiety, self-talk can increase their ego, allowing them to gain more confidence and perform better than they were beforehand. When administering self-talk, it is vital that it is positive and focuses on self-motivation content. It is most effective when it has been practiced and you have pre-planned what to say; this is normally done through the use of a mantra. As a performer I could use self-talk to help myself become more aware of my thoughts during training and competitions. I would need to come up with a motivation sentence or phrase which would prevent me from over aroused and would allow me to control my cognitive anxiety. To make this as effective as I possibly could, I would need to practice the phrase and use it regularly when paddling in a situation that I may find the need to perform a high brace. This would increase my performance and prevent me from performing the technique wrong when under pressure in competitions.

Imagery is a form of control for cognitive anxiety. Imagery is based upon the concept that the best way to reduce stress is by changing the environment the performer is in. However, this is not possible in sport and therefore imagery is used. When performing, I would use imagery to recreate a specific situation that is relaxing; a scene or place that is peaceful and safe. It has to be an image that particular performer has created, not someone else’s as this would reduce the effectiveness of the technique. Imagery, again, like self-talk must be rehearsed before the event, I must run through events in my mind to reinforce good habits. This allows me to practice any events that may occur when performing such as seeing the need to high brace in different situations and I would be able to pre-experience the performance of the high brace, showing me achieving my goals. This would allow me to believe that I am able to perform the skill correctly before competing, increasing my chances of it becoming my dominant response. Although kayaking is an open sport, this means that the environment is susceptible to change. This makes it harder to practice, although when used is still effective.

Visualisation is when the performer locks onto the image of the perfect model allowing them to focus on control; creating the image they want to happen or feel. This diverts attention away from the anxiety although it is dependant on the previous learning of perfect movements. In order for visualisation to be effective I must have the perfect image in my mind to allow me to perform the movement correctly. If I do not have the correct image/ knowledge of the movement then I may perform the movement wrong, resulting in demotivation. Before I go paddling, I should watch videos of my elite performer carrying out a high brace, watching when and where he performs the skill and his technique when doing so. I would then begin to visualise myself performing the correct skill and ignoring any irrelevant information.

However, if I do not have the correct motor programmes even though I have the perfect image, I will not be able to perform the skill correctly.

Breathing control is another method for helping with somatic anxiety. When performing in an intense situation or I am worried about the skill I am going to have to perform, breathing is normally one of my first signs of over arousal and my anxiety stepping in. My breaths become very short and sharp: preventing me from gaining enough oxygen in my body to perform at my best. This is targeted through focusing on my breathing rather than the task in hand helping to distract from the anxiety produced by the task. This is done through learning to breathe deeply, allowing air to come through the nose and the lower belly to rise promoting the body to fill the lungs before breathing out. By getting more oxygen into my body, it will help me relax as well as giving me a greater sense of control. This will consequently increase my comfort and then as a result allow me to become more confident allowing me to combat negative thoughts with greater ease. Although, for me, this feels unnatural as I do not normally breathe using the full stomach rise; consequently, I don’t do it very well. This needs practice before the event and encourages full exchange of oxygen, allowing a decrease in heart rate and it also promotes stabilized blood pressure.

Breathing control is normally done with a combination of cognitive techniques, such as self-talk, making the techniques even more effective.

Muscle tension is one of the biggest inhibitors of highest performance in sport. Muscle relaxation is beneficial as like breathing control, it helps to regain control of the body alongside making the performer feel more comfortable physically. PMR, also known as progressive muscular relaxation is a technique used by many athletes when the performer’s muscles are tense and tight. It is used by alternating tension and relaxation in the muscles of body parts; normally coupled with breathing control, it progressively reduces tension. It has shown to have beneficial long term effect on performers, helping to reduce general anxiety and stress whilst helping to increase and improve concentration.

PMR is carried out through tensing a group of muscles to a state of extreme tension for a couple of seconds and then relax the muscles normally followed by consciously relaxing the muscles further. This should be progressive- starting at the extremities of the body and working my way into my core. Success is dependent on learning how to systematically reduce the tension in the muscles.

PMR would help me when performing a high brace as it would encourage me to become more relaxed and reduce muscle stress. This would allow my muscles to become more limber, putting less strain on them when I have to perform the high brace. This has proven to be a very effective stress management technique and with practice, I would be able to relax my body in a matter of seconds.

Athletics – 100m sprint start

**C1 100m sprint start**

My major weakness in the 100m start is over-arousal and anxiety. The detrimental effect of my arousal can be explained by the ‘inverted U theory’ 

As seen above, performance is at its peak when my arousal levels are at their optimum, in the zone of optimal functioning. This is when I am aroused enough so as not to be under aroused which would cause my performance to be lack-lustre and sluggish, but not so high that I become over aroused and I make mistakes, such as ‘jumping the gun’ where in anticipation of the gun being fired, my over arousal causes me to start before I have received the stimulus to begin.

This over-arousal can also cause anxiety; this affects my performance because it causes me to tense up. This is detrimental to my performance in multiple ways; if I am tensed up then my shoulders cannot achieve horizontal hyperextension when I drive my arms out of the blocks. This decreases the power of my arm drives, which directly affects my leg drives as it prevents them from reaching optimum length as quickly as they should be able to; increasing the time it takes me to accelerate for the first fifteen to twenty metres. This immediately puts me at a disadvantage as I have to work even harder to try to get back into the race.

Somatic anxiety is a contributing factor to the decrease in my performance. When I have become over-aroused my body has many somatic responses, these include an increased heart rate and breathing rate, sweating, the need to urinate, the aforementioned increase in muscle tension and butterflies in my stomach. It is my awareness of these responses that increase my anxiety, and also my awareness of these responses that causes attentional narrowing which is where it takes me longer to process new stimuli such as the gun because of the attention to internal stimuli relating to my anxiety. This results in an increased reaction time, which puts me at a disadvantage to my opponents as I have begun sprinting after them, allowing them to have a lead from the off.

Catastrophe theory can also be applied to my start if my anxiety levels are high enough. Catastrophe is a development of the inverted U theory, where, instead of a steady fall off in performance following over arousal, there is a much faster and dramatic reduction in performance. This extreme decline is caused by high levels of both cognitive and somatic anxiety. This results in my performance being of far lower standard than it should be, and for the period of the 100m it would not be recoverable.

Evaluation apprehension contributes to my over-arousal as most of the competitions I race in have crowds among which are friends and my coaches, I therefore have the sense that my performance is being watched and evaluated which can cause problems if I already have uncertainties as to how I will perform as the evaluation of my performance I know is happening makes me want to excel and win. This places increased pressure on my performance, causing over arousal.

This is social inhibition (the detrimental effect of an audience on a performer’s performance) does not apply to the whole crowd though, as I perform better in front of a large crowd, this is social facilitation.

C2 100m Sprint start

To control anxiety and stress I shall implement a number of cognitive techniques:

Imagery: creating mental images to escape the immediate effects of anxiety.

One way of reducing stress is by changing the environment that is causing stress, but in the 100m it is not possible to do so. Imagery is a useful method of relaxing in such situations. Particular environments can be very relaxing, while others can be intensely stressful, an athletics arena for example. The principle behind the use of imagery in stress reduction is using my imagination to recreate a situation which in which I can relax, such as imagining myself at my training track where there is no pressure and it is strongly associated with positive emotions as training is a pleasurable activity. This dissipates the stress of the situation that I am in, enabling me to relax and focus on performing. I would do this in the time before we are called to our marks.

Visualisation: The process of creating a mental image of what you want to happen or feel (Mental rehearsal)

Visualisation is another form of mental rehearsal which uses visualisation to lock onto the ‘perfect performance’ as a way of focussing on controlling the performance. This reduces anxiety by diverting attention away from the cause of the anxiety and blocking out anxious thoughts.

In training, I would practice and watch the model performance of the sprint start so that I have the image and feel in my mind of the complete perfect performance. I can then ‘step into’ this and repeat it over and over in my head, mental rehearsal. This strengthens the pathways which will be utilised in the physical performance of the skill. So that when I got to the competition I would be able to visualise the performance and feel myself performing it giving me the confidence to go and do it, nullifying the effects of the anxiety or stress I may have been feeling.

Attentional control and cue utilisation: maintaining concentration on appropriate cues.

With this technique, when I had set myself in the blocks, I would block out all other stimuli and concentrate on the commands of the starter and then wait for the gun. This reduces anxiety because it blocks out the other competitors and crowd, who can cause social inhibition of my performance. It can also reduce my reaction time, which is a positive side effect.

Thought stopping: conditioning the mind to think of alternatives to the anxiety-causing negative thought.

This relaxation technique uses a simple physical or mental ‘action’, for example clenching a fist or imagining a picture as a means of switching your attention into a controlled mental state hence reducing cognitive anxiety. This can be used before the race, before I am called to my marks.

Self-talk: developing positive thoughts about one’s actions.

Breathing control: Using diaphragmatic breathing as a means of focusing on relaxation.

All of these techniques will create a state of mind in which I am not over aroused and anxious, but clear headed and able to concentrate on my race technique which allows me to increase the levels of my performance.

Football Goalkeeping – catching a cross

**C1 – Cause of being indecisive when deciding on whether to come out and claim the cross – Anxiety**

Anxiety is a negative aspect of stress caused by the fear of failure. There are four types of anxiety:

* **Cognitive anxiety -** is thoughts of nervousness, apprehension which a performer has about their lack of ability to perform a task successfully.
* **Somatic anxiety** – physiological responses to a situation where the performer feels the may be unable to cope, these responses can include increased heart rate, sweaty palms (galvanic skin response), increased heart and breathing rates and muscle tensions.
* **State anxiety** – anxiety felt in a certain situation. Also known as A-state anxiety.
* **Trait anxiety** – natural levels of anxiety and a natural tendency to view al situations as threatening. Also known as A-trait.

Natural levels of anxiety (Trait anxiety) can be measured using the Martens SCAT test which is a self-report test which was designed to find out which performers are likely to become anxious in a competitive situation. I have taken this test and it showed I have high levels of trait anxiety, especially before a game I get nervous and start to worry about if I am going to catch crosses cleanly and successfully, this is especially worse in big games, for example last year in a game which we had to win to win the league my levels of anxiety before the game were very high and remained high until I began catching crosses cleanly. This is where somatic anxiety starts as my heart rate starts to increase along with my breathing rate. State anxiety starts as the ball is crossed in, as I start to doubt my ability to make the right choice in how to deal with the ball and then start to doubt my ability to catch the ball cleanly. This anxiety can cause me to not catch the cross which in turn will increase the levels of anxiety which I will already be experiencing this leads to more dropped catches leading to more anxiety and the levels of anxiety can keep on increasing until I am successful in catching a cross. This effects my team mates as they don’t know whether they should leave the ball or whether they should clear it, it can also cause them to not trust me to catch the ball and can lead to them becoming anxious of me not being a solid keeper behind them, this can cause mistakes and potentially end up in a goal. These increase levels of anxiety can lead to me staying on my line and not coming to claim crosses that I should be coming out for. As I don’t come to claim the crosses I never get a chance to claim one cleanly which would lower my levels of anxiety.

**C2 – Using a variety of anxiety controlling strategies**

To help me reduce my levels of trait and state anxiety I am going to use the technique of visualisation, using this technique I am going to lock in the ‘perfect performance’ of this skill in my head by going over it again and again in my head. This reduces anxiety by diverting attention away from negative thoughts which cause anxiety; this depends on the learning of perfect movements.

Another technique for reducing trait anxiety before a match is through self-talk, when using this technique I will go and find a quiet spot either on the pitch or in the changing rooms before a match and use positive and motivational talk.

To help me deal with somatic anxiety I will use the technique of breathing control, this technique uses an aspect of physiology to distract the mind from an anxiety inducing situation. The first step is deep breathing, also known as diaphragmatic breathing, this helps to slow down my breathing rate and as I am focusing on taking deep breaths I start to forget about the anxious situation which I am about to enter, this will in turn reduce other physiological effects such as heart rate and galvanic skin response.

This will improve my overall performance as I will catch crosses a lot easier and with a greater success rate with regards to taking crosses clean. It will also improve my team’s performance as they will have confidence in me. So when I call for a cross then they know I am going to catch it cleanly and they can move out of the way.