

Pre-match competitive anxiety



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Pattern of Pre-Match Competitive Anxiety in Elite Male Rugby Union Players.

1. Introduction

Significant progress into the understanding of anxiety in sport has been made in recent years with the aid of research by such researchers as Burton (1988), Gould *et al.* (1987) and Martens and Gill (1976). In turn this has enabled sport psychologists to gain a deeper understanding into what causes competitive anxiety and the way in which athletes cope with it (Jarvis, 2006).

The ability to cope with anxiety in all sports is essential as it could make the difference between winning and losing a competition.

1.1 –Identifying the Problem

There is a lack of research into the effects of anxiety on sporting performance, especially in male rugby. In team sports it is particularly important to breakdown all aspects of the performance. The key issues researched in this paper are somatic and cognitive anxiety. From research it is clear that the failure to control these areas leads to unsuccessful teams (Yerkes & Dodson, 1968; Feltz, 1988; Martens *et al.*, 1990; Cox, 1998; Weinberg & Gould, 2007).

1.2 –Research Aims and Questions

The main aim of the research is to examine the pattern of pre-match competitive anxiety in elite male rugby union players.

With the use of the CSAI-2 and interviews, the effects that anxiety has on sporting performance will be investigated.

There are three questions to be answered in this research piece:

- 1. How does cognitive state-anxiety affect sporting performance?**
- 2. What affects does somatic state-anxiety has on sporting performance?**
- 3. How can self-confidence affect the level of sporting performance?**

According to LeUnes (1996), developments in the literature written around anxiety have focused on the multidimensional nature of the phenomenon. Therefore, all results will be analysed and compare with the predictions proposed by the Multidimensional Anxiety Theory by Martens *et al.* (1990) which is explained in the Methodology section.

1. 2 –Importance of Research

The findings from this research will be beneficial to coaches as they will provide a better understanding of how anxiety levels affect performance. The research will also be important to athletes, in this case rugby union players, as they will gain a deeper understanding into the reasons behind their feelings of anxiety and self-confidence.

By gaining a further understanding in this area, performance levels can be increased with the aid of appropriate preparation during training and before matches. Coping strategies could also be introduced to the players to enable them to control their levels of anxiety prior to matches.

1. 3 –Context

The research for this research project will take place at a local amateur rugby club. The club was set up in July 1898 and just before the Second World War the land was purchased and the pitches were laid. By 1975 the club had a fully erected club house with squash courts.

The club consists of 6 senior teams; Colts, Ladies, Vikings, Rhinos (Veterans), Wanderers and 1st XV. There are also teams for youth boys from U7 through to U17, and U15 and U18 teams for girls. The selected team for research is the 1st XV men's team.

Although the research is being carried out in this local rugby club, the results and findings can be applied to any other sports club across the country. The level and gender of the club or team will however make a difference to how the players react to certain situations.

1.4 –Outline of the Study

This research will be split further into five further chapters:

- **Chapter Two: Literature review**

in which I will be developing an overview of the field.

- **Chapter Three: Methodology**

will explain how I set out to investigate my research and why I chose the methods used.

- **Chapter Four: Results**

will present the findings of the research piece in chart form.

- **Chapter Five: Discussion & Analysis**

explains what I found out during the research project. It will relate them back to my literature review and compare them to the Multidimensional Anxiety Theory.

- **Chapter Six: Conclusion**

will explain my findings and close up the research project.

2. Literature Review

This literature review will be written in four sections. Each one will be looking into the effects of anxiety on performance in sport.

Section one will look at the definitions of trait and state anxiety and self confidence. Section two will be looking into the research around anxiety and its effects on performance, both positive and negative. The third section will be investigating the causes of anxiety; fear of failure, parental, peers and coaches' influences, social physique anxiety, and location. The final section will be exploring the characteristics of anxiety during performance in sport.

Objective and Data Sources

This research project provides an insight into the affects of anxiety on the performance of a selected rugby team. Database searches were done using SPORTDiscus, PsycINFO and EBSCOhost in order to find significant literature. The key words *rugby, anxiety, performance, coaches, location, parents, and team* were entered into the databases to bring up relevant articles. Only appropriate, peer reviewed data was extracted for this review.

2.1 –Trait and State Anxiety, and Self-Confidence.

Anxiety can be defined as, “ A state in which the individual experiences feelings of uneasiness (apprehension) and activation of the autonomic nervous system in response to a vague nonspecific threat.” (Barry, 2002: p230; Carpenito-Moyet, 2006: p11). “ Anxiety is viewed as an enduring personality factor or trait referred to as A-trait” (Davies, 1989: p70).

2. 1. 1 –Trait Anxiety

Trait anxiety “ is part of the personality, an acquired behavioural tendency or disposition that influences behaviour” (Weinberg & Gould, 2007: p79).

Individuals with a high level of trait anxiety have a tendency to regard certain situations as threatening, and respond to these with an increased level of state anxiety (Spielberger, 1971). For example, two hockey goal keepers are of the same standard yet one has a higher level of trait anxiety and finds pressure of saving the goals too much. This leads to him displaying higher levels of state anxiety. “ Anxiety is also viewed as a temporary state, A-state which is evoked by particular situations” (Davies, 1989: p70).

2. 1. 2 –State Anxiety

State anxiety can be defined as an emotional state “ characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous system” (Spielberger, 1966: p17). For example, the level of an athlete’s state anxiety will change during a rugby match. Before the game the player may have a high level of state anxiety, during the game it may lower as they settle into the game, and finally during the last few minutes of a tight game it may rise again.

State anxiety can be split further into cognitive state anxiety, and somatic state anxiety (LeUnes & Nation, 1996). In support of this proposal that the two aspects of state anxiety can be dealt with as independent constructs, both Burton (1988) and Gould *et al.* (1987) have proven through research that sporting performance is affected by the type of anxiety being measured.

Cognitive anxiety can be defined as the "...mental component of state anxiety caused by such things as fear of negative social evaluation, fear of failure, and loss of self-esteem" (Cox, 1998: p98).

" Somatic anxiety refers to the physiological and affective elements of the anxiety experience that develop directly from autonomic arousal" (Martens *et al.* , 1990: p6). Somatic anxiety is shown in responses such as increase in heart rate, breathlessness, sweaty palms, and muscular tension (Martens *et al.* , 1990; Morris *et al.*, 1981; Cox, 1998).

Research by Hanton *et al.* , (2000) examined the cognitive and somatic anxiety levels in 50 rugby players and 50 target rifle shooters. Hanton *et al.* (2000) concluded that rugby players were more likely to report that somatic anxiety had a positive impact on their sporting performance. However, the target rifle shooters reported that it had a negative impact on their performance.

Somatic and cognitive anxiety can be tested using the Competitive State Anxiety Inventory-2 (CSAI-2) developed by Martens *et al.* and first presented in 1982.

2. 1. 3 –Self-Confidence

Vealey (1986) defined sports confidence as the amount of confidence athletes possess about their ability to be successful in sport. Vealey (2001) suggested that self-confidence can be more traitlike or statelike depending on the time that it is measured. In essence, confidence might be something that an individual feels on a particular day (state self-confidence), or it might be part of their personality (trait self-confidence). Research carried out by

Hall *et al.* (1998), suggests that self-confidence is closely related to perceived ability and is depressed with the onset of competition due to the increase in anxiety.

As explained in literature by Horn (2008: p66), self-confidence is "...rooted in beliefs and expectations." If overall self-confidence is low and the player(s) expect something to go wrong, they are creating a self-fulfilling prophecy (Weinberg & Gould, 2007). This means that expecting something to happen actually helps it to happen. For example, if a team thinks that they will lose the upcoming match because they lost last time they stand a greater chance of losing than winning. " The expectation of failure leads to actual failure, which lowers self-image and increases expectations for future failure" (Weinberg & Gould, 2007: p323).

2. 2 –Anxiety and Performance.

As a result of the development of the CSAI-2, the Multidimensional Theory of Anxiety has been recognised in the field of sport psychology (McNally, 2002). The Multidimensional Theory of Anxiety is based on the idea that anxiety is comprised of two distinct parts; cognitive and somatic (as defined in section 2. 1). Both of these components have different effects on performance and can be manipulated separately in any occasion (Burton, 1998; Cox, 1998; McNally, 2002).

The Multidimensional Anxiety Theory predicts that cognitive state anxiety is negatively related to performance. However, the theory predicts that the somatic state anxiety is related to performance in an inverted U shape which can be seen in

Appendix 1

. Certain levels of anxiety can be advantageous for the performers, but only but to a certain level. Beyond this level the anxiety causes performance to decline (Martens *et al.*, 1990; Hanin, 2000; Weinberg & Gould, 2007).

According to Endler (1978), there are five factors that can be responsible for an increase in state anxiety in an athlete; threat to an individual's ego, threat of personal harm, ambiguity, disruption of routine, and threat of a negative social evaluation. A high level of anxiety is "...disadvantageous for optimum performance in competitive sport" (Davies, 1989: p71). This is demonstrated by the fact that more anxious individuals generally do worse in important events compared to less important events and practise sessions. This is supported by research carried out by Martens *et al.* (1990), Martin & Gill (1991), and Eys *et al.* (2003).

Martens *et al.* (1990) suggests that somatic anxiety has an Inverted-U shaped relationship with performance, whereas cognitive anxiety has a negative linear relationship with performance as shown in

Appendix 2

. Similar results had been found by Parfitt and Hardy (1991). They found that there were both positive and negative effects for somatic anxiety during performance related activities just before an important event or match during the time that cognitive anxiety was at a high level (McNally, 2002).

Anxiety can be a huge setback for many athletes, especially those who take part in individual sports, such as tennis singles, and for those who play in 'exposed' positions, such as goalkeepers in hockey (Davies, 1989). Research

has proven that there is an optimum level of anxiety for maximum performance. It was also proven that both high and low levels of anxiety are related to poor levels of performance (Yerkes & Dodson, 1968; Feltz, 1988; Martens *et al.*, 1990; Cox, 1998).

According to research carried out by Martin and Gill (1991), a player's level of anxiety varies depending on how important or challenging the match or competition is. More able players will therefore not be so adversely affected by high levels of anxiety, whereas less able players will be as they see the match as challenging and good results will seem unrealistic. Sigmund Freud (1962) did a lot of research into anxiety. In 1962 he focused on the anticipatory nature of anxiety. From this research he concluded that some individuals expect to win or fail, and therefore become more or less anxious according to their expectations.

An important piece of research into state anxiety among successful and unsuccessful competitors who differ in competitive trait anxiety was carried out by Martens and Gill (1976). From the research they concluded that the individuals who maintained low levels of A-state throughout the competition were highly successful. This supports the research carried out by Martens (1990) and Parfitt and Hardy (1991) with the Inverted-U shaped relationship between anxiety and performance.

“Anxiety, therefore is a central factor in performance in competitive sport” (Davies, 1989: p72). It is exasperating and disheartening for a talented and committed sportsman when their performance crumbles during competition due to over-anxiety. This is avoidable if the individual is suitably prepared

emotionally and emphasis is on the learning and enjoyment of the game. However, this could be difficult to enforce with a professional sportsman who may potentially have external rewards undermining intrinsic motivation (Weinburg and Gould, 2007).

2. 3 –Causes of Anxiety.

This section will be looking into the issues surrounding the causes of anxiety in sports performers. These will include fear of failure, parental, peers and coaches influences, and event importance. Relevant literature has been reviewed and presented in the section below.

2. 4. 1 –Fear of Failure

“ For many people, sport is an important arena in which one’s ability, motivation, and personality are scrutinized and evaluated by other people” (Leary & Kowalski, 1995: p122). Whenever individuals step onto the sports field they are at risk of showing themselves in an unflattering perspective. They may worry about displaying signs of being out of shape, unskilled, incompetent and unable to handle pressure to their fans, teammates, coaches and family (Passer, 1983; Davies, 1989; Leary & Kowalski, 1995; Jarvis, 2006). Research by Pierce (1980) concluded that youth sport participants worried more about making mistakes and underperforming than getting hurt and what others thought of them.

“ One of the most potent causes of anxiety is the fear of failure...” (Davies, 1989: p73). This fear of failure would also be connected with the loss of prestige and humiliation. Research by Passer (1983) supports this theory as he found that fear of failure is a major cause of threat in competitive-trait-anxious children.

This fear of failure can be evident in superior performers as there is an increased pressure to perform well when playing a less able opponent. Losing to a lower ranked team or player could be humiliating and result in a loss of prestige and reputation (Davies, 1989; Leary & Kowalski, 1995). The player may have the ability and skills to win the match, but due to their constant worry of how they are going to perform they end up underperforming (Passer, 1983). However, for professional athletes this adverse affect of anxiety on performance will be less as they have learnt to cope with such situations and are able to deal with them accordingly.

An example of a highly skilled player is Roger Federer (aged 27). Federer met the young Spaniard, Rafael Nadal (aged 22) in the Wimbledon finals in 2008. Federer was the current Wimbledon champion and had held the title for 5 consecutive years; this would have been his 6th World Championship title. Federer's defeat could have been due to the excessive amount of media coverage before the match adding to the pressure of him winning yet another title against a younger competitor. At the same time, the pressure would have equally been placed on Nadal to knock Federer off the top spot. Federer commented after the game " It's not a whole lot of fun, but that's the way it is. I can only congratulate Rafa for a great effort" (BBC Sport, 2008). The game was incredibly close; 6-4, 6-4, 6-7(5), 6-7(8), 9-7 (BBC Sport, 2008), and has gone down in history as the longest ever Wimbledon final.

2.3.2 –Parental, Peers and Coaches Influences

Parents and coaches can sometimes be far too pushy and ambitious and in turn increase the stress and anxiety levels within the athlete. According to

Jarvis (1990), it is apparent that both high and low expectations of performance can be linked to levels of anxiety. The over-concern and high levels of anxiety shown by anyone close to the athlete is likely to heighten their anxiety also, and in turn could damage the chances of success. " Too much pressure from teachers, coaches and family can add tremendously to competitive anxiety" (Jarvis, 1990: p118).

Passer (1983) concluded from his research that highly anxious individuals are very worried about performing badly as this will bring about criticism and disapproval from their peers, parents and coaches. However, Smith *et al.* (1979) developed a coach-training program designed to help coaches create an environment for the athletes to feel comfortable and less anxious in. The Coach Effectiveness Training gives the coaches the skills and ability to create a ..." socially supportive environment through frequent use of positive reinforcement, encouragement, and technical instruction, while discouraging the use of punitive behaviours" (Smith *et al.* , 2006: p492). Smith *et al.* (1995) discovered through research that there were significant reductions in performance-anxiety among children who played for a coach that had experienced the Coach Effectiveness Training. The children who were exposed to trained coaches showed a decrease in levels of anxiety over the season, whereas the other group who were exposed to untrained coaches showed an increase on the Sports Anxiety Scale-2 (SAS) (Smith *et al.* , 2006).

A frequent source of anxiety is the presence of spectators; these can be friends, family, coaches or even complete strangers. " Sometimes performance is enhanced, sometimes it deteriorates and sometimes there is little discernible difference" (Davies, 1989: p83). According to literature the <https://assignbuster.com/pre-match-competitive-anxiety/>

performance of stable and confident players usually improves when an audience is present, whereas that of anxious players tends to decrease (Weinberg & Gould, 2007; Jarvis, 2006; Martens *et al.*, 1990). Research also shows that the effect of an audience on superior players is positive, and for the less able player the audience presents them with an increase in anxiety and stress which in turn causes them to underperform. According to work carried out by Haas and Roberts (1975), Martens and Landers (1972) and Green (1983) the perceived role of the observer is an important factor for the athlete or performer. It has been suggested that if the observer occupies an important, judgmental role then this generates feelings of anxiety. The researchers found that on the other hand, if the spectators are seen as being positive and supportive, for example a coach, they will be generally welcomed by the performer.

2. 3. 3 –Event Importance.

“ The more important a sporting event is, the more stressful we are likely to find it” (Jarvis, 1990: p118). However, it is important to remember that it is the importance of the event to the individual that counts, not the status of the competition. An event may seem insignificant to most people but may be important to an individual (Weinberg &Gould, 2007). An example of this could be that an individual is competing against their old club team; there would be an increased desire to perform well and potentially beat them. Research carried out by Sanderson in 1977 on 64 of the best badminton players in England aged between 18 and 21; found that the perceived importance of the competition was a significant factor leading to A-State reactions (Sanderson, 1981).

Marchant *et al.* (1998) conducted an experiment with pairs of golfers. The golfers were either competing for three new golf balls, or a pair of new golfing shoes. Obviously, the golf shoes made the competition into a high importance one, and therefore the players experienced more anxiety than those competing for the golf balls.

An example of a player who was able to cope with the increase in anxiety is Jonny Wilkinson who took a drop goal to win England the 2003 Rugby World Cup in the final play of the game. If Wilkinson had been affected by the anxiety and pressure of the level of competition, he may have missed the goal.

2. 4 –Anxiety: Performance Characteristics.

In sporting competitive situations, the anxious performer tends to become over-aroused, tense, and far too worried to perform to the best of their ability. The increase in muscle tension can interfere with coordination causing the performance levels to decrease (Burton, 1988; Smith *et al.*, 2006; Weinberg & Gould, 2007). The feeling on inadequacy and lack of self-confidence hinders the sporting performance (Davies, 1989). For example in a competitive rugby match a player who suffers a high level of anxiety may lack confidence when going in for a tackle. This could result in the player passing him and scoring a try, but most probably resulting in injury as they are not fully committed to the tackle.

“ The highly anxious person is slower to react in the stressful competitive situation than he is in the relatively relaxed conditions of practice” (Davies, 1989: p75). During tense, crucial parts of the match the over-anxious player

may show unforced errors; for example in rugby they may miss a penalty kick and in tennis a double-fault may be played. Unforced errors may occur during the match; this can include forward passes, a knock-on, or a late tackle.

3. Methodology

In order to achieve the objectives of this research project, a variety of appropriate research methods have been chosen, using both primary and secondary data. Before research was collected it was important to establish a research process which acted as a framework throughout the research project. During this chapter the strengths and weaknesses of the potential research method is discussed and only the suitable and most relevant have been selected for this study.

3.1 –Paradigm Rationale

There are two broad research traditions; qualitative which answers questions such as ‘ why’ and ‘ how’, and quantitative which answers questions such as ‘ what’ and ‘ when’ (

See appendix

– page 27 table) (Gratton & Jones, 2004). As I am interested in researching a particular phenomenon I mainly carried out quantitative data collection. I measured how anxiety affects performance, both positively and negatively within the men’s 1st XV at Reading Rugby Football Club.

It was decided to mix quantitative data with qualitative data to make the research more credible and valid. Many researchers such as Nau (1995) and Jayaratne (1993) have suggested that blending qualitative and quantitative

methods of research can produce a result highlighting significant findings from each. Henderson *et al.* (1999) suggests that using anecdotes and narratives to support quantitative data can provide clarity to the findings. Linking the two types of data can give a bigger picture of the issues around the subject. During this research project, quantitative data was collected to provide numerical data from a large sample, whereas the qualitative data collected provides rich data from a smaller sample (Gratton & Jones, 2004).

3. 2 –Research Approach

The research question “ Pattern of pre-match competitive anxiety in elite mate rugby union players” includes elements taken from both an inductive and deductive approach to research. When researching around the subject of how anxiety affects performance, a deductive approach appears to be more appropriate to the research project as it was unnecessary for the researcher to come up with a new theory. A large amount of research has already been carried out into the affects of anxiety on sporting performance, evident in the literature review.

For this piece of research the Multidimensional Anxiety Theory proposed by Martens *et al.*,(1990) was used. The theory is based on the idea that anxiety is comprised of two distinct parts; cognitive and somatic. The Multidimensional Anxiety Theory predicts that cognitive state anxiety is negatively related to performance, and that the somatic state anxiety is related to performance in an inverted U suggesting that there is an optimum level of anxiety (Weinberg & Gould, 2007; Burton, 1998; Cox, 1998; McNally, 2002).

3.3 –Participants

For this research into the effects of anxiety on performance, the men's 1st team of the amateur Reading Rugby Football Club was chosen. They were chosen as there is the opportunity to meet with the meet every week.

From talking to the players it is apparent that the club has a mixture of professions; students, army personnel, mechanics, and business men. However, they all have one passion, and that is rugby. The ages of the players range from 18 to 38 years. There is a variety of experiences within the team; some players are in their first season of National 3 level rugby, whereas a number are in their fourth or fifth season at this level.

Training takes place on a Tuesday and Thursday from 7: 30pm until 9: 30pm. During this time the players train, have physiotherapy (if it is needed), and they also have a meal together before going home. The amount of time that the team spends together off the pitch is vital for the development of team cohesion.

3.4 –Data Collection

During this research project, data was collected using both questionnaires and interviews. This section will look at questionnaires and interviews separately explaining the different types of question, and the advantages and disadvantages of both.

3.4.1 –The Questionnaire Survey

Following the research in Chapter 2, the Competitive State Anxiety Inventory-2 has been chosen for this research. The inventory is a sport-specific, self-report that has been proven to be a reliable and valid measure

in competitive situations of cognitive and somatic state anxiety and self-confidence. The CSAI-2 consists of a three 9-item subscales that measure cognitive anxiety, somatic anxiety, and self-confidence (Burton, 1988). Each of the 27 questions are rated on a 4-point Likert scale from “not at all” to “very much so”. The questionnaire was administered during the final hour before competition over a period of 14 weeks. The scores collected on each of the three scales provided a reference point from which to examine the rugby player’s patterns of multidimensional anxiety.

3. 4. 1. 1 –Types of Questionnaires

According to Gratton and Jones (2004) questionnaires are possibly the most common method for collecting data in sports-related research. A questionnaire is simply “...a standardised set of questions to gain information from a subject” (Gratton & Jones 2004: 115). Questionnaires are associated with quantitative research where data is required from a large sample group. In this case the questionnaires measure the anxiety levels of the 1st XV team before matches.

There are three types of questionnaire; postal, telephone and face to face questionnaires. Postal questionnaires are given or posted to the participants who then complete them in their own time; they are then posted back to the researcher. Telephone questionnaires are completed by the researcher while talking to the participant over the telephone. Face to face questionnaires are completed with both the participant and researcher in the same location.

For this research the most appropriate way to collect data was to hand out self-completion questionnaires that were carried out face to face. Handing

out the questionnaires saves postal and telephone costs, and also time. This was the best way for the researcher to collect the data that was needed before summarising it using tables and graphs (Gratton & Jones, 2004).

3. 4. 1. 2 –Advantages and Disadvantages of Questionnaires

Advantages

A well designed questionnaire provides little opportunity for the introduction of bias into the results. However, a badly designed questionnaire can sometimes lead to bias data, and therefore using questionnaires does not automatically mean that there is a reduction in bias (Thomas *et al*, 2005; Gratton & Jones, 2010).

The use of a questionnaire enables the participant to remain anonymous. This is advantageous when researching sensitive issues such as violence, drugs and, in this case the personal issue of anxiety. Enabling the participants to remain anonymous may increase the validity of the researcher's results.

As the CSAI-2 is being used the research has been provided with a well-structured means of collecting quantitative data.