The effect of anxiety on an athletes performance psychology essay

Competitive state anxiety is defined as “ a tendency to perceive competitive situations as threatening and to respond to these situations with feelings of apprehension and tension.”(Martens, Vealey & Burton, 1990). Competitive state anxiety can be split into cognitive and somatic components, cognitive being negative mental thoughts and concerns about ability and performance for instance indecision and loss of confidence, with somatic being the physiological responses to anxiety such as increased heart rate and muscle tension.

It is important to measure both intensity and direction to determine the effect of anxiety on an athlete’s performance as it allows interpretation of results and can subsequently be used to assist the athlete to alter their thoughts before a competition and to improve performance. The intensity component indicates the “ levels of competitive anxiety in relation to factors such as situational antecedents” (Woodman & Hardy, 2001), and direction allows “ interpretation of results as facilitative or debilitative to performance” (Jones, 1995).

The athlete in this study is an 18 year old female triathlete. The study was conducted before and after a British Universities & Colleges Sport (BUCS) national duathlon championship. The event involved a 3. 2km run followed by a 16km bike ride and another 3. 2km run in which she came 12th in a time of 54 minutes 52. 747 seconds, which was similar to her previous best performances.

Results

The results for cognitive A-state and somatic A-state anxiety from the Competitive State Anxiety Inventory-2 (CSAI-2) are indicated in the table and graph below. The scores can range from 9 (low) to 36 (high) for intensity, and from -27 (very debilitative) to 27 (very facilitative) for direction.

Cognitive Anxiety

Somatic Anxiety

Intensity

19

14

Direction

-8

0

The CSAI-2 indicated that she had low to medium intensity cognitive anxiety and that this would be slightly debilitative to her performance. In contrast, she suffered from low somatic anxiety but had a direction score of 0 signifying that the somatic symptoms she felt would affect her performance neither positively nor negatively.

In the interview it was discovered that she felt that the competition was quite important but was not a main race for her although there were a lot of

elite competitors in the race. She also added that as it was a BUCS race she felt pressure from her coach as well as herself to do well for the university. The pressure helped her motivation to keep going through the middle of the race, which turned out to be similar to her previous performances. Prior to the race she felt worried but as the race started she kept setting aims to keep up with people and overtake other competitors.

The race started early which gave her less time to warm up after a hard training week leading up to the race. Despite the amount of training in the week before the race, she said she had high energy which was helpful to her performance.

Discussion

The multidimensional theory of anxiety (Martens et al., 1990) indicates that as cognitive anxiety increases, performance will drop. This theory only considered intensity, however later research led to the “ direction” aspect (Jones, 1995) being added and anxiety considered as debilitative or facilitative. Before the race, the athlete was feeling low-medium intensity cognitive anxiety, which should result in a medium to high performance. However, the CSAI-2 results indicated that the cognitive anxiety she was feeling would have a detrimental effect on her performance. Neither somatic or cognitive anxiety were seen as facilitative to performance and research has found that males consistently report higher facilitative perceptions than females (Wiggins, 1998). If cognitive anxiety levels increase too high then, combined with elevated physiological arousal, could lead to a dramatic decline in performance as explained by the catastrophe theory (Hardy & Fazey, 1987).

Wiggins (1998) also discovered that cognitive intensity was higher than somatic intensity but somatic direction was higher (more facilitative) than cognitive direction. This was evident with the athlete but neither component of anxiety was considered to be facilitative.

Studies have shown that athletes' intensity of cognitive anxiety is highest before competition and then declines significantly from pregame to postgame (Butt, Weinberg, & Horn, 2003). This was evident for the athlete as anxiety eased as the race started. Prior to the race, she was experiencing low-medium cognitive anxiety and felt moderately nervous. The main symptoms of cognitive anxiety suffered by the athlete were concern about the competition, the race result and self-doubt as well as concern that others would be disappointed with her performance. This intensity and pressure helped her feel motivated and stay strong, and any nerves disappeared once she started the race and positive thoughts helped channel her focus on the task in hand.

Somatic anxiety intensity has been found to fluctuate over time but direction remains stable (Butt et al., 2003). Intensity was found to be highest before the game and declined during competition. The athlete in this study suffered from low intensity somatic anxiety before the competition but this was not facilitative or debilitative. The main symptoms of somatic anxiety were nervousness, jitteriness and increased heart rate. It was evident that the intensity decreased when the competition started as the nerves eased and she felt energetic.

A study of athletes (Hanton, Wadey, and Connaughton, 2005) found that many of the debilitating symptoms remained prevalent after years of many competitions, were reported to fluctuate closer to the event and particularly at higher levels of competition. The event that the data for this study was collected from was for the triathlete's first BUCS competition. This shows that even after competing in many previous events as well as internationally, anxiety was still found to be a debilitating factor towards performance.

Another discovery made by Hanton et al. (2005) was that an athletes' main routine before a competition is to be physically prepared over mentally prepared. Physical readiness, such as warming up and training in the build up weeks, was found to allow the athletes to compete at an elite level despite debilitating anxiety symptoms. However, when comparing athletes who mentally prepared and those who did not, performance was higher in those who had mentally prepared. A problem for the athlete in this study was that due to the race start time being moved forward, she did not have sufficient time to physically warm up let alone to mentally prepare. Failing to warm up properly may have had a detrimental effect on her performance as a warm up can increase the speed of muscle contraction and relaxation, increases heart rate and blood flow to working muscles, in addition to mentally focusing on the task in hand.

The coherence between the CSAI-2 questionnaire before the event and the interview afterwards was strong. The athlete felt low-medium cognitive anxiety from the CSAI-2 including self-doubts and concern about the result, and this was backed up afterwards in the interview when she said that she was worried and feeling pressure before the race. She also stated that she

was suffering from nerves before the race in both the CSAI-2 and the interview.

Conclusions and Recommendations

From the CSAI-2 questionnaire and interview I can construe that the anxiety suffered by the athlete did not affect her performance negatively. The intensity of cognitive anxiety was low-medium and somatic anxiety was low intensity before the race. Too much anxiety would have a detrimental effect on performance due to high pressure, negative thoughts and attentional narrowing. Too little anxiety could lead to lack of concentration, focusing on unimportant cues from the environment, external distraction. I establish that the athlete had moderate levels of anxiety which can increase effort as the athlete is not overcome by pressure. In the interview after the race she said that any pressure and negativity was focused onto a positive attitude and setting goals to improve her position.

Although I consider the athlete was unaffected by her anxiety levels, if the direction aspect of cognitive and somatic anxiety can be made facilitative, it may have a beneficial impact on performance. To do this there are a number of techniques that sports psychologists can use to manipulate an individual’s judgment of a competitive situation, including self talk and imagery. A consistent finding across studies is that sport performers have a stronger preference for problem-focused strategies for overcoming anxiety, and perceptions of cognitive anxiety as debilitative are associated with behavioural disengagement and venting of emotions (Ntoumanis and Biddle, 2000).

Self talk can be used to help anxiety responses such as self-doubt. This can be positive, having the ability to win, or negative, not being able to lose. Self-talk can help to increase concentration on the task at hand.

Imagery can be used to improve self-confidence and overcome nerves. It involves mental picturing a perfect performance or remembering a previous performance that the athlete would like to repeat. It can be used with mental rehearsal, planning the events and tactics of the event or in the case of the triathlete, the race. She had positive thoughts during the race, but if these can begin before the race then her start may improve, as the pressure and worry may be relieved.