

**PSYCHOLOGICAL MOMENTUM IN ELITE ATHLETES**

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THE FOLLOWING PARTS OF THIS THESIS HAVE BEEN  
REDACTED AT THE REQUEST OF THE UNIVERSITY;

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*This thesis is dedicated to Margaret Craigmyle*

## ABSTRACT

The competitive sporting environment provides an ideal opportunity to examine the concept of psychological momentum. The aim of this thesis is to further develop the issues raised by the momentum literature through the application of an eclectic range of research approaches.

Study One examined positive and negative experiences for successful and unsuccessful performances within a population of elite middle and long distance runners. A qualitative design revealed that there were differences between the number of positive and negative experiences exhibited for the two performances. More specifically, more positive experiences were found for the successful performance and negative experiences for the unsuccessful performance. Personal and situational variables, such as confidence, goals, anxiety and attributions, were examined and it was concluded that the athletes' interpretations of experiences may be related to positive and negative momentum states.

The second study examined in more detail the relationship between positive and negative experiences. It also attempted to gain a greater understanding of perceived momentum by tracking momentum shifts over time between competing tennis players. A diverse approach to data collection and analysis allowed for comparisons between competing players to be made. Descriptive statistical analysis revealed that winning the first point in a game resulted in more games being won, compared to losing the first point. Content and frequency analysis was also carried out based on interview data. Results indicated that differences existed between the winners and losers. In particular, more positive experiences were exhibited by the winners and more negative experiences by the losers. More in-depth case studies were used to gain a more detailed insight into momentum shifts. Each match examined told a unique story, however similarities were found. There were two main findings, firstly losers identified more key momentum moments than winners. Secondly, questionnaire data revealed divergent patterns for perceived status over a range of parameters (*e.g.* fatigue) between each winner and loser. In combination these findings offered further support for the differentiated existence of momentum within sports competition.

The final study considered the notion of momentum from a more holistic perspective and utilised a longitudinal methodology to examine both on and off court activities of a female tennis player on the professional circuit. A departure from the previous post-positivistic paradigm lead to a case study being produced which identified fluctuation of momentum both during and between performances. Results adapt well to recent models of momentum and are discussed in terms of each construct.

The findings from the thesis support the existence of psychological momentum and contribute towards a reformulated model of momentum. The model draws upon findings from the present thesis and also incorporates findings from previous momentum research.

Finally, the unique approach of combining traditional quantitative methods with more recent qualitative techniques highlighted concerns over the rigidity of past research and suggests how new lines of enquiry might be used in future research.

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## **CHAPTER ONE: INTRODUCTION**

## 1.1 Introduction

Anecdotal reports from athletes and coaches have suggested not only that psychological momentum exists, but that it plays an important role in performance outcome (Gilovich, Vallone & Tversky, 1985; Silva, Cornelius & Finch, 1992). Despite the phenomenon being held in such high regard with respect to performance, research into the area of momentum has been recent. The last twenty years have produced a number of studies, focusing on various aspects of momentum yet, to date, this concept is one of the least understood within sport, both empirically and conceptually (Taylor & Demick, 1994).

Studies have tended to focus on three key issues, namely gender and skill level differences and antecedents (Greer & Love, 1986; Miller & Weinberg, 1991; Burke, Burke & Joyner, 1999). Findings for both gender and skill level have been equivocal. It has been postulated that gender differences may be due to the differentiated role of self-confidence, with males exhibiting higher levels of confidence compared to females (Weinberg, Richardson, Jackson & Yukelson, 1983). However, Richardson, Adler and Hanks (1988) failed to find any gender differences when trying to predict match success after winning the first set in a tennis match.

To attempt to explain this equivocal finding, some researchers argued that it was the ability or skill level of the athlete that determined whether they went on to win or lose a competitive performance (Gilovich et al., 1985; McClutcheon, 1997). However equivocal results have been found for skill level, with some studies showing no momentum effects when ability is matched (Silva, Hardy & Crace, 1988), while other studies have shown that momentum effects are at their strongest when ability is matched (Adams, 1995).

A study by Richardson et al. (1988) argued that for momentum to occur, consideration must be given to how close the score is, suggesting that the situational variable is important in determining whether momentum is perceived or not. Several studies have examined both situational and personal antecedents of momentum and have found that they vary from person to person (Cornelius, 1991; Burke, Edwards, Weigand & Weinberg, 1997). This led to the notion that

momentum is subjective and can not be properly understood without the individuals' perceptions of a situation being taken into consideration.

Three models have been developed to help explain the mechanisms behind momentum (Adler, 1981; Vallerand, Colavecchio & Pelletier, 1988 and Taylor & Demick, 1994). Although each model reflects different aspects of momentum, common components do exist, such as striving toward a goal. Despite this, no one definition of momentum yet exists.

The vast majority of research into psychological momentum has focused on two main methodologies, namely archival and observer-perspective (Iso-Ahola & Mobily, 1980; Silva et al., 1988; Burke et al., 1997; McClutcheon, 1997). Although these studies have allowed sport psychologists to gain insight into momentum, they have generally failed to consider the athlete's own perceptions of momentum in relation to a specific performance. As researchers have suggested, momentum is subjective and as such may vary from person to person (Vallerand, et al., 1988; Burke, et al., 1997). Due to the subjective nature of momentum, alternative methodologies may be required to elicit a more athlete specific, in-depth understanding of momentum to emerge.

The quantitative paradigm has been the dominant focus in sport psychology research (Biddle, 1997). Only recently have qualitative methodologies been considered in the search for a deeper understanding of psychological concepts in sport. Pioneering work by Scanlan, Stein and Ravizza (1989a,b) introduced the use of semi-structured interviews and content analysis. Despite the production of deeper, more descriptive findings, content analysis has been criticised on several levels, not least for falling under a positivist/post-positivist umbrella (Sparkes, 1995).

More recent qualitative research has focused on case studies (Gilbourne, Taylor, Downie & Newton, 1996) and self narrative (Sparkes, 1994). A departure from author evacuated text has lead to an introduction of confessional tales, allowing the reader to follow the authors' journey through their research. Such a departure

has been argued to open up a new line of qualitative enquiry (Sparkes, 1998; Faulkener & Sparkes, 1999).

Despite the need to be cautious with regards to issues such as validity and trustworthiness (Sparkes, 1998), these new forms of enquiry are gaining acceptance in the discipline of sport psychology.

## 1.2 Aims and Objectives

The aim of this thesis is to examine psychological momentum in elite athletes through the use of different methodologies. The aims and objectives of each study are outline below, with a brief overview of methodologies utilised. Finally, a broad overview is provided of the journey taken, both in an ontological and epistemological sense.

### *Study One Aims:*

- i) To examine positive and negative experiences before, during and after successful and unsuccessful performances in elite male and female middle and long distance runners and consider them in relation to psychological momentum.
- ii) To utilise a qualitative research design, involving a semi-structured interview technique and content analysis, to consider the athlete's own perceptions of the competitive experience.
- iii) To produce the results through the use of frequency and content analysis.
- iv) To compare and contrast positive and negative experiences between successful and unsuccessful performance.

### *Study Two Aims:*

- i) To examine psychological momentum in elite male and female tennis players before, during and after competitive matches.
- ii) To combine quantitative and qualitative methodologies, in the form of statistics, questionnaires and video-prompted interviews to gain a deeper understanding of micro shifts of momentum.
- iii) To produce the results through the use of statistics, content analysis and case studies.
- iv) To compare and contrast findings from differing analytical procedures.

*Study Three Aims:*

- i) To examine psychological momentum using a longitudinal perspective with an elite female tennis player.
- ii) To combine quantitative and qualitative methodologies, in the form of questionnaires, observations, a reflective diary, and formal and informal interviews.
- iii) To produce the results through the use of a case study
- iv) To compare the findings in relation to models of psychological momentum.

*Overview of 'The Journey'*

This thesis aims to advance the understanding of psychological momentum in elite athletes through enquiry that spans the quantitative and qualitative paradigms. The first study is post-positivistic in nature and is positioned within grounded theory. It examined the different mental states during successful and unsuccessful performances and their possible association with momentum and/or performance. In line with past research, issues, such as self-confidence, attributions and gender differences, were examined. Additional factors, such as goal-setting and directionality of anxiety were also explored for potential links with momentum shifts.

The second study embraced a positivistic approach, but began to explore alternative form of qualitative enquiry in the shape of case studies. Statistical analysis examined the hypothesis that winning the first point in a game was the key factor in winning the game. Athlete-driven definitions of momentum were produced in order to examine the notion that momentum is subjective. Finally, case studies explored the issue of cognitive appraisal on personal and situational variables.

The final study moves along the continuum of interpretism and positions itself toward constructivism, using the self-narrative style of a confessional tale and citing alternative forms of legitimisation such as catalytic validity. Momentum was explored from a holistic angle, allowing for wider ranging issues and

experiences to be included. Conceptually, this allowed many theoretical lines of enquiry to be examined and compared to past research.

The thesis journey therefore begins with a post-positivistic paradigm and finishes with a relativist, interactional stance, which embraces the epistemology of constructivism. The journey culminated in a new model of momentum being developed, which encompassed the key issues highlighted in the three studies.

## **CHAPTER TWO: LITERATURE REVIEW**

## 2.1 Overview of Psychological Momentum

It has been argued that the competitive sporting environment provides an ideal opportunity to examine the theoretical concept of psychological momentum (Adler, 1981). This view is supported by anecdotal reports from athletes, who have suggested that momentum shifts during performance are often the key to performance outcome (Gilovich et al., 1985; Vallerand et al., 1988; Silva et al., 1992). However, despite the importance individuals place on this phenomenon, it is one of the least understood concepts within sport, both empirically and conceptually (Taylor & Demick, 1994).

The first empirical study to examine psychological momentum in sport was undertaken by Iso-Ahola and Mobily in 1980. They defined momentum as the “added or gained psychological power...which influences the individuals’ mental and physical effort...and performance” (p.392). Using archival data from racquetball tournaments, Iso-Ahola and Mobily found that in a ‘best-of-three’ match, the winner of the first game was more likely to win the match. More specifically, winners of the first game won 73.1% of their second games and 86.6% of their matches. If, however, the first two games were split, they reported that momentum effects were cancelled out and each player had an equal chance of winning. Studies carried out with tennis players showed similar results (Love & Knoppers, 1984; Silva & Hardy, 1985). More recently, research in other sports, such as basketball (Weinberg et al., 1983), ice hockey (Gayton, Very & Hearn, 1993) and billiards (Adams, 1995) have also found that winning the first game, set or goal predicted match success.

During the last twenty years, a number of studies published findings on the topic of psychological momentum. These studies focused on the sports of tennis, basketball and volleyball, and examined several variables, including gender differences and momentum (Iso-Ahola & Mobily, 1980; Weinberg, Richardson and Jackson, 1981; Weinberg et al., 1983; Ransom and Weinberg, 1985; Greer and Love 1986; Richardson et al., 1988; Weinberg & Jackson, 1989), ability level on momentum (Ransom & Weinberg, 1985; Richardson et al., 1988; Silva et al., 1988; Weinberg & Jackson, 1989; Miller & Weinberg, 1991), and the

timing of momentum shifts (Silva & Hardy, 1985; Silva et al., 1988; Miller & Weinberg, 1991).

### **2.11 Gender and Momentum**

Studies that have examined the relationship between gender and its effects on momentum have proved equivocal. Weinberg et al. (1981), defined momentum as coming from behind, after having lost the first set, to win a best of three sets match. Using archival data, they found that male tennis players came from behind to win more often than female players do, with 14% of males and 9% of females winning the match after losing the first set.

Weinberg et al. (1983) examined gender differences with team sports, namely volleyball and basketball. Using archival data, results showed no significant differences between the genders. However, the males did come from behind to win 15% of their matches with the females coming from behind to win 13% of their matches. Weinberg and Ransom (1985) found similar findings when examining the top twenty ranked tennis players in the world. Thirty-nine percent of males and 37% of females came from behind to win the match. Weinberg and Jackson (1989) also found only a 2% difference between male and female tennis players winning having lost the first set.

Greer and Love (1986), have noted that female tennis players winning a game or a set were significantly more likely to go on and win the subsequent game or set. Males, on the other hand, did not show this tendency. However, from a point-to-point perspective, Greer and Love (1986) noted that winning one point tended to predict winning the following point for both males and females. In a similar study, Richardson et al. (1988), also failed to find any gender differences when examining whether winning a particular game in the first set would predict match success for tennis players categorised as being A-level.

Weinberg et al. (1983) suggested that such findings could be due to the differentiated role of self-confidence within the two populations. They postulated that to reverse momentum and come from behind in a match to win would

require a certain degree of self-belief. Males, they went on to argue, generally exhibit higher levels of self-confidence compared to females. It should be noted, however, that although males did come from behind more often than females in all of the above studies, in many cases the differences were negligible.

There appears to be some confusion in the definition of psychological momentum in the above studies. Some researchers, such as Weinberg et al. (1981) discuss momentum in terms of coming from behind to win, while others, for example Greer and Love (1986), examine momentum in terms of the likelihood of winning or losing predicting subsequent winning or losing. To help clarify this situation, it may be necessary to discuss results in both in terms of reversing momentum and maintaining momentum.

### **2.12 Ability and Momentum**

One factor, which may have lead to the equivocal findings for gender, is that of ability or skill level. It has been argued that players won points, games and/or sets in the above studies not because of momentum effects, but simply because they were the better player (Gilovich et al., 1985; Ransom & Weinberg, 1985; Richardson et al., 1988; Silva et al., 1988; Weinberg & Jackson, 1989; Miller & Weinberg, 1991; Adams, 1992; McClutcheon, 1997a). Weinberg and Jackson (1989), using archival data, found that regardless of gender, professional tennis players were more likely to reverse their momentum compared to junior and other senior players.

However, Miller and Weinberg (1991) postulated that if ability is controlled for, the presence of any performance effects could be more readily attributed to momentum shifts. In addressing the issue of ability further, some studies have demonstrated that when athletes are matched on ability levels, no momentum effects were present (Gilovich et al., 1985; Silva et al., 1988; McClutcheon, 1997). For example, Silva et al. (1988), found that when matches went to three sets, a scenario, which they argue, indicates a greater equity of ability levels, no evidence of momentum effects were present. Indeed, when they examined the tie-break results, the lack of momentum was even more apparent. Players

winning the tie-break in the second set, a scenario which was expected to produce positive momentum, were no more likely to go on and win the match compared to players who lost the tie-break. They conclude that when players possess similar ability levels, momentum may be difficult to create or sustain.

Laboratory based studies have been carried out to examine the impact ability may play in the relation to psychological momentum. Silva et al. (1992) manipulated subjects' perceptions of momentum by providing false feedback during laboratory maze tasks. Subjects who were told that they were winning most of the games reported experiencing positive psychological momentum more frequently than the subjects who believed they were losing. Subjects in the losing group reported a higher frequency of negative momentum experiences compared to the winning group. Despite this, the subjects in the winning group did not perform significantly better than those subjects in the losing group. These findings, Silva et al. (1992) postulate, may be due to the cognitive appraisal of the situation.

McClutcheon (1997) manipulated perceptions of momentum with subjects carrying out a maze task. Results were consistent with the findings of Silva et al. (1992). Cornelius, Silva, Conroy and Petersen (1997) found similar findings for their study with subjects participating in a basketball shooting competition. Subjects stated that they experienced momentum during the contest and that these experiences affected their performance. However, these perceptions did not translate into significant improvement in performance.

In contrast to the above findings, some studies have found that momentum effects are at their strongest when the skill level of the players are equal (Richardson et al., 1988; Adams, 1995; Gayton et al., 1995). Adams (1995) found that winners of the first game in a billiards match were more likely to win the match during the second half of a billiard tournament than in the first half. Adams' (1995) argument that skill level was more similar in the second phase of the tournament, points toward ability not having as significant an effect on performance as momentum. Gayton et al. (1995) examined momentum within the team sport of ice hockey. They found that when ability was equal, 72.5% of

the games won were by the team that won the first period. Additionally, the team who scored first won 66.5% of games. However, their findings indicate that factors other than momentum account for between 80-90% of performance variance. A similar figure for performance variance was found by Gayton et al. (1993).

Iso-Ahola and Blanchard (1986) examined the concept of ability in relation to tennis players' levels of self-confidence. They found that although the winners perceived themselves to be better players, it was their higher levels of self-confidence that allowed them to perceive that they were more likely to win the subsequent game compared to the losers. Iso-Ahola and Blanchard (1986) argue that confidence levels rather than ability levels were key, as their findings showed no difference between differing ability levels of players. It would be interesting to examine this hypothesis in relation to gender differences. As Weinberg et al. (1983) have argued, males have higher levels of confidence compared to females and can therefore turn momentum around much easier. Research into gender and performance outcomes may help to refute or substantiate such an argument.

Richardson et al. (1988), have argued that for the opportunity for momentum effects to occur, competition must be close in score, in addition to the players being matched on ability levels. They examined whether winning a particular game in a set would predict match success. In addition to finding that the player winning the first game of the first set won the match 70.5% of the time, results also showed that winning certain games also predicted match success. More specifically, games 8,10 and 11 in the first set, and game 4 in the second set, were found to be significant predictors of match success. On the basis on these results, Richardson et al. (1988) argued that as the sets became closer in score, they became more competitive and in turn the shift in momentum, or importance particular games had, appeared to be more pronounced to the athletes.

### **2.13 Situation Criticality and Momentum**

These studies suggest that it is not just ability that is important in determining momentum changes, but the specific situations athletes experience which may play an important role in predicting game, set and match success. Vallerand et al. (1988), have cited the pattern of behaviour exhibited during a sporting performance, as an additional situational variable affecting the perceived existence of psychological momentum. They illustrate their point by using a basketball example. Making three steals in a row whilst winning, they argue, will have little if any effect on momentum. However, if the same three steals were made which caused the score to be tied, momentum will be seen to exist. Therefore the criticality of the situation is important. This is verified by additional research by Miller & Weinberg (1991), Taylor and Demick (1994) and Burke et al. (1999).

### **2.14 Antecedents of Momentum**

Several studies have attempted to explore the antecedents of momentum, both personal and situational. Adler and Adler (1978) were the first to examine these variables. They argued that 'preconditions' could elicit momentum before the performance itself starts. These include both physical and emotional components, as well as perceived pressure surrounding the performance. These components could, they argued, be influenced by past performances. Adler (1981) and Weinberg and Jackson (1989) also highlighted the importance of past performances. Cornelius (1991) and Burke and Houseworth (1995) also examined the pre-game period and cited coach pep talks, crowd influence, team-mate interactions, warm-up, practice and psychological readiness as issues which may influence the existence of momentum.

Studies have found that antecedents of momentum during performance itself vary greatly. Burke et al. (1999) found that 84% of momentum starters were characterised by a combination of good performance from one team and a poor performance by the opposing team. This study backed up an earlier piece of work with tennis and basketball players (Burke et al., 1997). However, when antecedents are broken down to more specific causes, a general lack of consensus

is found. For example, in a study by Richardson et al. (1988), twenty-one factors were listed by tennis players as being a cause for momentum. These included breaking serve, thinking positively about personal skills and winning a long game. A comparable study by Taylor and Demick (1994) found thirty such factors. Taylor and Demick (1994) also found a similar number of different factors for basketball. Burke et al. (1997) found that when subjects with knowledge of the sport watched either tennis or basketball matches, a relatively low agreement was found for momentum starters and breakers. Therefore, regardless of whether an individual was an observer of a performance or took part in the performance, consensus on the antecedents of momentum could not be found.

Vallerand et al. (1988) postulated that momentum is subjective and is initiated by both personal and situational variables. It is because of the subjective nature of the cognitive appraisal of the athlete, they argue that so many antecedents are found for momentum. This view is supported by more recent research (Miller & Weinberg, 1991; Taylor & Demick, 1994). Cornelius et al. (1997) went further and stated that that momentum cannot be properly understood unless the athletes' perceptions of the situation are considered.

### **2.15 Models of Momentum**

Vallerand et al. (1988) in acknowledging that momentum is subjective, examined the concept from two different standpoints, namely as an antecedent and as a consequence. Past research has tended to define momentum as being associated with improved performance (Iso-Ahola & Mobily, 1980; Hardy & Silva, 1985). However, Vallerand et al. (1988) also examined momentum as being the cause of performance improvement. In developing their Antecedent-Consequences Model of Psychological Momentum, Vallerand et al. (1988) attempted to distinguish between momentum as a cause of change in performance, and momentum as the effect of performance change. The model consists of three parts, antecedents, consequences, and the perceptions and feelings associated with momentum (Figure 2.1).

Momentum is defined as the perception that one is progressing towards a goal. This perception, they argue, is associated with higher levels of motivation and enhanced perceptions of control, confidence, optimism, energy and synchronism. For individuals participating in the performance, cognitions and affects related to these concepts are felt. An observer, although highly involved with a performance itself, can only try perceive other athletes' perceptions. Although not discussed in any detail, negative momentum is defined in terms of a reduction in the above concepts.

**Figure 2.1 The antecedent-consequences model of psychological momentum (Vallerand et al., 1988)**

The model assumes that antecedents are subjective and must be perceived as initiating momentum before momentum can influence performance. Perceptions of momentum, they argued, are produced by both situational and personal variables. These include the nature of the task, criticality of the outcome, competitive anxiety and skill level.

A major driving force behind Vallerand et al.'s (1988) model, is the importance that perceived personal control plays with respect to these situational variables.

Whether an individual perceives they have control or not over a situation will influence how they interpret that situation. This, they explain, is why in some situations, not everyone will perceive momentum as being present. As noted earlier, they state that an antecedent variable, such as a steal dunk in basketball, may allow the athlete to gain or regain control over the situation. Objective outcomes, such as winning the first set of a tennis match, may also allow an individual to perceive control over a situation. It is this perception of control that may initiate an increase in positive perceptions and feelings of momentum and in turn affect performance. If the interpretation is attributed to internal factors, such as skill level, it is hypothesised that perceptions of control will be enhanced. It is therefore the interpretation of the antecedent, or momentum starter, that can elicit feelings of psychological momentum.

Contextual variables, such as the crowd and whether or not the performance was perceived as being important to the individual or not, will also affect perceptions of momentum. However, Vallerand et al. (1988) did not go into any detail with the mechanisms behind these variables.

Criticality of the situation is also discussed within the model. More specifically, it is the situation or context that will define whether momentum is present or not. For example, calling a time-out during a close match may be perceived as a chance to break the opposing team's momentum. However, if a time-out were called when the opposing team was winning by a big margin, perceptions of breaking momentum would probably not be present.

Vallerand et al. (1988) highlight the fact that perceptions of control can, however, be an illusion. An athlete may attribute a performance to something which although they had no control over, they perceived control was present. They suggest that a biased information-processing system may be functioning. Athletes will remember situations where momentum appeared present and performance increased yet forget situations where momentum did not increase performance. Such a hypothesis is consistent with findings by Gilovich et al. (1985) that found that momentum might be a cognitive illusion.

Personal variables, such as anxiety levels and skill levels are thought to influence perceptions of momentum. If an athlete is over anxious or fails to exhibit the skills required to perform at a certain level, momentum will not be perceived and performance will not increase. However, a study by Cornelius et al. (1997) failed to find any relationship between anxiety, either somatic or cognitive, and perceptions of momentum. This finding could be due to the environment. A laboratory based task may not have been competitive enough an environment to induce such associations with anxiety.

Vallerand et al. (1988) tested their model using an observer-perspective methodology with tennis players of differing playing experience. Two scenarios, namely, coming from behind to win four games in a row to tie at five games all and alternating winning games up to five games all were presented as hypothetical situations in a questionnaire. Players were asked to answer questions relating to psychological variables, such as control, energy and confidence that may be experienced during these situations.

Results demonstrated that the situational variable was important in influencing perceptions of momentum. All players, regardless of their experience, identified coming from behind to tie the score at five all represented momentum being present. The experienced players also noted that this momentum was important in determining set outcome. Vallerand et al. (1988) postulated that these findings could be due to the hypothetical situations being unambiguous in nature. They argued that ambiguous situations would have resulted in experienced players perceiving more momentum being present compared to their inexperienced counterparts.

Existence of momentum was associated with such factors as increased perceptions of control, confidence, energy, optimism, synchronism, motivation and progressing toward a goal. This finding supports the tenet that these personal variables are associated with momentum.

A study by Miller and Weinberg (1991), using volleyball players provided partial support for the Vallerand et al. (1988) model. Results showed that perceptions of

momentum were found to exist under some specific antecedent conditions, such as a tie score of 5-5, but it was also noted that outcomes could not always be predicted. More specifically, the team that was perceived to have momentum did not necessarily have a performance advantage. Silva et al. (1992) found a similar finding with subjects carrying out a laboratory motor skills task.

To investigate momentum antecedents further, Burke et al. (1997) attempted to determine the degree of agreement or disagreement in observers' perceptions of momentum starters within athletic competitions. Results showed a lack of agreement over the antecedents. This lack of consensus was associated with the view that momentum antecedents are idiosyncratic as opposed to generic. A factor highlighted earlier by both Vallerand et al. (1988) and Taylor and Demick (1994). Burke et al. (1997) also argued that because the subjects did not actually participate in the sporting competition in question, then important emotions and cognitions, thought to be associated with momentum antecedents, would have been lost. This may have negated the sensitivity required to identify momentum starters.

Vallerand et al. (1988) were not the first to develop a model of momentum. Adler's (1981) model had earlier attempted to provide a broader explanation of the mechanisms of momentum (Figure 2.2). He argued that an individual will initially focus on a specific goal, and that their efforts will be directed towards achieving this goal. Adler (1981) postulated that goals channel the motivation and concentration of an individual. The level of confidence an individual possesses will help to nurture achievement of the goal. Confidence, he argued, can be carried over from past performances. The motivation of an individual will influence the effort they put into achieving the goal. In this context, emotional responses, either positive or negative, will be associated with fluctuations in the individuals' physiological arousal system. A heightened psychological and physical readiness will result from increases in physiological arousal, and in turn elevate performance level. The performance is then cognitively appraised and creates a spiral of either positive or negative momentum. Positive momentum is linked with higher levels of confidence, control, feeling more positive, and

having more energy and rhythm. Although intuitively appealing, Adler's model (1981) can be criticised.

**Figure 2.2 Cross-sectional model of momentum (Adler, 1981)**

Firstly, he fails to consider the role attributions play in the process of cognitive appraisal and in determining emotional responses. It is widely accepted that individuals' emotional responses may not only relate to the win-loss outcome of performance, but also reflect on deeper attributional appraisal of the performance (Biddle & Hill, 1992). Secondly, although Adler (1981) includes arousal within his model, it is defined as the physiological response needed to achieve the goal. No mention is made of arousal being experienced cognitively.

Despite Adler's model (1981) not being sport specific, similarities exist between his model and the model of Vallerand et al. (1988). Goals, the primary impetus for momentum to occur, and factors such as confidence and control are perceived by both models to be associated with momentum. The importance both Adler (1991) and Vallerand et al. (1988) place on emotions has been supported by later research which has shown affect is a necessary component of momentum (Burke et al., 1997; Kerick, Iso-Ahola & Hatfield, 2000).

More recently, Taylor and Demick (1994) developed a model of momentum. Their rationale for a new model was based on the work of Adler (1981) and Vallerand et al. (1988). Adler (1981), they argued, failed to explain in detail how the components of his model worked, in particular physiological arousal and the influence of cognitions. Although Taylor and Demick (1994) endorsed the model of Vallerand et al. (1988), with reference to situational and personal factors, they felt the model lacked the arousal and emotional components they felt were associated with momentum. In addition, Vallerand et al. (1988) did not define certain components, such as synchronism, clearly enough.

Taking these criticisms into account and building on previous research, Taylor and Demick (1994) developed a multidimensional model of momentum for sport (Figure 2.3). The model consists of six elements which lead to momentum being perceived as present. These elements make up what Taylor and Demick define as the 'momentum chain'. Precipitating event(s), (*e.g.* external or internal, environmental or social, dramatic or gradual, or related directly or indirectly to performance) are required to begin the momentum chain. These events need to generate changes in the athlete's perceptions. Factors such as the athlete's competitive experience, self-efficacy and perceptions of control will have a bearing upon whether or not a change in perception is achieved.

Once a perception of an event has occurred, changes in cognitive, affective and physiological states take place. These changes counter-depend upon each other, in other words, one state can affect other states. For example, perceptions of control can affect an individuals' self-efficacy, motivation, emotions and physiological changes. Taylor and Demick (1994) argue that physiological arousal is critical in establishing, maintaining and breaking momentum. Optimal arousal is required to produce momentum.

**Figure 2.3 Multidimensional model of momentum in sport (Taylor & Demick, 1994)**

Having experienced these changes, a change in behaviour will be apparent. Behavioural change will result in either an increase or decrease in performance. For sports that involve a one-to-one contest, such as tennis and basketball, opponent factors need to be considered within the momentum chain. Taylor and Demick (1994) believe that for one athlete to have positive momentum and increase performance, it may be necessary for the other athlete to have negative momentum.

Finally, Taylor and Demick (1994) addressed the issue of skill level and momentum. They point to past research (Marcus & Cushman, 1982; Taylor & Boggiano, 1987) which suggests that more experienced athletes would differ in their ability to initiate, maintain and interrupt momentum, compared to less experienced athletes. They contrast Adler's (1981) finding that an event is followed by a similar event (*i.e.* success follows success or failure follows failure) with the findings of Silva et al. (1988) which found that this is not always

the case. Silva et al. (1988) postulated that momentum could be gained or lost by two different mechanisms, positive inhibition and negative facilitation. Positive inhibition can result in momentum being lost after a successful event, thus increasing the probability of subsequent failure. Negative facilitation can occur which will increase momentum after an event is perceived as a failure. Silva et al. (1988) turn to a quote made by Boris Becker's former coach to illustrate this phenomenon: '*Boris finds a way to turn the negative into a positive. If he goes down a game, it does not discourage him. It makes him more fiery*'. (p.347) Taylor and Demick (1994) suggest that more experienced athletes will exhibit negative facilitation, where there will be an increase in momentum following failure which will increase the probability for future success, and Adler's (1981) upward spiral. Less experienced athletes, they postulated, would experience Adler's (1981) downward spiral and positive inhibition, where success produces a loss of momentum and an increase in the likelihood of failure.

To help validate their model, Taylor and Demick (1994) carried out an examination on the early stages of the model. Using questionnaires and video tapes of tennis and basketball matches, subjects, who had varying degrees of experience for each sport, were asked to state how many positive and negative precipitating events occurred for the winning and losing athletes. Results indicated distinct differences for each sport. For basketball, both the winning and losing teams had a similar number of positive and negative precipitating events. In contrast, winning tennis players were seen to experience more positive than negative events compared to the losing players. It may be that an individual versus team sport may be a confounding variable.

A link between precipitating events and changes in immediate outcome was found only for basketball. As the model predicts, changes in outcome only occurred after a precipitating event. For tennis, no link could be made, with 20% of changes in outcome occurring without a precipitating event. Two explanations for these results can be offered. Firstly, the methodology used in this study was observer-perspective. Because of this, the individual athletes' perceptions of cognitive appraisal of the situational and personal factors could not be taken into

consideration. This appears to be a serious flaw in this study, in light of the importance Taylor and Demick (1994) place on individuals' perceptions.

Secondly, the use of a team and individual sport may not be conducive/appropriate for a comparison to be made with regards to momentum. Taylor and Demick (1994) themselves admit that this finding is unexpected, in light of their previous assumption that momentum is less likely to occur in team sports due to the fact that the 'momentum chain' would need to occur for several players.

### **2.16 Summary of Momentum Research**

These models postulate several factors associated with momentum. However, they fail to consider some fundamental issues associated with some of these factors. The two main omissions are related to goals and arousal. Firstly, all three models assume that goals play a major part in perceived momentum. Despite this, no mention is made with regards to the type of goals individuals set, more specifically, whether the goals are task or ego oriented. Research has shown that these goals will have differing effects on individuals' motivation and anxiety levels (Hall, 1990; Newton & Duda, 1995; White & Zellner, 1996). If this is the case, then examining the type of goal set may help determine the effects it has upon other components of the models.

The second area of concern is the failure to consider the cognitive aspect of arousal/anxiety in any depth. Adler (1981), for example, examines only physiological arousal. Literature has identified state anxiety as multidimensional, encompassing both somatic and cognitive anxiety (Liebert & Morris, 1967; Martens, Vealey & Burton, 1990; Swain & Jones, 1993), and as such any model should include both components of anxiety. An additional consideration is that of directionality of anxiety (Jones & Swain, 1992). Research has shown that cognitive and somatic anxiety can be both facilitative and debilitating (Jones & Hanton, 1996; Smith & Jones, 1998).

Even with these shortcomings, Taylor and Demick (1994), along with the previous two models appear to indicate that there are common components associated with momentum. Despite this, no one definition of momentum yet exists. The most cited definition of momentum originates from Iso-Ahola and Mobily (1980), who talk of the “added or gained psychological power” (p.392). Yet Adler (1981) discussed momentum in terms of changes in individuals’ perceptions whilst reaching one’s goal and Vallerand et al. (1988) attempt to associate momentum with both antecedents and consequences of performance. What is known is that momentum, whether a cognitive illusion or not, is perceived to affect athletic performance.

## **2.2 Overview of qualitative research paradigms**

Denzin and Lincoln (1994) identified key 'moments' during the 1970's and 1980's where qualitative research began to move away from positivist and post-positivist stance towards more eclectic methodologies which raised questions of reliability and validity.

The quantitative, or positivist paradigm has up until recently been the predominant approach in sport psychology research. Adopting a realist ontology and an objective epistemology, quantitative research examines data in the form of numbers. Objective knowledge is paramount. In contrast, the qualitative paradigm focuses on a subjective epistemology and a relativist ontology. Emphasis is placed on the understanding of behaviour and its meaning to individuals.

During the late 1970's and early 1980's sport psychologists began to explore the use of the qualitative paradigm in more detail, moving away from what many feel as 'abstract, detached form of language...and impersonal voice' found with the quantitative paradigm (Sparkes, 1995).

### **2.21 Content Analysis**

Early qualitative research focused on the use of semi-structured interviews and content analysis (Scanlan et al., 1989a,b; Gould, Eklund & Jackson, 1992a,b). The interview process followed guidelines from Patton (1980) which emphasised the importance of issues emerging from the interviewees. The interview schedule itself was designed using a standardised format. Each subject was taken through a series of identical questions to maintain continuity. In accordance with Patton (1980), specific clarification and elaboration probes were used after open-ended questions and general probes. Clarification probes were utilised when the interviewer did not fully understand a subjects' response while elaboration probes were used to gain a deeper understanding of a specific topic.

Criticism has been made of the structure of such interview schedules (Dale, 1996). Dale argued that too much rigidity in an interview could lead to a failure

in gathering all the relevant information. More specifically, the use of predetermined questions presented in an identical manner may inhibit the respondent giving a true and thorough account of their experiences. Dale (1996) suggests the use of more open ended questions to overcome this potential problem.

Although a number of studies have been published, there appears to be no consensus on the number of subjects required for content analysis (Biddle et al., In Press). In some studies, large numbers of subjects were interviewed, such as Orlick and Partington's (1987) interviews with seventy five athletes. In contrast, other studies have interviewed less than ten subjects (Rose & Jevne, 1993). It is hypothesised that the number of subjects may be related to constraints, such as subject population and time limits. Kvale (1996) postulates that despite the need of some researchers to strive for large numbers of subjects to fit into what he terms the quantitative presupposition of the more interviews the more scientific a study is, he cautions such a view. Kvale (1996) points to a reduction in the 'quality' of the data due to an overload of analysis and its potential to commit errors. It seems pertinent to consider data collection and analysis issues in parallel to subject numbers.

Content analysis is analysed by both inductive and deductive means. The procedure for content analysis is set out below:

1. All interviews were tape-recorded and transcribed verbatim.
2. Researchers read and re-read all interview transcripts until becoming completely familiar with them.
3. Researchers independently identified quotes and/or paraphrases which emerged from the interview transcripts. These made up the Raw Data Themes for further analysis.
4. The Raw Data Themes were grouped together around underlying uniformities (Glaser & Strauss, 1967). This process involved each quote and/or paraphrase being compared and contrasted with all the other quotes and paraphrases. This allowed similar quotes to be grouped together. Each cluster of quotes had a heading, Higher Order Sub-Theme.

5. Each Higher Order Sub-Theme was consequently compared and contrasted and grouped into clusters of Higher Order Themes.
6. When appropriate, Higher Order Themes were clustered under the heading of General Dimensions.
7. Deductive analysis was carried out to verify the inductive analysis. This involved checking that all the quotes and paraphrases were present in the transcripts. It also allowed a frequency count to be included, if required, identifying the number of subjects citing each Raw Data Theme.
8. Triangular consensus was used to help validate the process. Each researcher would provide their findings to each other and discussions were held until mutual agreement was reached for the grouping of data.

Inductive analysis allows themes and categories to emerge from the interview data. In contrast, deductive analysis is a more theory driven approach, with pre-determined themes and categories being defined. Meyer and Wenger (1998) and Schwandt (1997) both highlight the use of both deductive and inductive methods in content analysis. Indeed it is difficult to argue that one process can not occur without the other. As Krane et al. (1997) point out: *'It is unrealistic to expect any researcher to begin a study without the requisite knowledge to understand the phenomena under consideration'*. (p.216).

Researchers have argued that using a qualitative paradigm allows a richer, more descriptive foundation to advance the understanding of a particular topic. Scanlan et al. (1989b), for example, examined sources of enjoyment in former elite figure skaters. Results highlighted a number of new psychological constructs previously unknown in the literature. Gould et al. (1992b) interviewed members of the Olympic wrestlers' team on their experiences at the Games. They emphasised the importance of the methodological approach used in relation to the depth of their findings. The interview schedule, they argued, allowed them to *'get into the head of these outstanding athletes and achieve much more depth than previous quantitative investigations'*. (p378).

However, content analysis can be criticised at a contextual level (Sparkes, 1998). The process by which quotes and paraphrases are separated and

categorised under different headings decontextualises the data (Tesch, 1990). Subjects lose their identity and specific time periods are lost. Mason (1996) has argued that the enthusiasm shown for being able to categorise data has been at the expense of losing the context. More specifically, the thread running through each athlete's story is severed in order to compartmentalise the interview data.

### **2.22 Different methods of qualitative enquiry**

More recently researchers have begun to move away from the traditional content analysis approach and explore different methods of qualitative enquiry, for example case studies (Gordon & Lingren, 1990; Gilbourne et al., 1996), action research (Gilbourne, 2000) and self narrative (Sparkes, 1994). Wolcott (1994) stresses the need for qualitative researchers to be *'story tellers...To be able to tell a story well is crucial...When we cannot engage others to read our stories – our completed and complete accounts – then our efforts at descriptive research are for naught'*. (p.17).

Sparkes (1995) views the traditional positivist paradigm as having no writing style other than that of science. Language is in an abstract, detached form with no use of a personal voice. In essence, the object examined is denied a voice (Woolgar, 1988). Such writing suggests that the researcher is somehow independent from the topic examined and as such exhibits no cause for concern with regards to researcher bias. A factor associated with validity of the work.

In contrast, qualitative research allows the voice of the subject to be heard. This can be in the form of quotes taken directly from interview transcripts. Using quotes or paraphrases allows a story to be told through the eyes of the subject. However, a note of caution should be highlighted. Although the quotes allow a story to be told, it may not necessarily be the story of the subject. More specifically, it is the researcher who has editorial control over what quotes are included where. Therefore such a story may hide certain 'truths' about the subject.

In the past, the only voice heard was that of the subject (Van Maanen, 1988). The researcher served as a collector of data and not as part of the research findings and was therefore distanced from the data. However, more recent work has encompassed the author and allowed their voice to be heard (Sparkes, 1995; Gilbourne, Under Review). The author is included within the writing as 'I'. Writing in the first person is in direct contrast to the author evacuated approach taken by positivist and post-positivist research.

Including the author into the research findings allows for the opportunity of confessional tales to be embraced. Van Maanen (1988) and Atkinson (1991) describe such tales as being autobiographical in nature. More specifically, the author is allowed to express a personalised account of 'what really happened' during the data collection. Thoughts and feelings are exposed, and the reader can follow the author's journey of triumphs and errors. In short, the confessional tale opens up the author to the reader and allows them into their world.

The use of dramatic recall can aid the reader in positioning themselves into the authors world. Strong metaphors, unusual phrasings and holding back on interpretation all serve to draw the reader into the story and allow them to reflect on what is going on.

### **2.23 Collection of data**

In order to obtain detailed data, several researchers have emphasised the importance of 'fitting into' an environment (Sparkes, 1992, 1994, Gilbourne, 2000). This requires the researcher being accepted into the community and building up the trust and respect of significant others around them. Sparkes (1994) states a prerequisite to successful data collection and interpretation is the ability of the researcher to blend into the environment. This, he feels, allows the researcher to view the world from the subjects' perspective and help them to explain how and why subjects explain their thoughts, feelings and behaviour. Although such an approach may be used whilst collecting data for content analysis, it appears to be more important when carrying out qualitative enquiry requiring more detailed information. Once accepted into the community, data

collection can be obtained by several methods. For example, interviews based on observations of behaviour, maintenance of a field diary and/or a reflective diary, and video tape of behaviour.

Data can be collected during specific time periods or longitudinally and nomothetically or idiographically, depending upon the remit of the researcher. It has been noted (Dunn, 1994) that there is a dearth of research in sport psychology using the ideograph approach, despite the value given to such a method by social psychologists (Allport, 1962; Frank, 1986). Sears (1992) argues that ideographic research provides a better insight into the subjects' world compared to the nomothetic approach. Pervin (1984) further noted that idiographic research could unearth new variables and generate hypotheses that could be tested in a nomothetic setting.

#### **2.24 Legitimation of qualitative research**

Despite the move away from pure positivism, Sparkes (1998) suggests that the vast majority sport psychology research of a qualitative nature has been positioned in a post-positivist area, with what appears to be a reluctance to divorce the work from the quantitative paradigm. He builds his argument on the need of researchers to justify the trustworthiness of their work (Sparkes, 1998). This 'parallel' perspective attempts to legitimise their work through the use of terms such as credibility, dependability and transferability (Hardy, Jones & Gould, 1996).

Hardy et al. (1996) emphasised the importance of triangulation in establishing trustworthiness. Almost all the published papers in the sport psychology field which have used content analysis have included triangulation in their protocol. For example, Gould et al. (1992a) stated. *'The interviewer plus two other investigators extensively discussed...each wrestler...until consensus was reached'*. (363). Hardy et al. (1996) also cited other methods for trustworthiness, such as member checking, thick description and experience of the researcher. Member checking involves the participation of the subjects in reviewing the researcher's data, thus allowing an opportunity for the subject to verify the

validity of the data. Thick description, for example in the form of verbatim quotes, can be seen as a process that helps to maintain quality control. Finally, researcher credibility is measured in terms of experience of interviewing and qualitative data analysis. Scanlan et al. (1989a) and Gould, Tuffey, Udry and Loehr (1996) for example, emphasise the training the researchers received in qualitative research before carrying out interviews.

However, trustworthiness methods are not without their critics. Sparkes (1998) has argued that there is no ontological rationale for choosing trustworthiness techniques. The use of member checking for example, whilst intuitively appealing, fails to consider the issue of multiple realities (Gallagher, 1995). Despite the importance Dale (1996) places on member checking to validate his work, Fielding and Fielding (1986) state that such a process can not be seen as either a direct validation or refutation of the researchers' findings. Although Sparkes (1998) does not advocate that member checking is abandoned altogether, he does highlight the need to be aware of its limitations.

Despite the need of some qualitative researchers' to adhere to the positivist paradigm, Clarvairo, Najman & Silverman (1995) openly embrace such a position, others have argued against such a legitimisation (Lincoln & Guba, 1994; Sparkes, 1994, 1995). Sparkes (1994) argued that each paradigm requires a separate understanding and analysis of data and in turn, different criteria. The use of the 'parallel' perspective is seen as problematic. A case of quantitative standards being squeezed into a qualitative perspective (Denzin, 1997). Each paradigm involves different truths and in turn different realities.

Reason (1981) views validity in terms of the skills and sensitivity of the researcher and as such states that validity is more personal and interpersonal than the methodological view held by the positivistic paradigm. Riessman (1993) argues that validity is in need of reconceptualisation in some qualitative work, such as narrative studies. Wolcott (1995) goes further and postulates validity should be abandoned. The confusion surrounding the term validity and its need to be incorporated within a qualitative protocol is still in its infancy but

encompasses what Denzin and Lincoln (1994) term the fifth 'moment' of qualitative enquiry.

### **2.25 Summary of qualitative research**

Qualitative research within the sport psychology domain is becoming an accepted form of enquiry (Dale, 1996). The most dominant form of enquiry is that of content analysis, however other protocols have begun to surface, which have challenged researchers to consider alternative ways of 'knowing.' This challenge has forced the sport psychology community to consider new methods of data collection, representation and legitimacy of qualitative research.

The once long held belief that qualitative enquiry lies in parallel to the quantitative paradigm has been exposed as a naïve notion and there appears to be a crisis of representation with regards to the methodologies and research practices used. This argument is fuelled by Sparkes (1998) who has argued that the term validity should be abandoned completely and replaced with more suitable criteria. He accepts that such a recommendation will be difficult but stresses the need to forge forward and examine new ways of qualitative enquiry.

**CHAPTER THREE: PSYCHOLOGICAL MOMENTUM  
IN ELITE MIDDLE AND LONG DISTANCE RUNNERS**

### 3.1 Introduction

Past research has examined the relationship between athletes' cognitions' and their performance (Orlick & Partington, 1988; Gould et al., 1992a). Findings have shown that there are consistent differences between what athletes term as successful and unsuccessful performances. Orlick & Partington (1988), for example, compared athletes who perceived themselves to have performed up to or exceeding their personal best and /or expectations, with athletes whose performance fell below this criterion. Results showed that mental readiness was a major influencing factor for athletic performance. In particular, athletes performing at their personal best, utilised pre-competition plans and focus/re-focusing techniques. The less successful athletes were found to be lacking in such strategies.

Gould et al. (1992a) examined Olympic wrestlers pre-competitive cognitions' and affect in relation to their all-time best and worst performances during the 1988 Olympic Games. Results indicated that there were distinct differences in mental states before each of these performances. More specifically, before the all time best matches, the wrestlers indicated that they experienced an optimal mental state, which included, positive expectancies, optimal arousal, and feelings of heightened effort, commitment and focus, in addition to mental preparation strategies. The mental state before the all-time worst match was perceived as negative and encompassed negative, irrelevant or irregular thoughts and negative feeling states. In addition to this, their pre-performance routines were impaired.

The above studies indicate that different mental states are present during both successful and unsuccessful performances. Such states may be associated with the more global phenomenon of psychological momentum. Iso-Ahola and Mobily (1980), defined momentum as the "added or gained psychological power...which influences the individuals' mental and physical effort...and performance" (p.392).

In this context, positive or negative competition experiences may be associated with a positive or negative frame of mind, which in turn may lead to positive or negative shifts in psychological momentum.

To date, momentum research has not considered the possible effects positive and negative experiences, may have on momentum and/or performance. It would seem plausible to suggest that an increase in frequency, of either positive or negative experiences, may have a direct impact upon the initiation or termination of either positive or negative momentum. Emphasis on the dynamic nature of cognitive appraisal could help to account for the dynamic nature of changes in cognition and fluctuations in emotion. In addition, individual attributions are also implicated in the process of appraisal and cognition. It is widely accepted that an individual's emotional responses may not only relate to the win-loss outcome of performance, but also reflect on deeper attributional appraisal of the performance (Biddle & Hill, 1992).

#### *Rationale for study*

The purpose of the present study was to examine positive and negative race experiences. Using a time-to-event paradigm, the frequency of these experiences would be considered in relation to possible positive and negative momentum shifts. The study linked findings to the concept of psychological momentum through collective bias in the identification of the athletes' positive and negative experiences.

The rationale behind the use of a qualitative research design was that such a qualitative protocol would contrast with past research, which has tended to utilise either archival or observer-perspective data. Although these studies have allowed sport psychologists to gain insight into momentum, they have generally failed to consider the athlete's own perceptions of the competitive experience. Furthermore, as several papers have suggested that momentum is subjective and as such may vary from person to person (Vallerand et al., 1988; Burke et al., 1997), it was felt that utilising a qualitative approach would elicit a more athlete specific, in-depth understanding to emerge.

In addition, previous studies have examined momentum effects from mainly a collegiate level athlete perspective. Very few studies have attempted to view momentum through the eyes of elite athletes. Middle and long distance runners were chosen as the population of the study as it was considered that such a 'continuous'

sport/event with no time-outs, would allow for an uninterrupted examination of positive and negative experiences.

## 3.2 Methodology

### 3.21 Subjects

The subjects for this study comprised 4 male and 4 female British middle and long distance runners. The athletes were defined as being elite by their representation at international competition. Elite males ( $n=4$ ) ranged in age from 22 to 33 years ( $M=26.75$  yrs) and had on average 12.25 years of competitive running experience. All male athletes were ranked in the British top ten. Elite female athletes ( $n=4$ ) ranged in age from 24 to 34 years ( $M=27$  yrs) and had on average 14.75 years of competitive running experience. All female athletes were ranked in the British top six.

### 3.22 Design of the Interview Schedule

#### *Interview Protocol*

A standardised interview schedule was designed in accordance with Patton's (1980) recommendations (secondary appendix 1). The interview schedule comprised of three main sections and had been refined, over time, from three previous drafts. The first section was designed to familiarize the athletes with the interview procedure. It contained information on the nature of the research, including the time periods to be discussed, the right to decline to answer and/or terminate the interview and the confidentiality of the data.

The second section focused on three broad time periods. Namely, the week leading up to the race, the day of the race and the time after the race. Within each time period, specific factors were examined. For example, in the week leading up to the race, training experiences were explored: "*How had training been going over the last week?*". The broad time period focusing on the day of the race was sectioned off into more specific time frames. These time frames included the morning of the race ("*What were your first thoughts when you woke up?*") and the race itself, including specific in-race incidents ("*What sort of thoughts were going through your mind at that time?*"). Finally, post-race attributions were examined in the time period after the race ("*Can you think of any reasons as to why you performed the way that you did?*").

The third and final section was designed to elicit the athletes' reflections on the interview process. It included the opportunity for the athletes to seek further information about the research or the interview procedure. It also allowed the interviewee to respond to any concerns relating to the interview procedure: "*Do you think that I lead or influenced your responses in any way?*".

Based on the protocol used by Scanlan et al. (1989a), specific clarification and elaboration probes were used. This allowed the depth of the questioning to remain consistent across all the interviews. Retrospective taped interviews were used and each interview lasted for approximately two hours.

### **3.23 Procedure**

Athletes were recruited through contacts made with two leading British coaches. Letters were sent to their athletes, and in some cases, a presentation was undertaken to explain the nature of the research and the procedure. Interview dates, times and places were arranged with the athletes over the phone.

On arrival at the interview, athletes were asked to read and sign the informed consent form (secondary appendix 2), and complete an Athlete Information Sheet (to gain demographic information on the athlete). Following this administrative phase the interview structure was explained to them and retrospective taped interviews were then carried out with the athletes focusing on what they perceived to be their most successful and least successful races.

### **3.24 Pilot Study**

Pilot interviews were carried out with 3 middle/long-distance runners to allow the author to make any necessary amendments to the wording and inclusion of questions, and to the length of the interviews. The interview schedule went through a total of four drafts from conception to completion.

Pilot interviews one and two were carried out with a male fell runner and a female international cross-country athlete, using Interview Schedule Three. Both interviews

were recorded using a Dictaphone, and were played back and notes taken on the author's interview technique, the appropriateness of the questions and the athletes' responses. To keep within the 'socially acceptable' time of two hours for interview completion, the interview schedule was shortened. This involved omitting questions pertaining to specific details, which for the purpose of the study were deemed unnecessary/superfluous. Therefore questions, such as the race time, the weather and the rankings of the other athletes in the race were rejected. The final questionnaire adhered to theoretical, as opposed to social issues.

Pilot interview three was carried out with a male middle-distance runner using Interview Schedule Six and lasted for approximately one and a half hours. The interview was taped using a Dictaphone and also videoed. The video was examined by an accredited sport psychologist, with expertise in qualitative research, and feedback given to the author regarding body language and wording of questions. It was felt that this process aided the author's understanding of the interviewing process. On the basis of the independent researcher's feedback, it was deemed appropriate to proceed and interview the sample of elite athletes.

### **3.25 Data Analysis**

The data were subjected to both content and frequency analysis (Côté, Salmela, Baria & Russell, 1993).

The interviews were transcribed verbatim, resulting in 145 pages of single-spaced interview data. Preparation and inductive analysis was conducted in accordance with established protocol of Gould et al. (1992). Separate tables were initially developed for each gender's results. However on close inspection, few gender differences were found. On the basis of this finding, the results were condensed together, with the few gender differences noted.

A total of 738 raw data themes (RDT) were identified. Where more than one athlete identified the same factor, brackets were used to indicate the number of athletes eliciting such a factor, and whether they were (female, male). From these, 67 Higher

Order Sub-themes emerged from both the male and female athletes, and a total of 19 different time phases/in-race incidents were generated.

Triangular consensus was reached with an independent qualitative researcher on all themes. Follow-up deductive analysis provided additional verification of the inductive analysis themes.

### *Establishing Trustworthiness*

In light of the recommendations of Lincoln and Guba (1985) and Hardy et al. (1996), several steps were taken to increase the trustworthiness of the present study. Firstly, the interviewer had a background in qualitative research, with past experience in both interviewing skills and qualitative data analysis. Secondly, triangular consensus was reached on all themes, with two independent qualitative researchers. Finally, thick description, in the form of quotes, are also provided in addition to the Raw Data Themes and Higher Order Sub-Themes. A concern was acknowledged of the use of retrospective interviews. More specifically, the possibility of retrospective introspection and its possible effects upon the bias of results.

Consequently, steps were taken to try and limit and report any retrospective bias. The nature of the events asked to be recalled, namely the most and least successful performances, were deemed to be key moments in their careers. Due to the importance of such events, it was expected that they would be capable of recalling the details surrounding them. During the first stage of the interview, explaining the procedure, athletes were drawn/highlighted to the importance of truthful recall. This was aided by explaining that they may need to take their time to remember some specific points, so pauses during the interview would be okay. They were asked not to guess how they thought they might feel, and if they couldn't remember specific points they were encouraged to say so. They were also reminded that there were no right or wrong answers. In addition to the pre-interview steps to control for retrospective bias, post-interview measures were also integrated into the procedure. Each athlete was asked, at the end of their interview, how they felt the interview went. In particular, whether they had any difficulty recalling each performance and whether they felt the interviewer had lead or influenced their answers in any way. All eight athletes felt that their memory recall for the performances were accurate,

with no external influence exerted from the interviewer. Indeed, some stated their surprise at how much information and detail they had retained over time. In combination, it was felt that these steps increased the methodological rigor of the present study.

### **3.3 Results**

#### **3.31 Successful performances- positive experiences**

The positive experiences resulting from athletes' successful performances are displayed in figure 3.1 (pages 42-47). A total of 256 raw data themes (not including 29 raw data themes on goal-setting) were extracted from the athletes interview transcripts. These raw data themes were categorised into 31 Higher Order Sub-themes and 18 time phases/in race incidents.

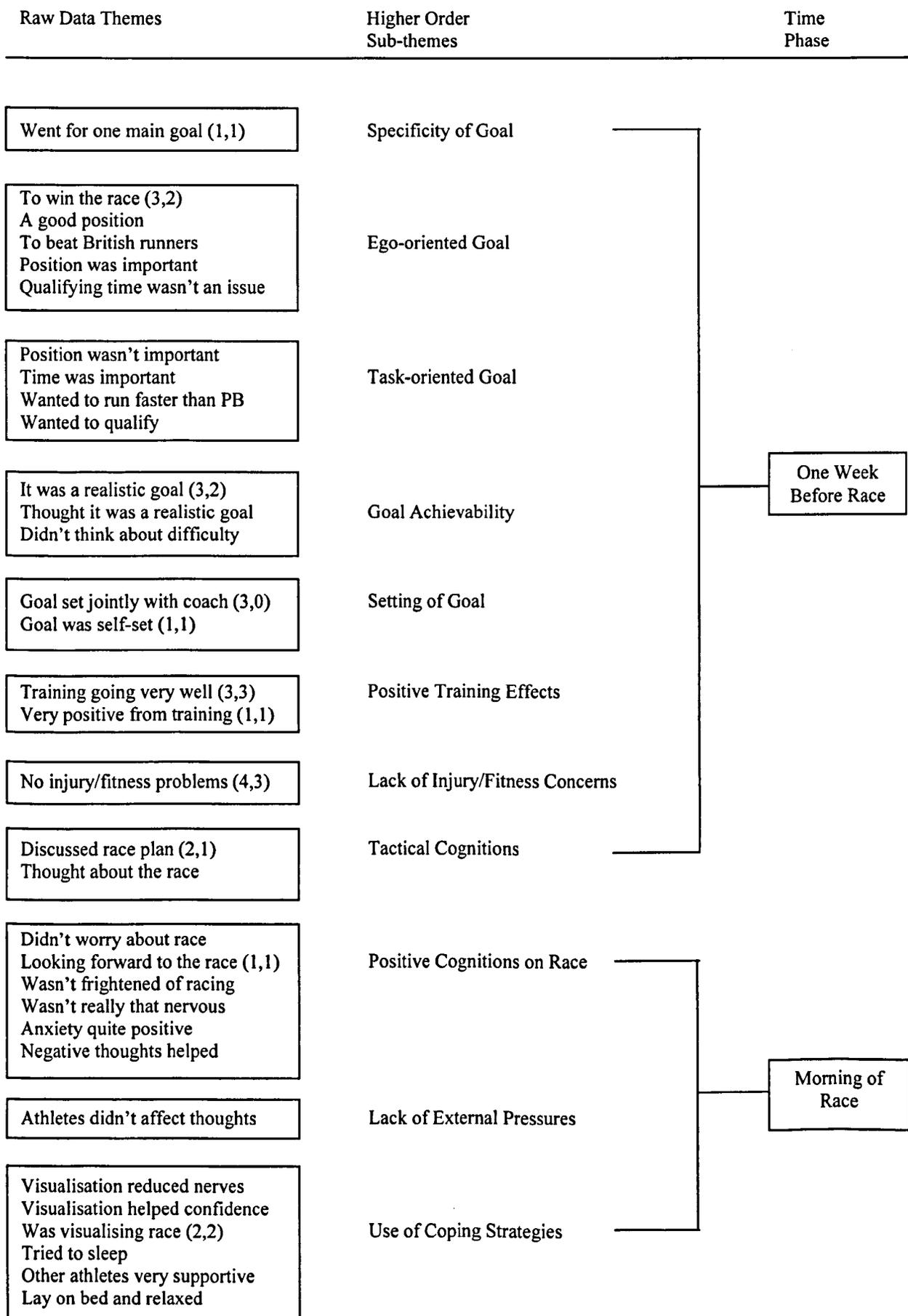
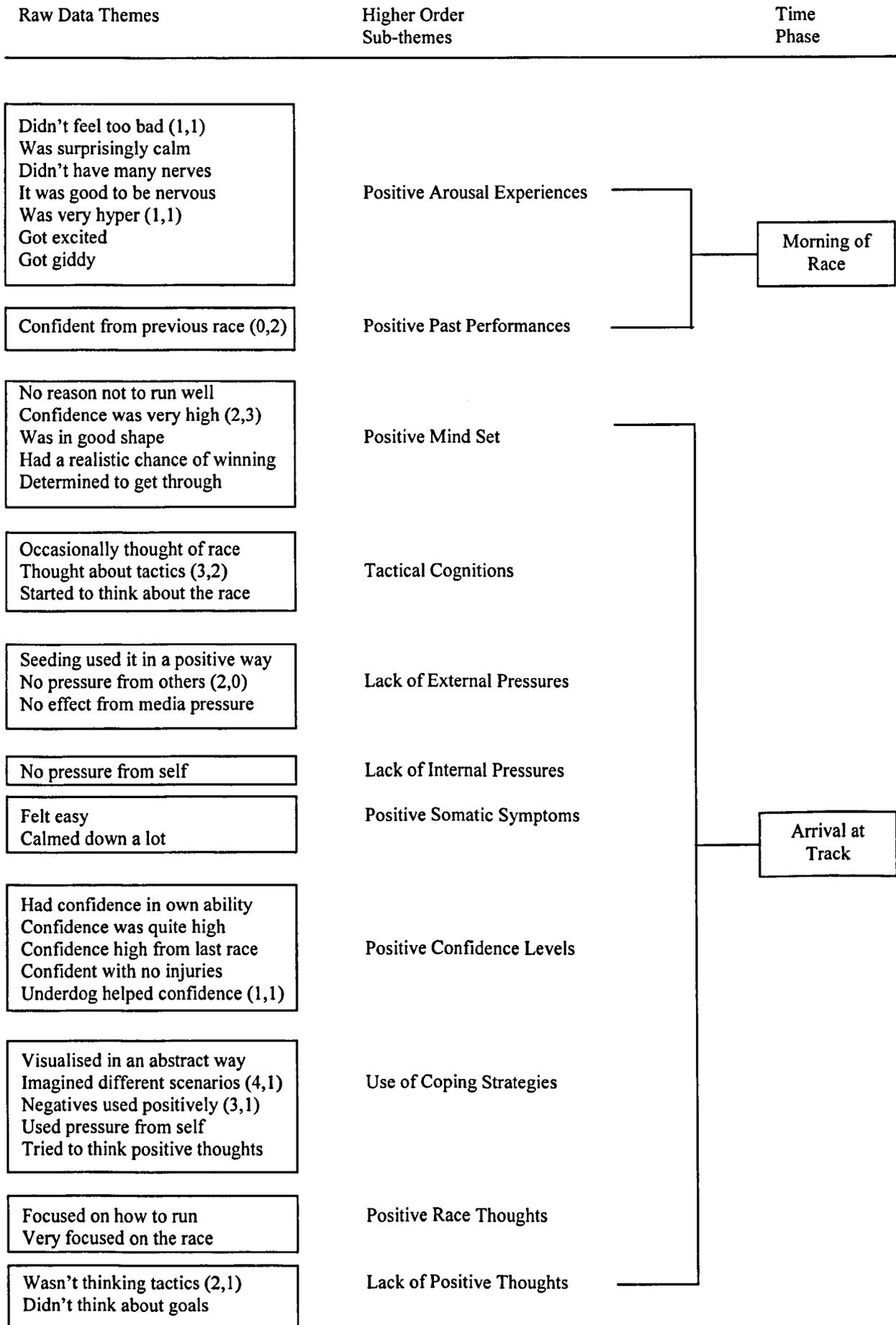
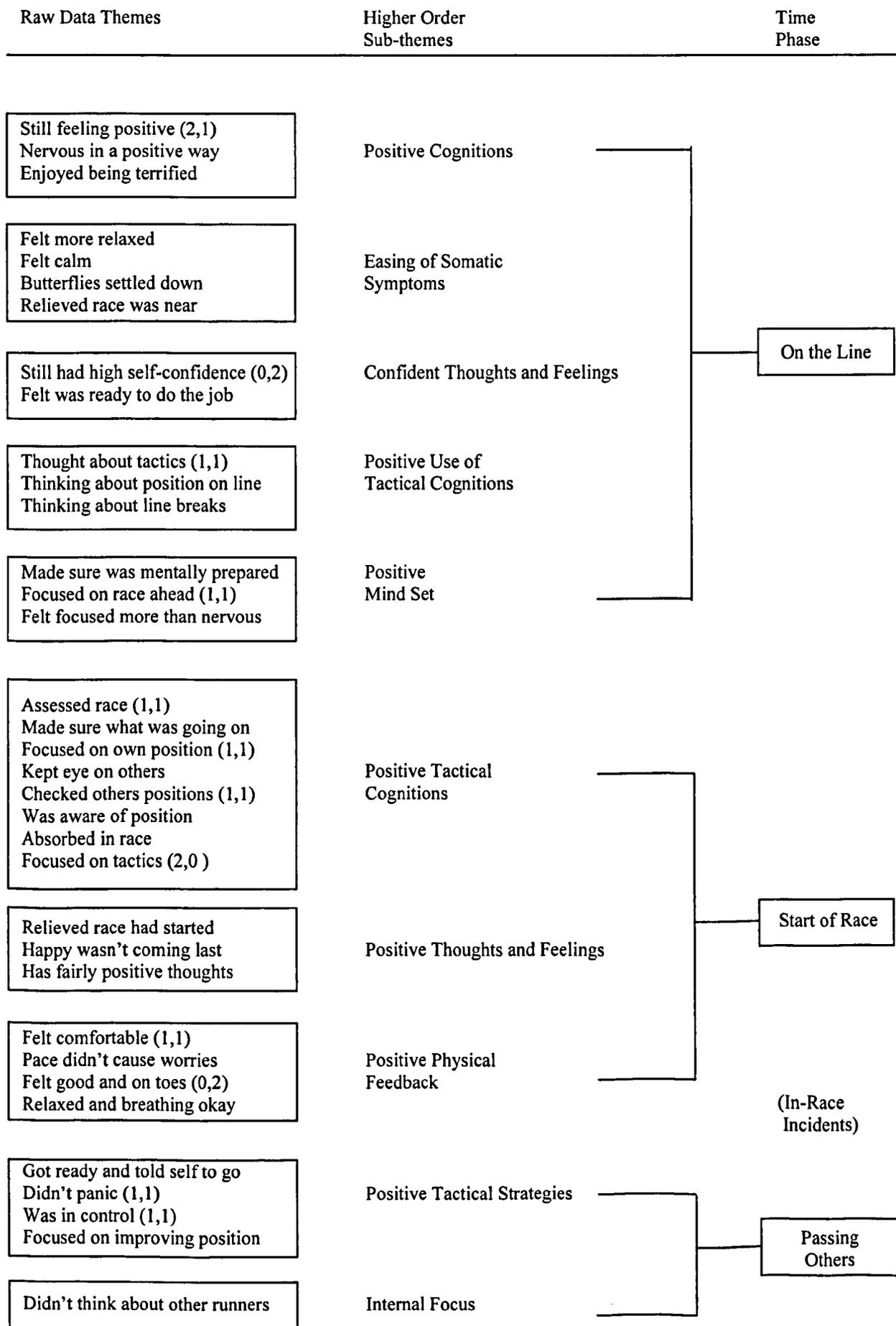
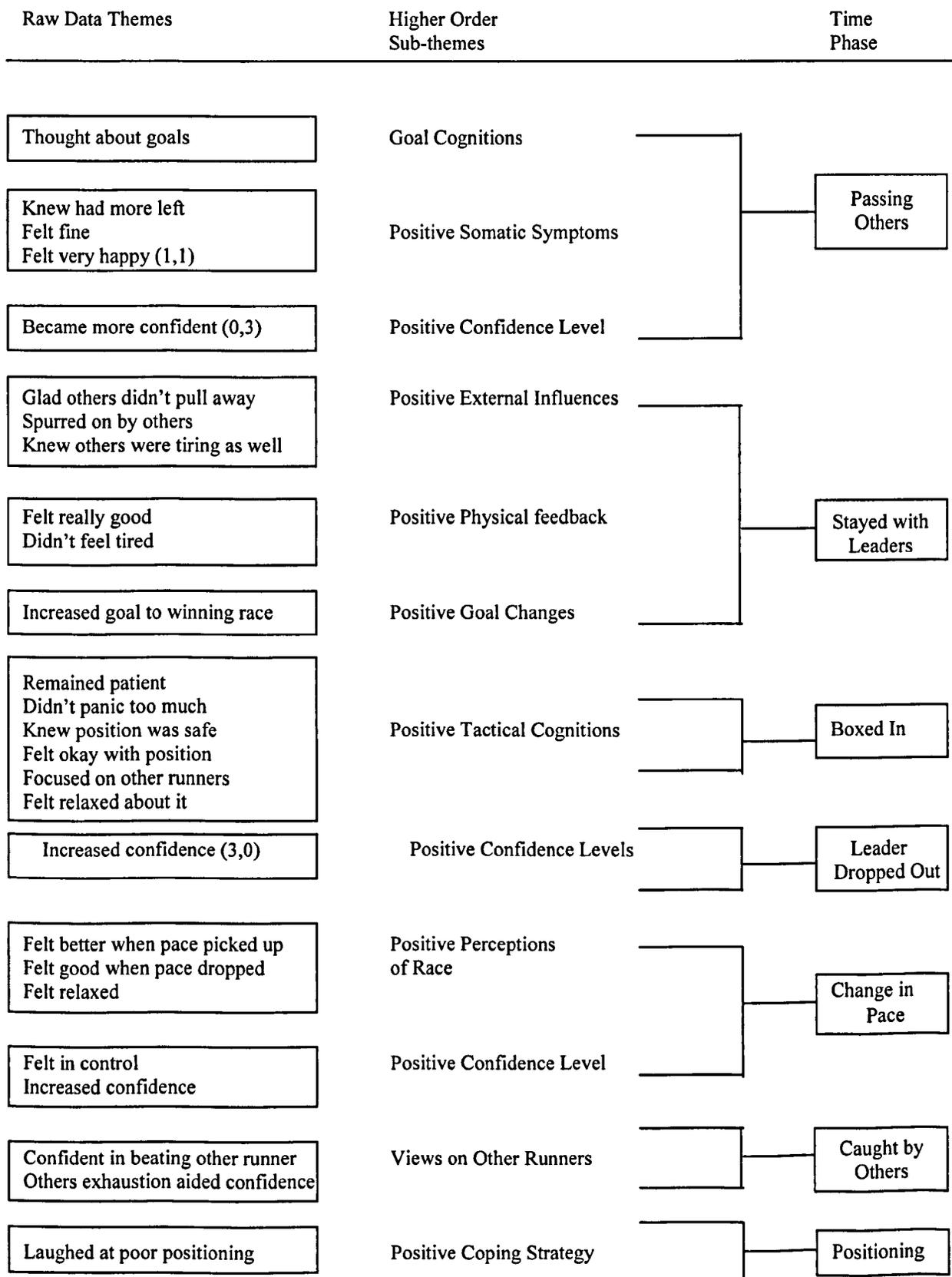
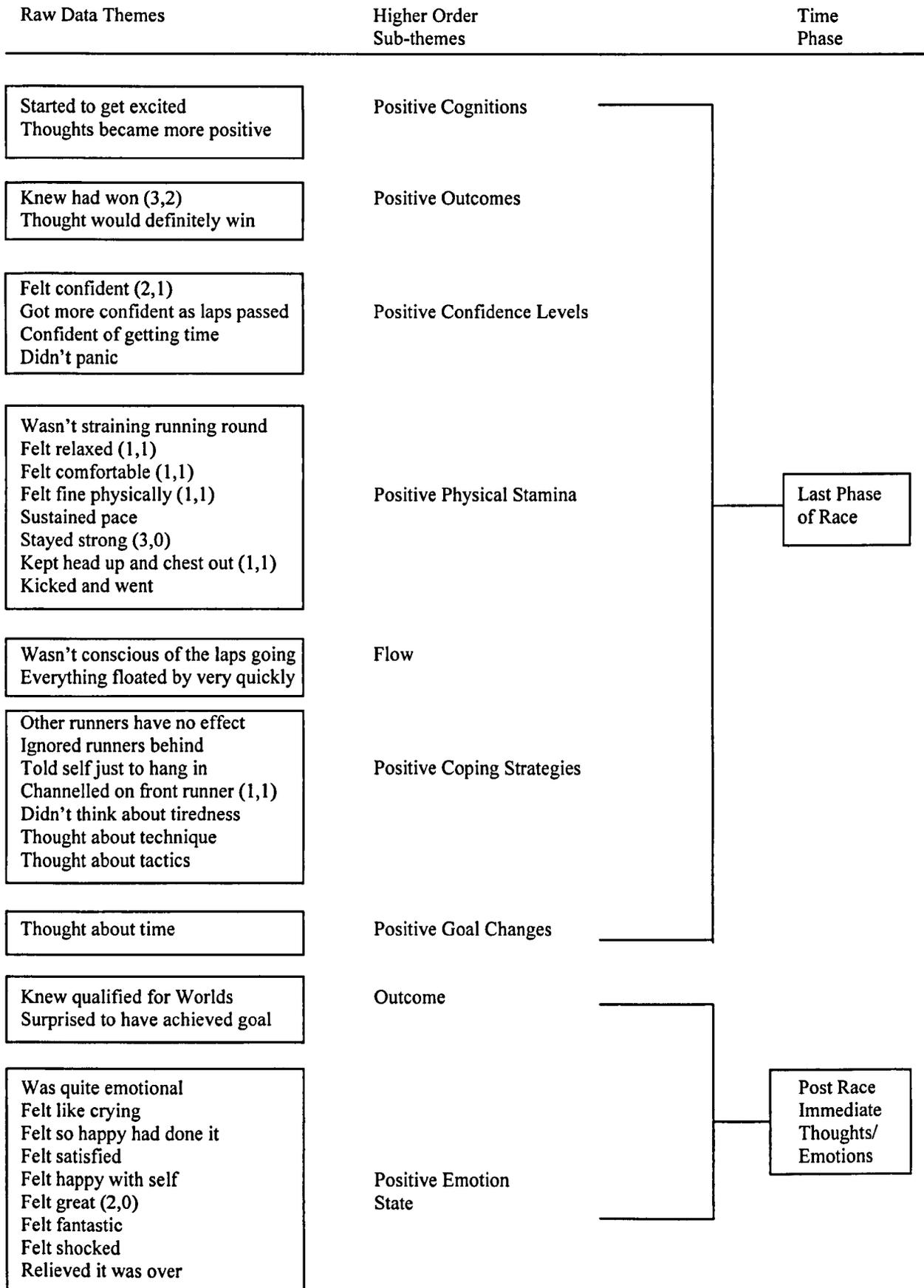


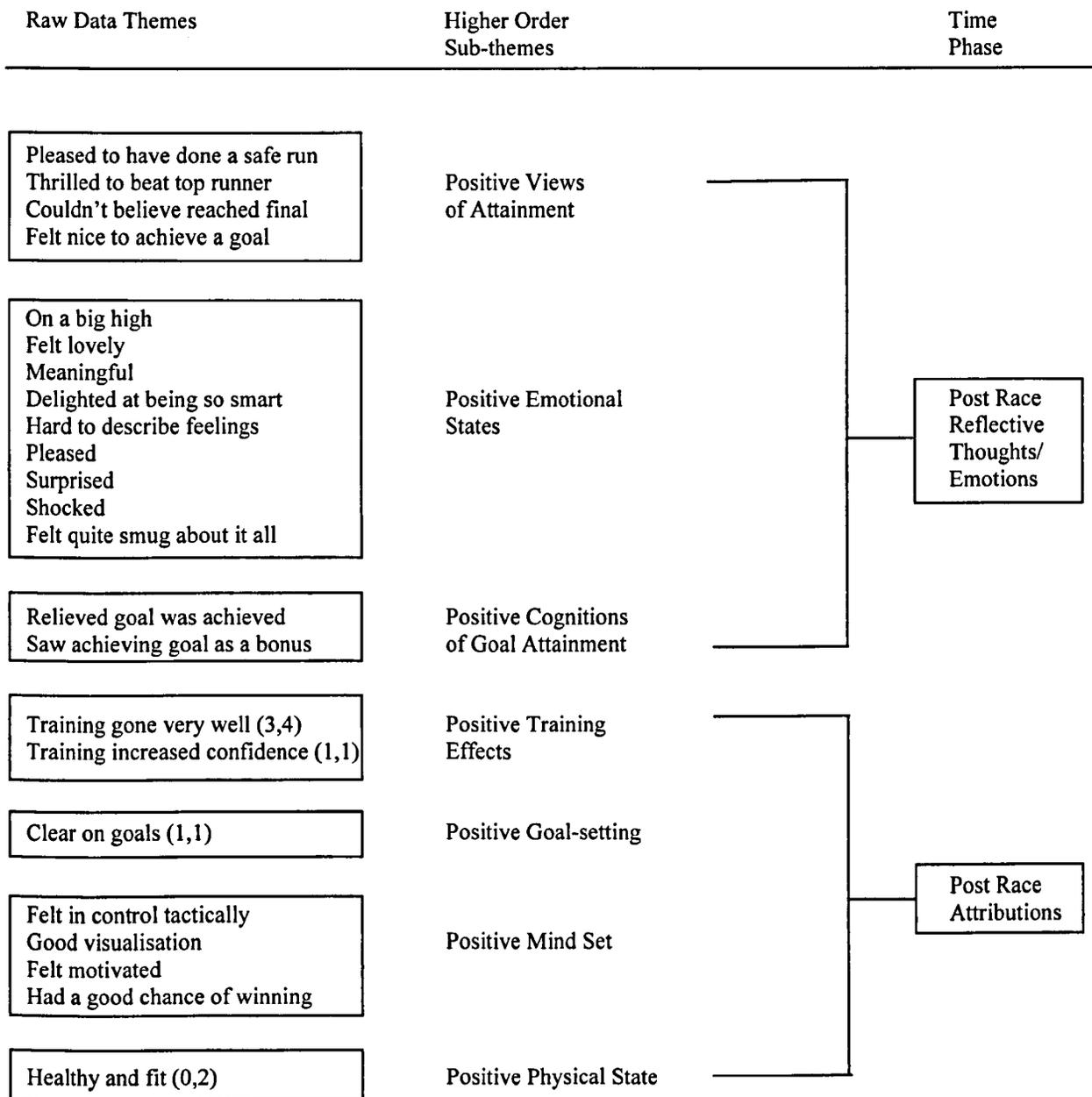
Figure 3.1 Successful performances: positive experiences











### 3.32 Successful performances- negative experiences

The negative experiences resulting from athletes' successful performances are displayed in figure 3.2. (pages 48-52). A total of 134 raw data themes (not including 12 raw data themes on perceived effects in next race) were extracted from the transcripts and categorised into 19 Higher Order Sub-themes and 16 time phases/in-race incidents.

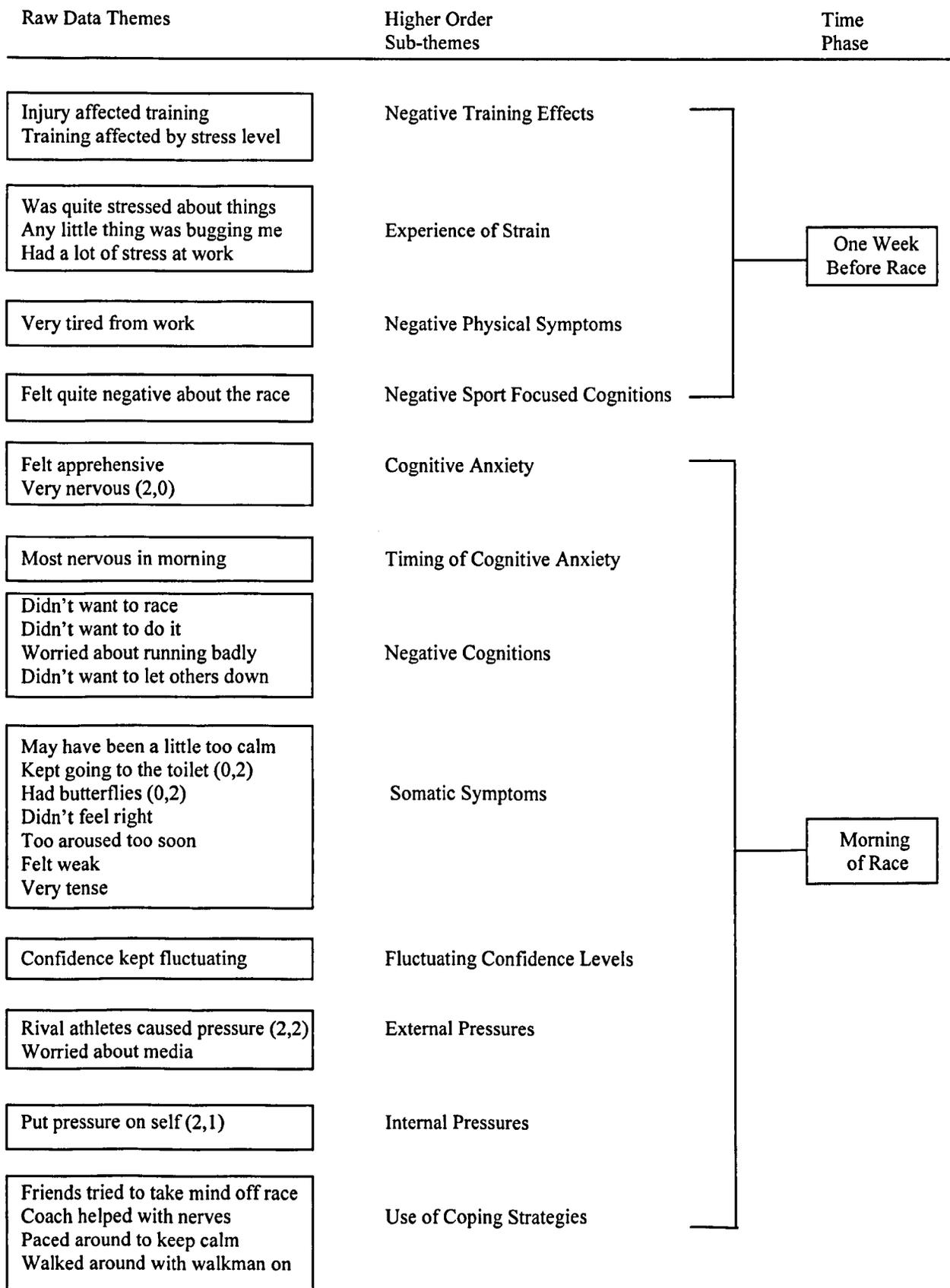
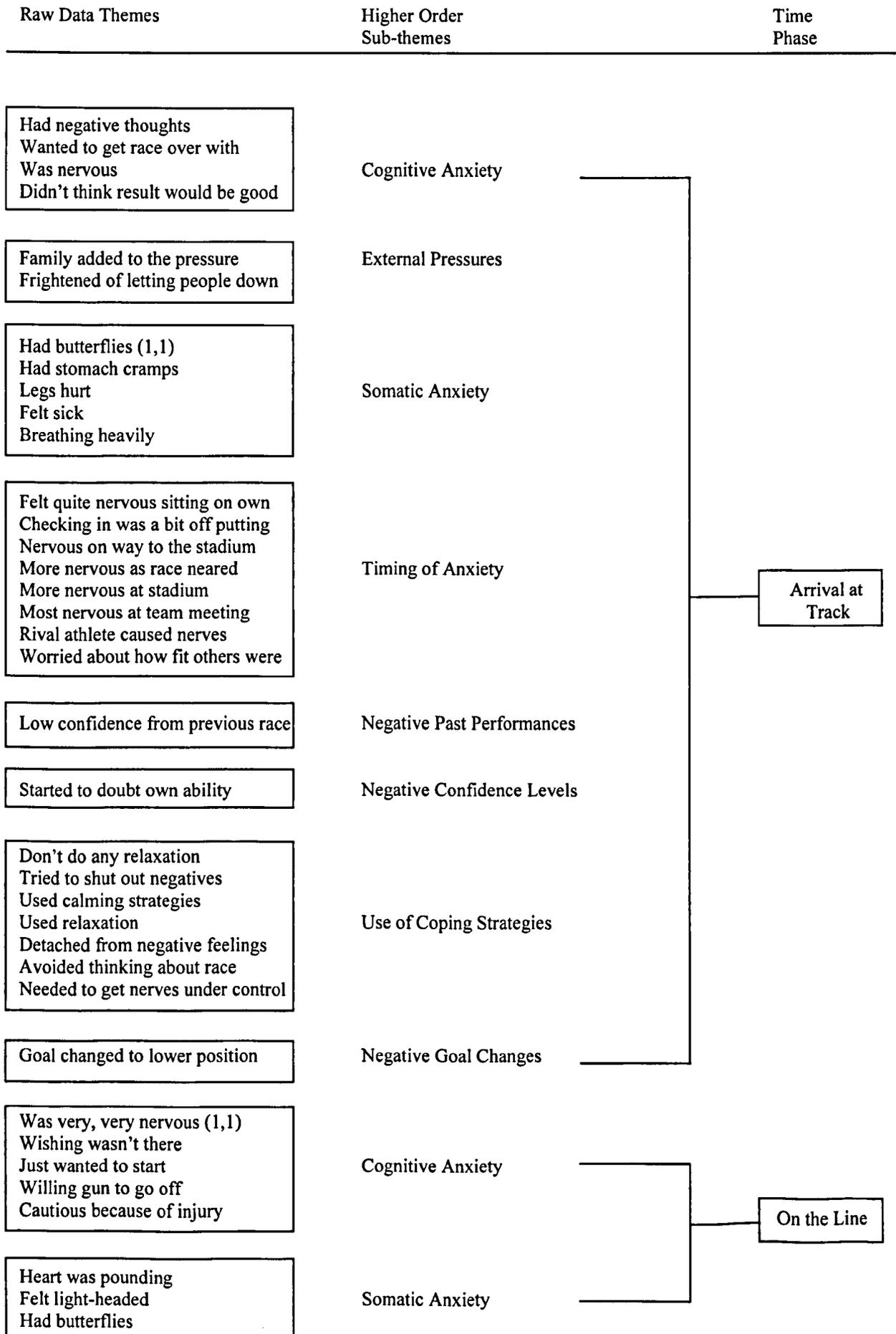
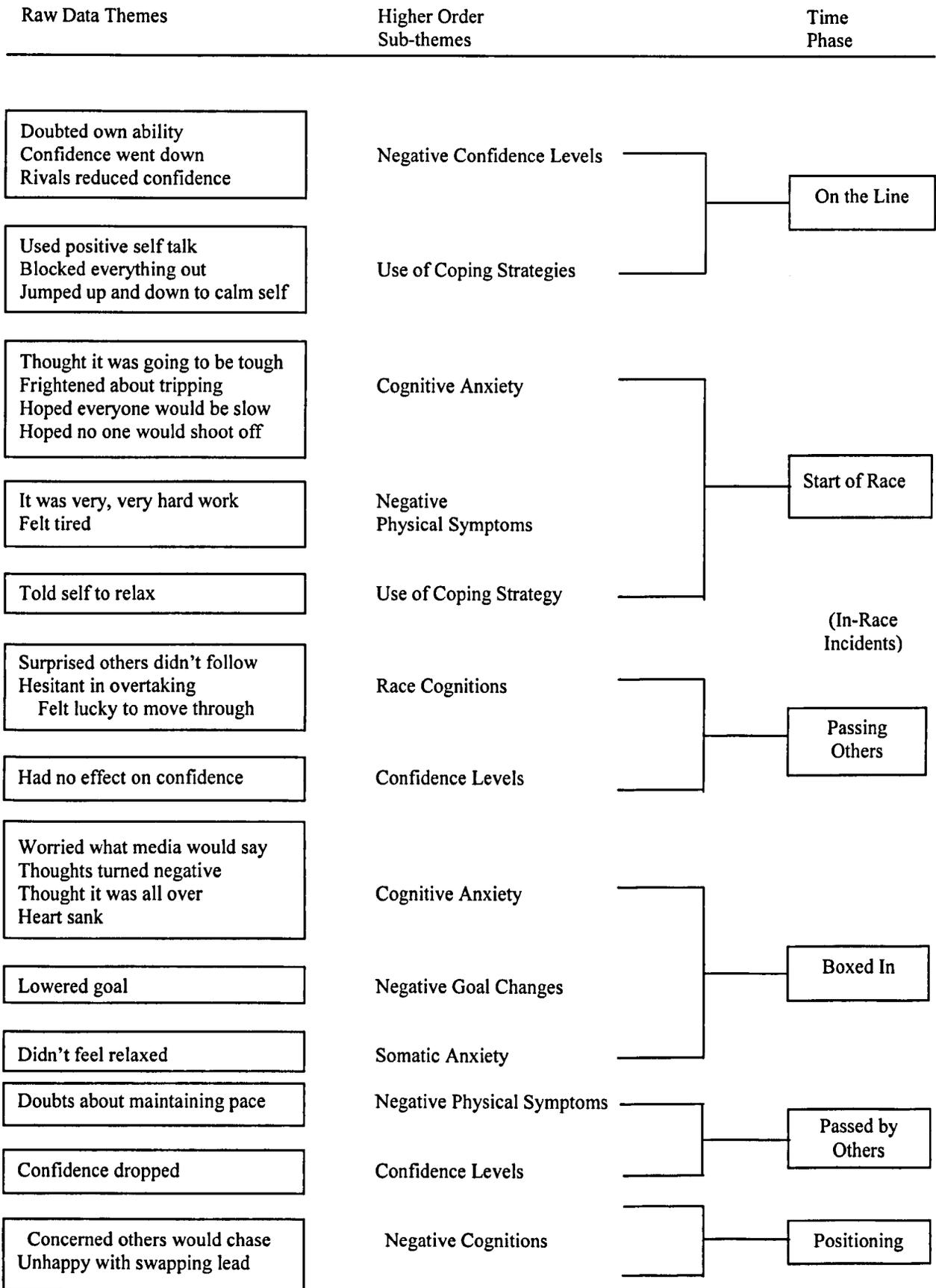
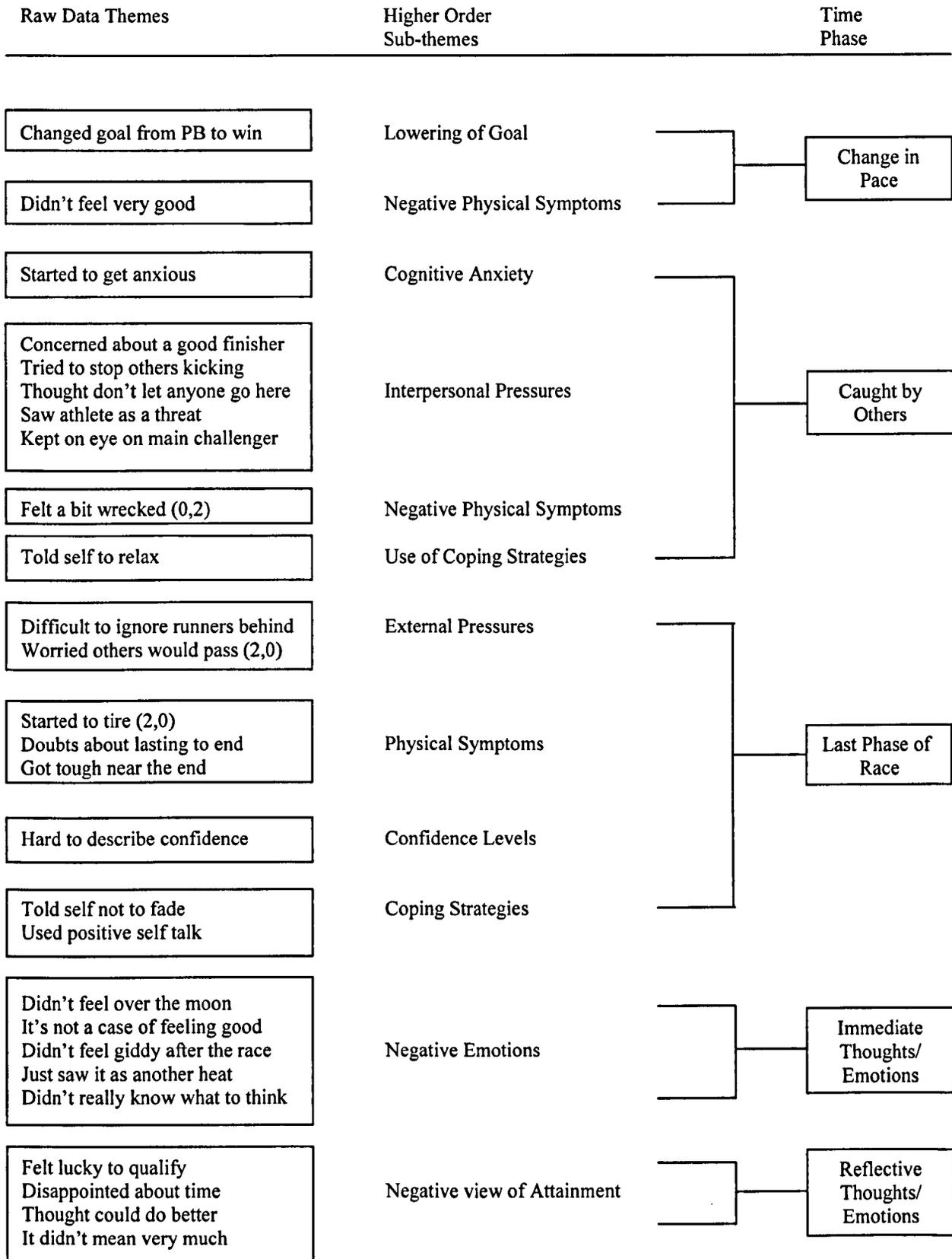


Figure 3.2 Successful performances: negative experiences







Raw Data Themes	Higher Order Sub-themes	Time Phase
Added pressure (1,1) Was overawed from last race (1,1)	Negative Perceived Effects	
May of had a subconscious effect More aware of what was going on Can't remember doing next race!	Positive Perceived Effects	
Didn't have much of an effect	No Perceived Effects	
Gave more confidence (3,1)	Confidence levels	

### 3.33 Summary of successful performances

#### One Week Before Race

Positive training effects (Raw Data Themes (RDT)=8) and lack of injury/fitness concerns (RDT=7) were the two major factors obtained from the athletes during this time period.

#### Morning of Race

There were more reports of negative raw data themes (RDT=30) than positive raw data themes (RDT=28). The positive Higher Order Sub-themes with the highest number of raw data themes were use of coping strategies (RDT=9), positive arousal experiences (RDT=9) and positive cognitions on race (RDT=7). The most cited negative Higher Order Sub-themes was negative somatic symptoms (RDT=9).

#### Arrival at Track

During this time phase eight negative Higher Order Sub-themes were identified. The two main themes being timing of anxiety (RDT=8) and the use of coping strategies (RDT=7), focusing primarily on relaxation techniques (sub-RDT=4). Use of coping strategies were also identified in the positive Higher Order Sub-themes (RDT=12). These strategies consisted of positive self-talk and positive visualisation (sub-RDT=11). Athletes also identified feelings of high self-confidence during this time phase (RDT=6).

On The Line

Cognitive anxiety was the most cited Higher Order Sub-theme (RDT=6). Of the remaining Higher Order Sub-themes, three were negative in direction: somatic anxiety (RDT=3), negative confidence levels (RDT=3) and use of coping strategies (RDT=3), and five were positive: positive cognitions (RDT=5), easing of somatic symptoms (RDT=4), positive use of tactical cognitions (RDT=4), positive mind set (RDT=4) and confident thoughts and feelings (RDT=3).

Start of Race

Although there were three Higher Order Sub-themes each for both positive and negative experiences, there were a greater number of positive raw data themes. The Higher Order Sub-theme with the most raw data being positive tactical cognitions (RDT=12), followed by positive physical feedback (RDT=6) and positive thoughts and feelings (RDT=3). Cognitive anxiety had the most negative raw data themes (RDT=4), followed by negative physical symptoms (RDT=2) and use of coping strategies (RDT=1).

Passing Others

Fifteen of the raw data themes were positive in direction, with tactical strategies (RDT=6) and positive somatic symptoms being the most cited (RDT=4). Two negative Higher Order Sub-themes were also identified, race cognitions (RDT=3) and confidence levels (RDT=1).

Staying With Leaders

This situation produced only positive Higher Order Sub-themes, with positive external influences producing the most raw data themes (RDT=3).

Boxed In

These incidents produced one positive Higher Order Sub-theme, positive tactical cognitions (RDT=6), and three negative Higher Order Sub-themes: cognitive anxiety (RDT=4), negative goal changes (RDT=1), and somatic anxiety (RDT=1).

Passed by Others

Only two negative raw data themes were identified, the Higher Order Sub-themes being negative physical symptoms (RDT=1) and confidence levels (RDT=1).

### Positioning

Two Higher Order Sub-themes, one positive, positive coping strategies (RDT=1) and one negative, negative cognitions (RDT=2) were produced.

### Change in Pace

Two positive and two negative Higher Order Sub-themes were identified. Positive perceptions of the race elicited the most raw data (RDT=3).

### Caught by Others

There were nine negative raw data themes in this time phase. The Higher Order Sub-theme with the most raw data was interpersonal pressures (RDT=5). One positive Higher Order Sub-theme, views on other runners, was identified (RDT=2).

### Leader Dropped Out

This occurred in three of the female races, which produced the Higher Order Sub-theme of positive confidence levels (RDT=3).

### Last Phase of Race

There were 7 positive Higher Order Sub-themes for this time phase. Positive physical stamina (RDT= 14), positive coping strategies (RDT=8) and positive confidence levels (RDT=6) had the most raw data themes. Four negative Higher Order Sub-themes: physical symptoms (RDT=4), external pressures (RDT=3), coping strategies (RDT=2) and confidence levels (RDT=1), were identified.

### Immediate and Reflective Thoughts and Emotions

Of the thirty-six raw data themes identified, twenty-seven of them were positive in direction.

### Post Race Attributions

All attributions (RDT=17) were positive in direction. Positive training effects was cited by seven out of the eight athletes as a reason for their successful performance.

### Perceived Momentum Effects

The perceived effects for the next race were a mixture of both positive, (RDT=7) and negative (RDT=4), with only one raw data theme identified as having no perceived effects.

### Goal Setting

The goals set by the athletes were a mixture of task-oriented and ego-oriented in nature. The majority felt that their goals were realistic.

### 3.34 Unsuccessful performances- positive experiences

The positive experiences within the athletes' unsuccessful performances are displayed in figure 3.3. (pages 55-57). A total of 65 raw data themes (not including 16 raw data themes on goal-setting) were extracted from the transcripts. These raw data themes were categorised into 19 Higher Order Sub-themes and 11 time phases/in-race incidents.

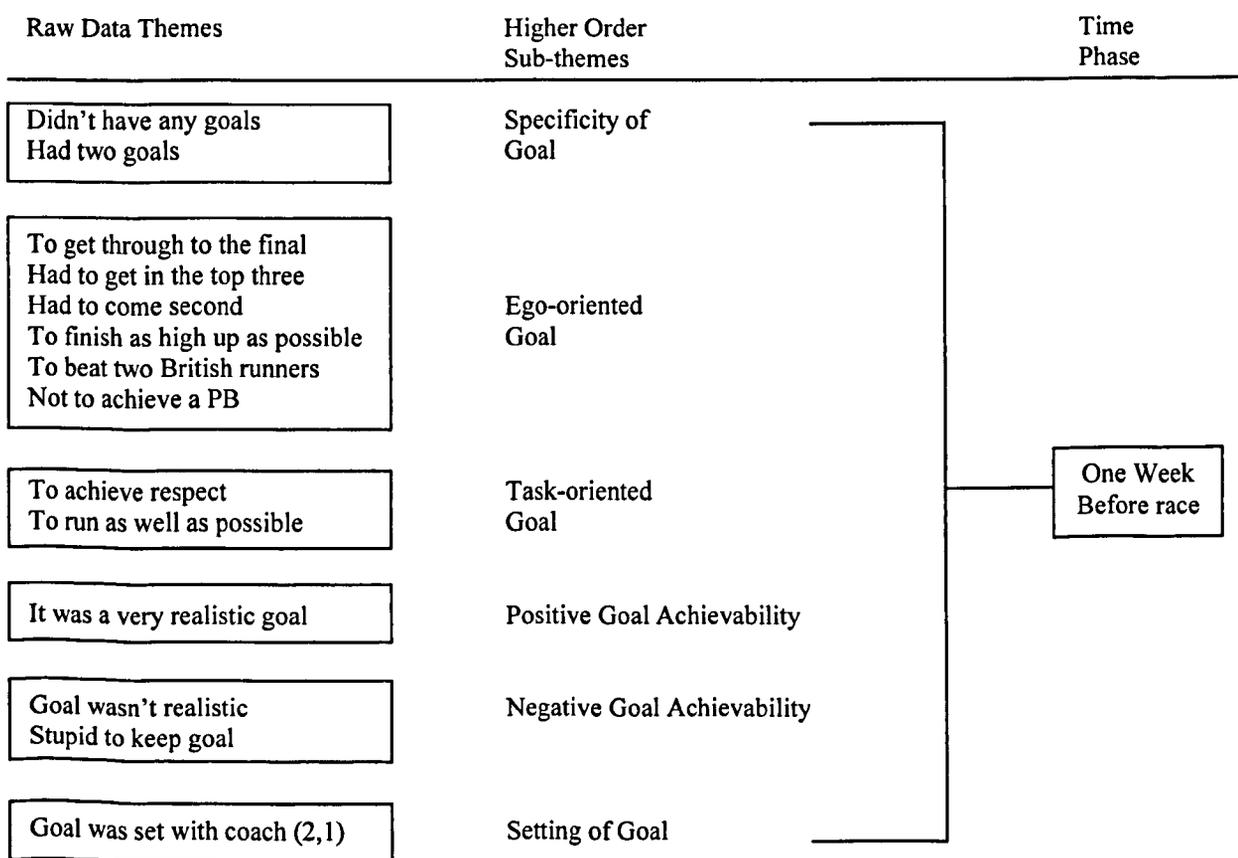
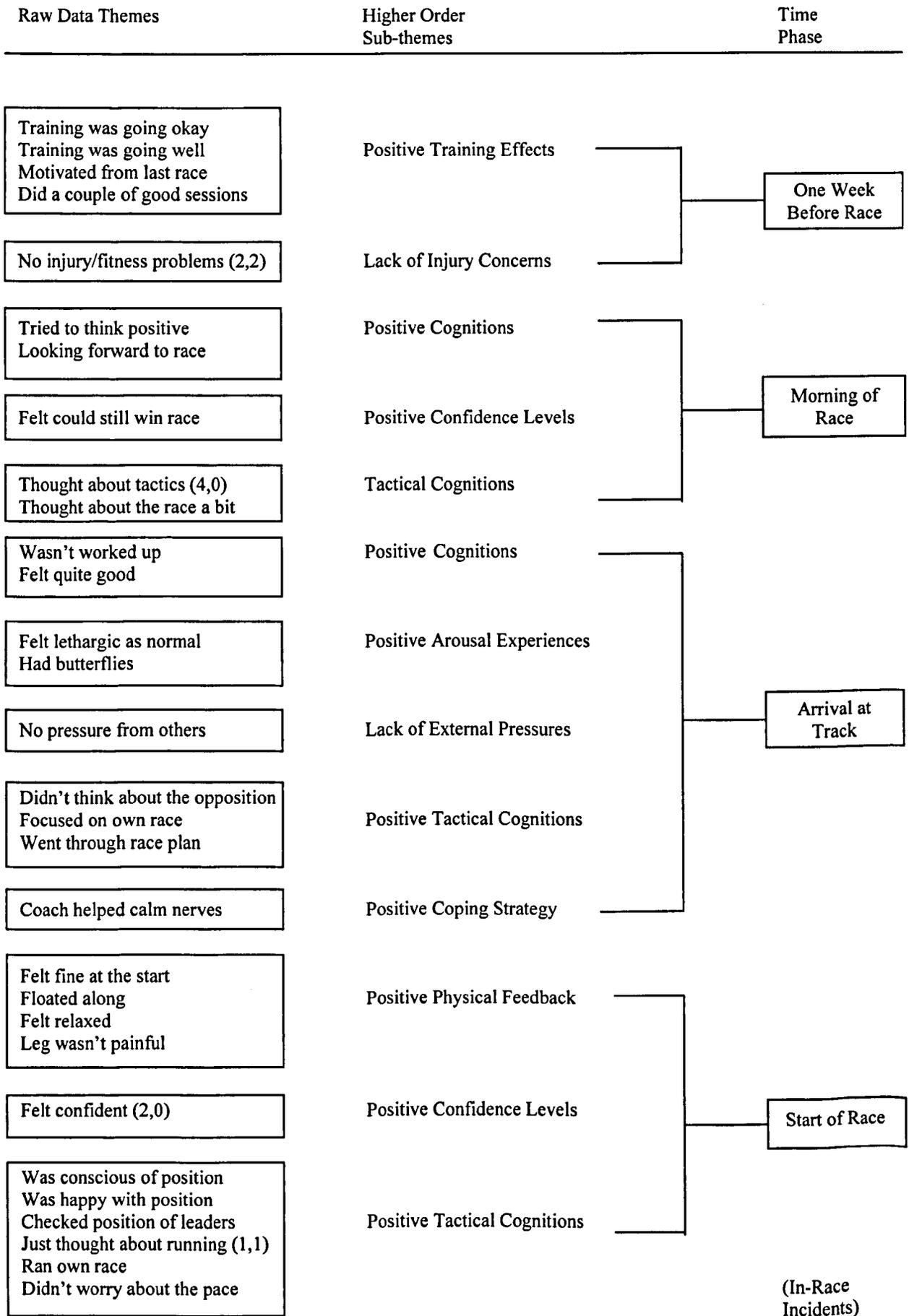
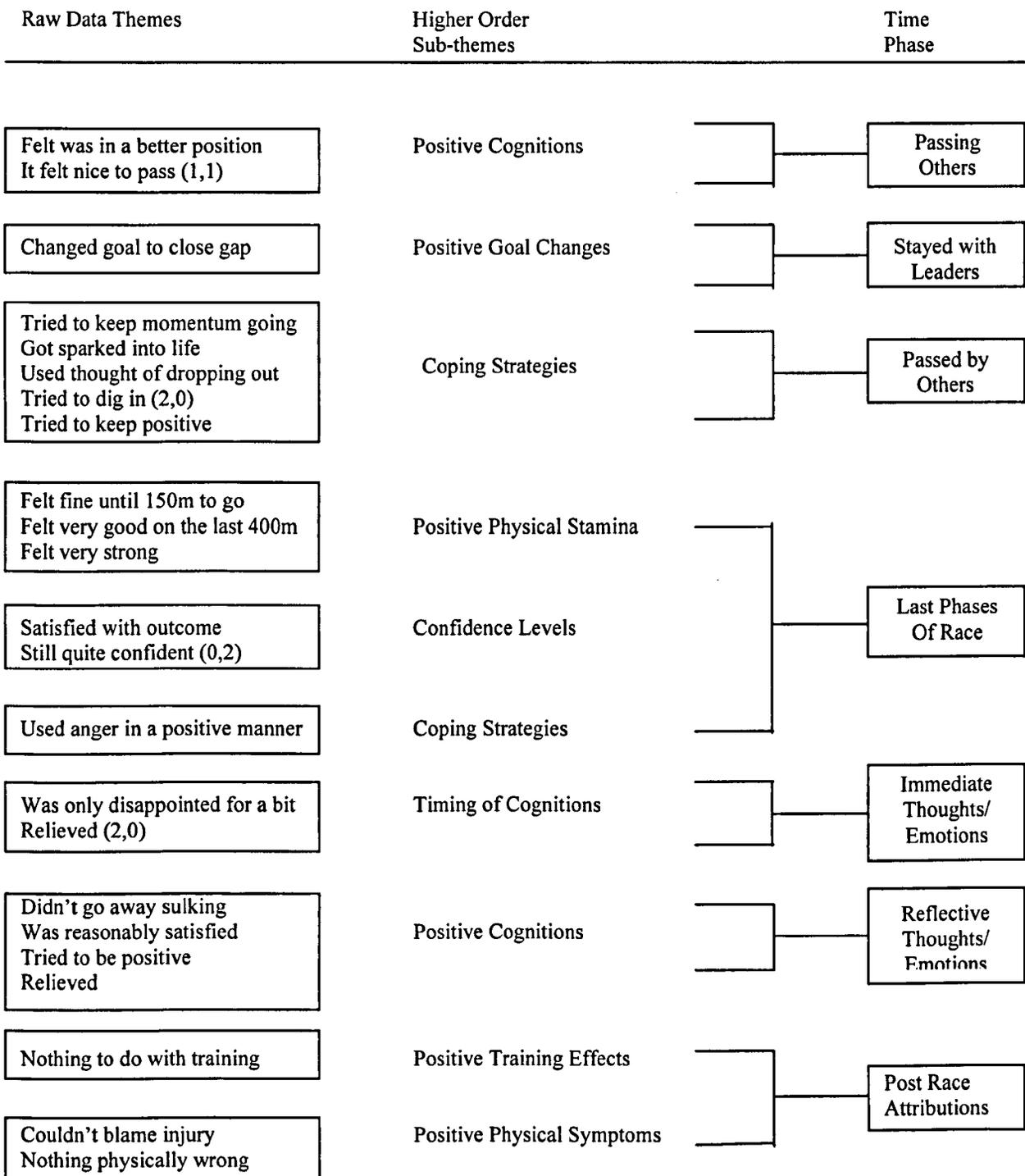


Figure 3.3 Unsuccessful performances: positive experiences





### 3.35 Unsuccessful performances- negative experiences

The negative experiences findings from the athletes' unsuccessful performances are displayed in figure 3.4. (pages 58-63). A total of 218 raw data themes (not including 10 raw data themes on perceived effects on next race) were extracted from the transcripts. These raw data

themes were categorised into 27 Higher Order Sub-themes and 16 time phases/in-race incidents.

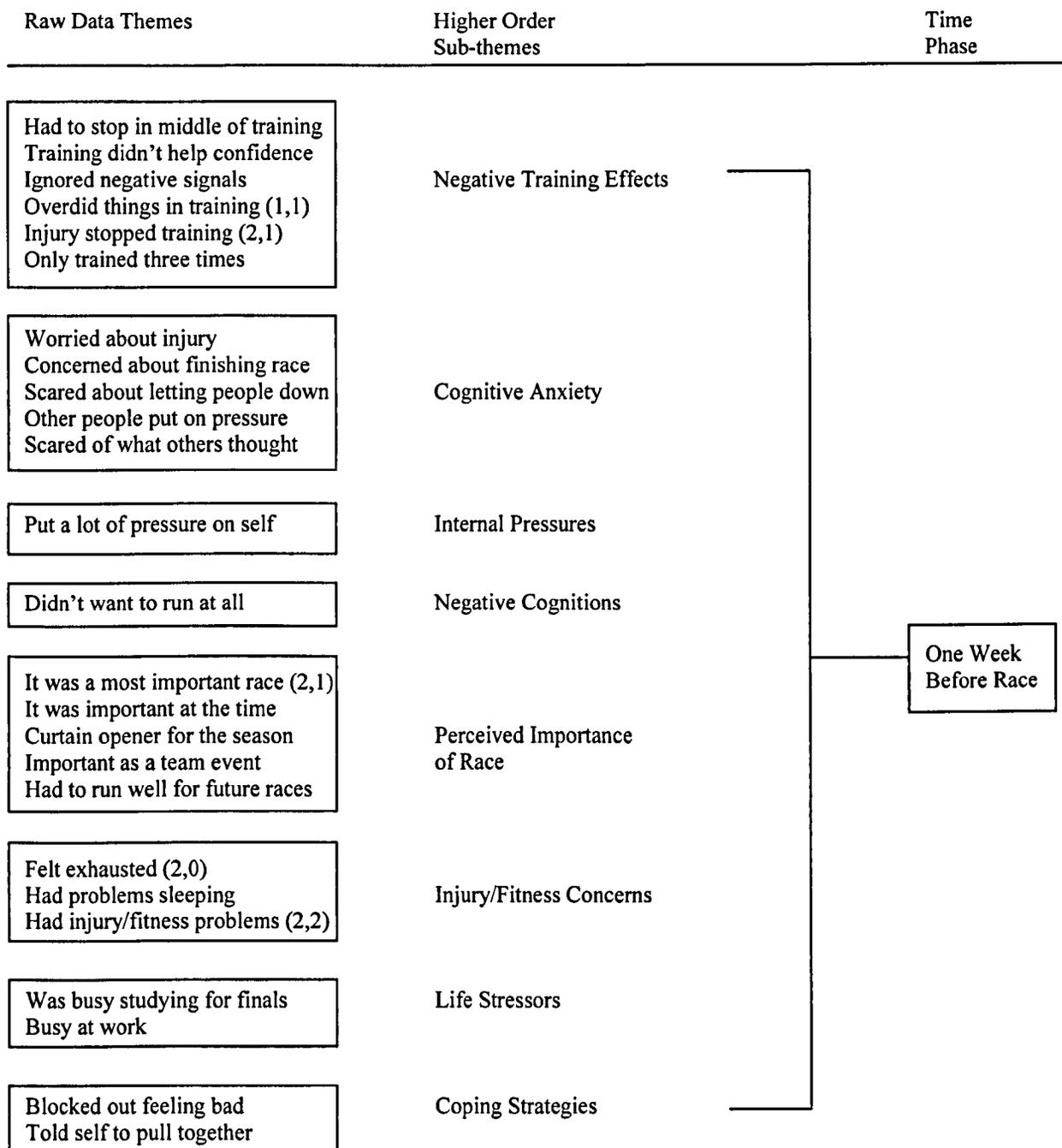
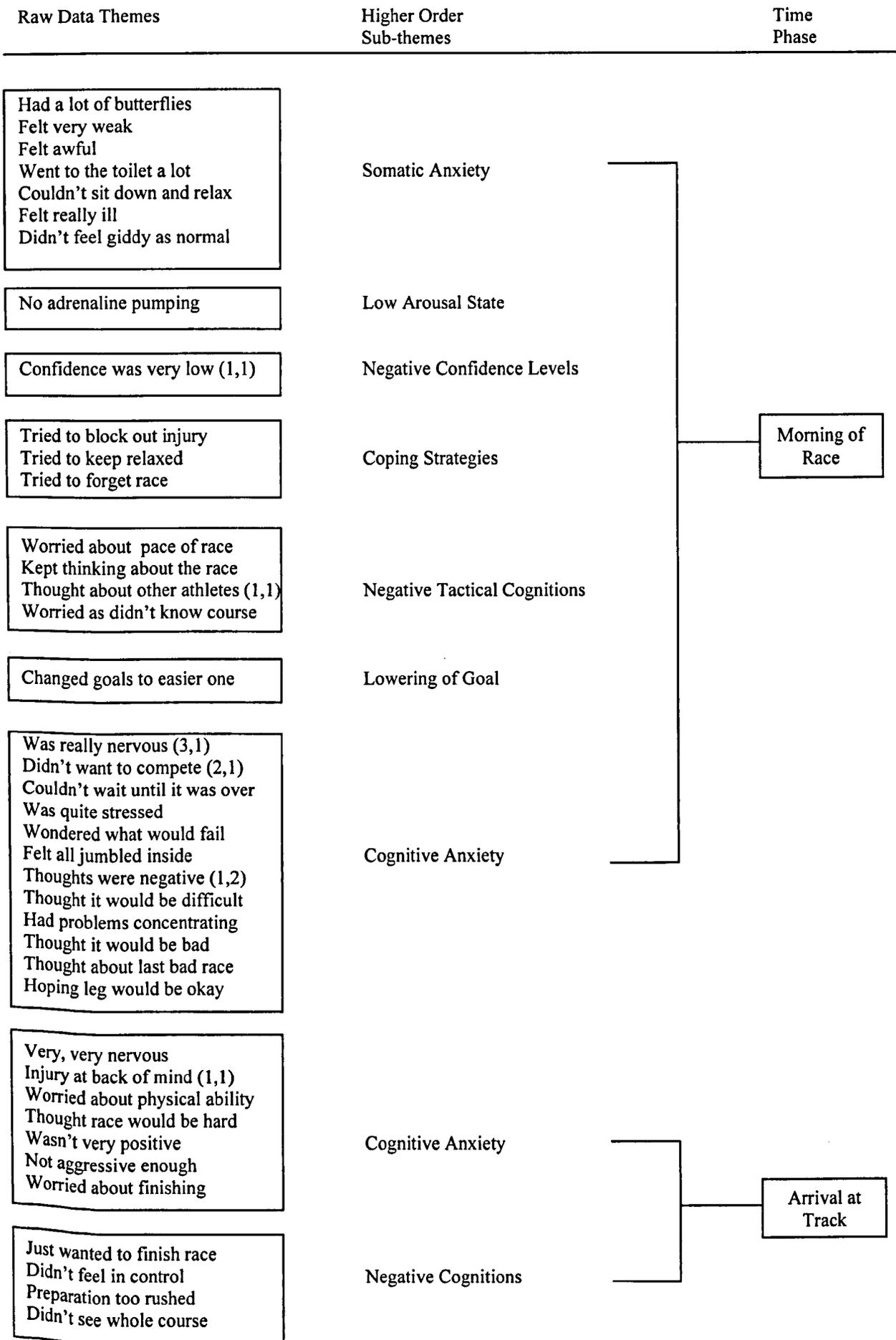
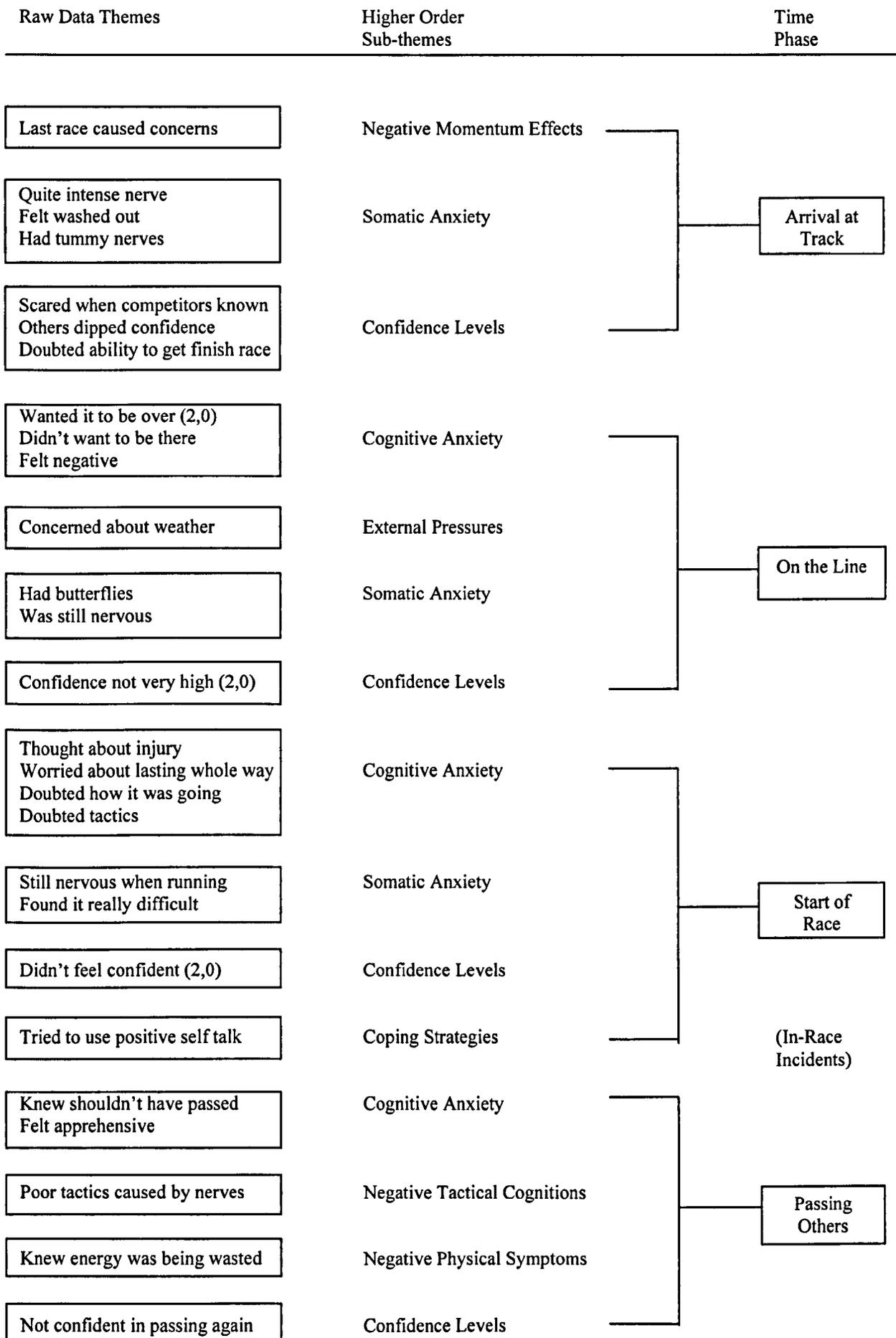
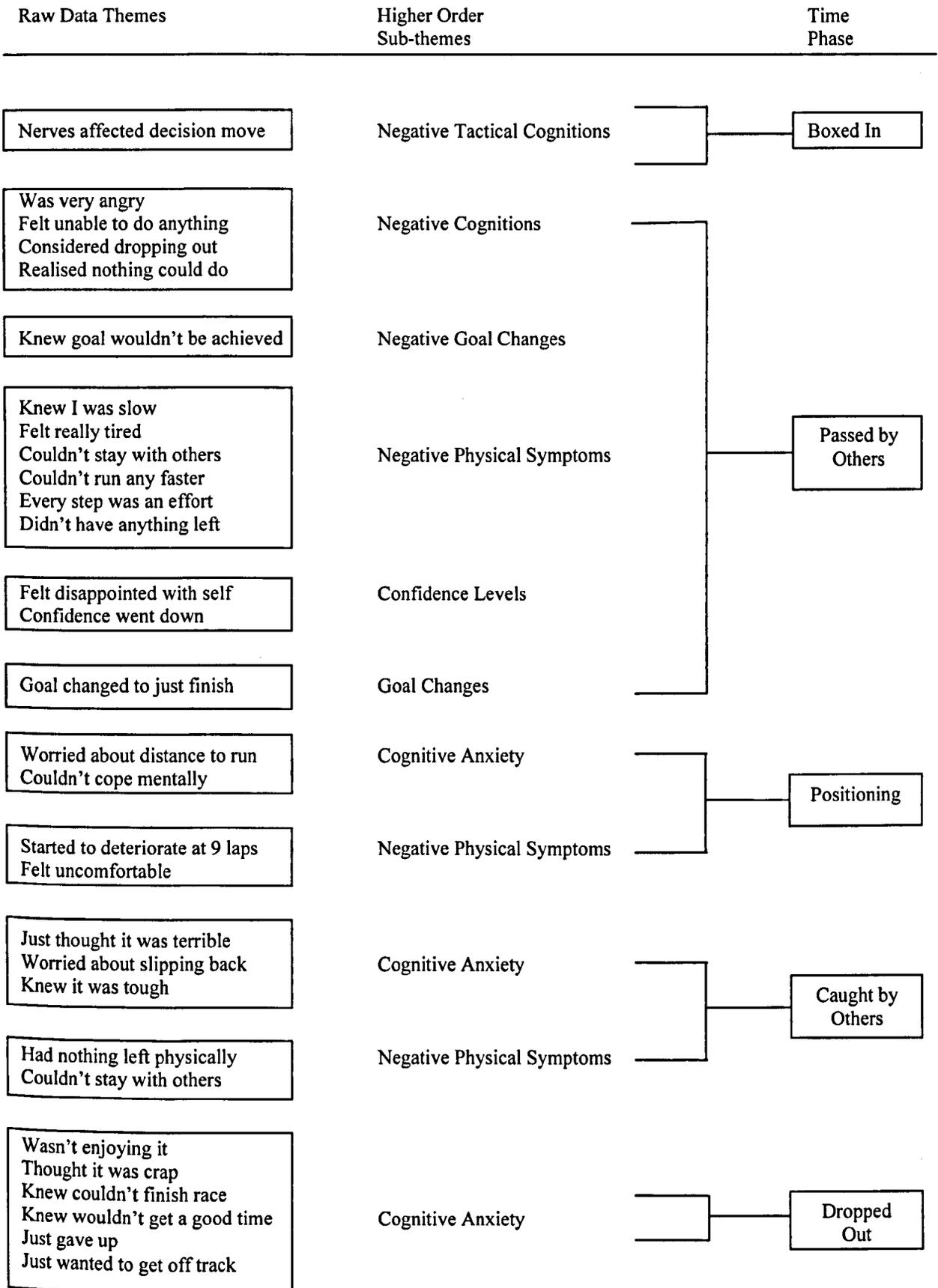
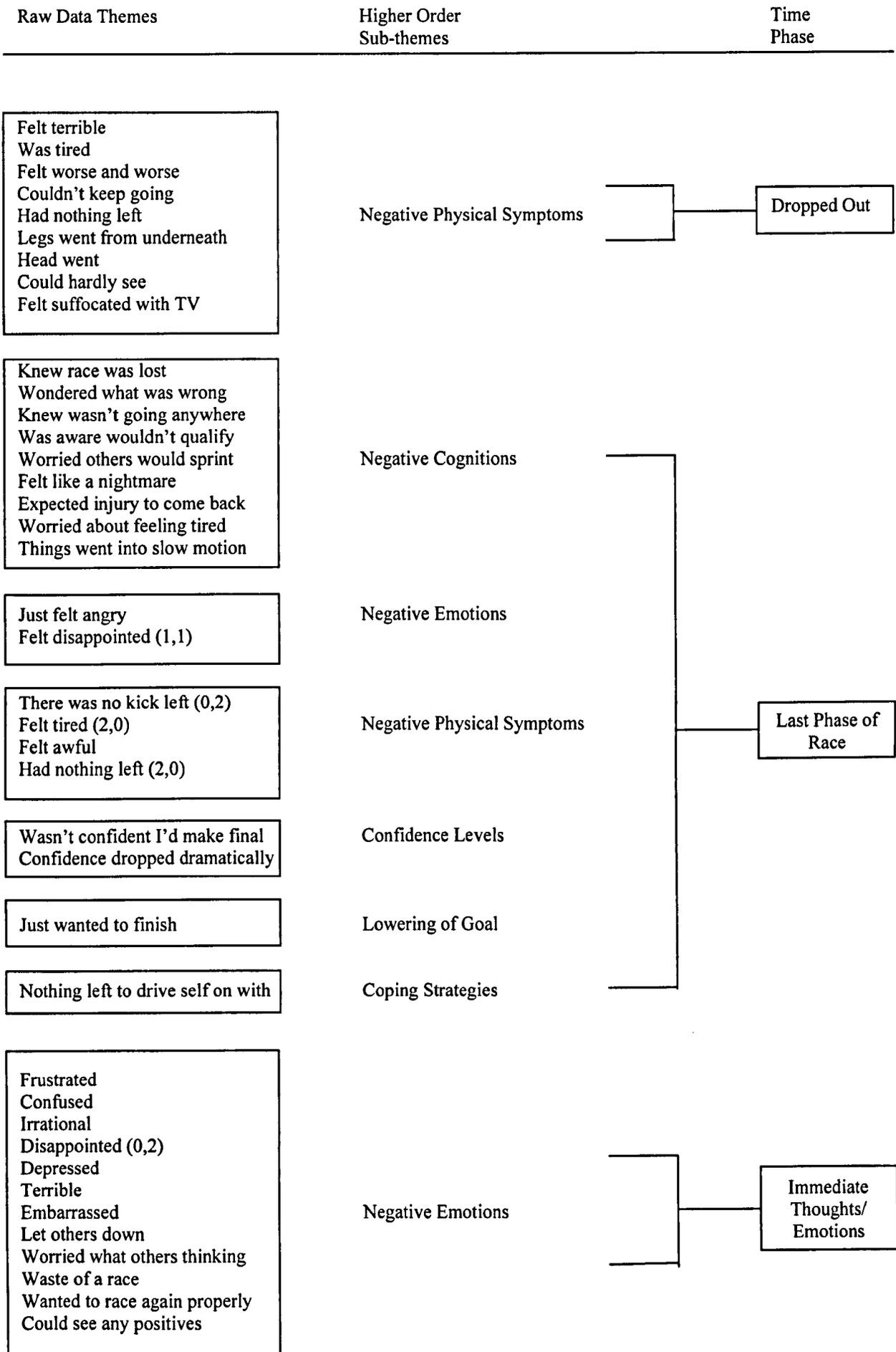


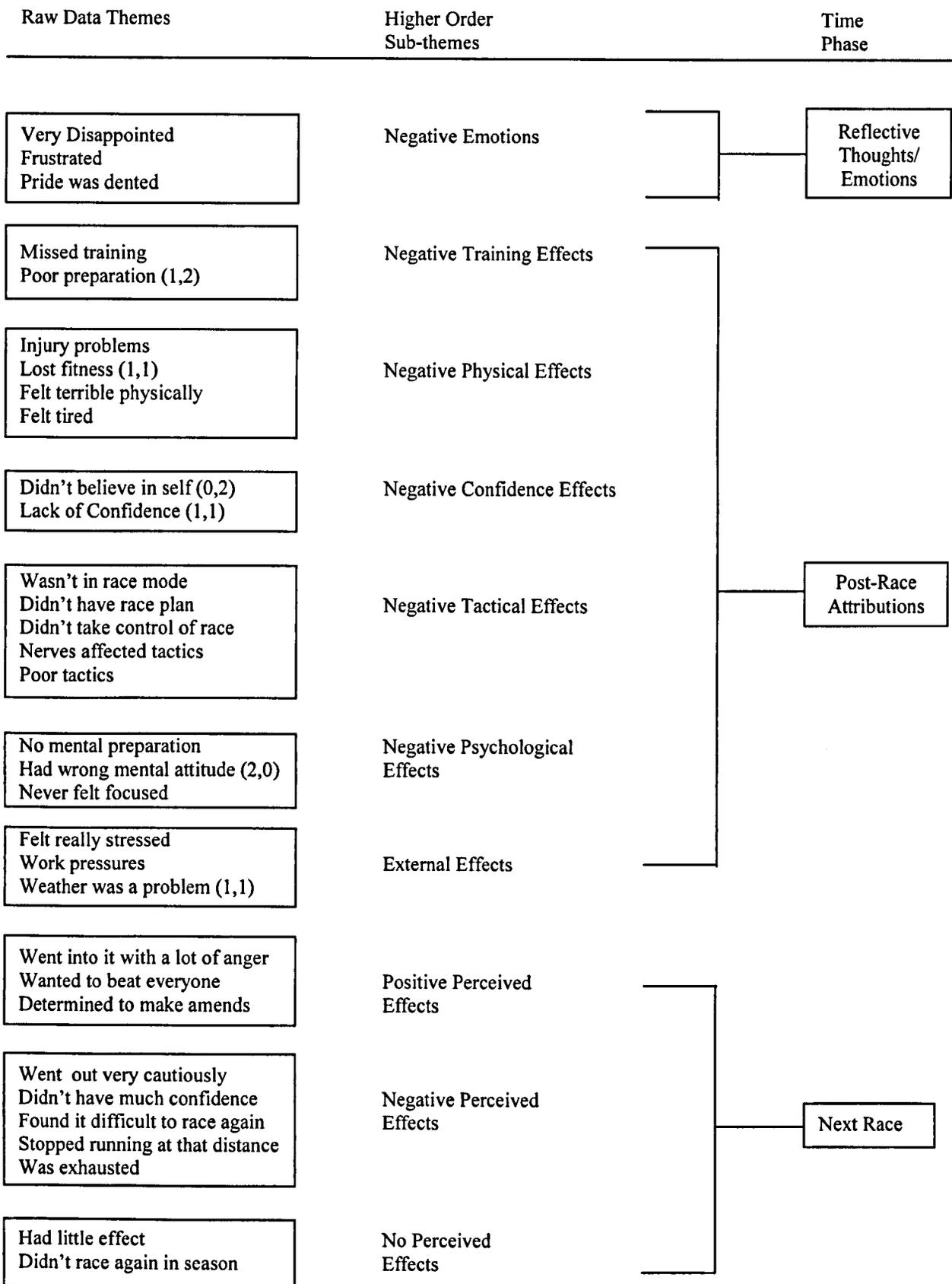
Figure 3.4 Unsuccessful performances: negative experiences











### **3.36 Summary of unsuccessful performances**

#### One Week Before Race

There were thirty-four negative and eight positive raw data themes identified for this time phase. The Higher Order Sub-theme with most raw data themes was negative training effects (RDT=9). These negative training effects seemed to be exacerbated by injury and fitness problems, cited by six out of the eight athletes. Positive training effects (RDT=4) and lack of injury concerns (RDT=4) were the two positive Higher Order Sub-themes identified.

#### Morning of Race

There were thirty-six negative raw data themes identified, compared to eight positive raw data themes. The negative Higher Order Sub-themes which had the most raw data were cognitive anxiety (RDT=19), and somatic anxiety (RDT=7). Positive tactical cognitions contained the most positive raw data themes (RDT=5).

#### Arrival at Track

During this time phase five negative Higher Order Sub-themes were identified. The one with the most raw data was cognitive anxiety (RDT=8), followed by negative cognitions (RDT=4), somatic anxiety (RDT=3), confidence levels (RDT=3) and negative momentum effects (RDT=1). Five positive Higher Order Sub-themes were identified: positive tactical cognitions (RDT=3), positive cognitions (RDT=2), positive arousal experiences (RDT=2), lack of external pressure (RDT=1) and positive coping strategies (RDT=1).

#### On The Line

All four Higher Order Sub-themes were negative in direction: cognitive (RDT=4), somatic anxiety (RDT=2), confidence levels (RDT=2) and external pressures (RDT=1).

#### Start of Race

There were nine negative raw data themes and thirteen positive raw data themes. The negative Higher Order Sub-themes were cognitive anxiety (RDT=4), somatic anxiety (RDT=2), confidence levels (RDT=2) and coping strategies (RDT=1). The positive Higher Order Sub-themes were positive tactical cognitions (RDT=7), positive physical feedback (RDT=4) and positive confidence levels (RDT=2).

### Passing Others

During this in-race incident, five negative Higher Order Sub-themes were identified: cognitive anxiety (RDT=2), negative tactical cognitions (RDT=1), negative physical symptoms (RDT=1) and negative confidence levels (RDT=1). Three positive raw data themes were categorised under the Higher Order Sub-themes of positive cognitions.

### Staying With Leaders

This time phase produced only positive Higher Order Sub-theme, positive goal change (RDT=1).

### Boxed In

Only one Higher Order Sub-theme was identified, namely negative tactical concerns (RDT=1).

### Passed by Others

Five negative Higher Order Sub-themes were identified: negative physical symptoms (RDT=6), negative cognitions (RDT=4), confidence levels (RDT=2), goal changes (RDT=1) and negative goal changes (RDT=1). This compared to one positive Higher Order Sub-theme, coping strategies (RDT=6).

### Positioning

Two negative Higher Order Sub-themes, cognitive anxiety (RDT=2), and negative physical symptoms (RDT=2) were produced.

### Caught by Others

During this in-race incident, two negative Higher Order Sub-themes were identified: cognitive anxiety (RDT=3) and negative physical symptoms (RDT=2).

### Dropped Out

This occurred in two of the female races, and produced the fifteen negative raw data themes, placed into negative Higher Order Sub-themes of negative physical symptoms (RDT=9) and cognitive anxiety (RDT=6).

Last Phase of Race

There were six negative Higher Order Sub-themes for this time phase: negative cognitions (RDT=9), negative physical stamina (RDT=7), negative emotions (RDT=3), confidence levels (RDT=2), lowering of goal (RDT=1) and coping strategies (RDT=1). The three positive Higher Order Sub-themes were, positive physical stamina (RDT=3), confidence levels (RDT=3) and coping strategies (RDT=1).

Immediate and Reflective Thoughts and Emotions

Out of the twenty-three raw data themes produced, sixteen were negative in direction.

Post Race Attributions

There were six negative Higher Order Sub-themes identified: negative tactical effects (RDT=5), negative physical effects (RDT=5) and negative psychological effects (RDT=4), negative training effects (RDT=4), negative confidence effects (RDT=4) and external effects (RDT=4). Two positive Higher Order Sub-themes, positive training effects (RDT=1) and positive physical symptoms (RDT=2) were also identified.

Perceived Momentum Effects

Three Higher Order Sub-themes: positive effect (RDT=3), negative effect (RDT=5) and no effect (RDT=2) were identified.

Goal Setting

The goals set by the athletes were ego-oriented (RDT=6) and task-oriented (RDT=2).

**3.37 Comparison of successful and unsuccessful performance results**

A broad overview of the results indicated that of the total number of positive and negative experiences, there were 66% positive experiences compared to 34% negative experiences for the successful performance (390 RDT's). For the unsuccessful performance, 77% of the total number of experiences were negative in nature, compared to 23% of positive experiences (283 RDT's). Sample quotes, verified as being representative for specific time periods through triangulation, are used to expand and illustrate upon the positive and negative experiences.

### *Week leading up to race*

The week leading up to the successful and unsuccessful race, the two major factors associated with this time period were training effects and injury/fitness concerns. All 8 athletes stated that they felt that training had gone well in the lead up to the successful race: *"I felt very positive from training, it went very well"* and only one male athlete had any injury or fitness problems: *"I got injured after my last race...so I wasn't able to train properly"*. In contrast, in the week leading up to the unsuccessful race, 4 athletes felt that training had gone badly: *"I overdid things in training"*. Also at this time, half of the athletes reported injury/fitness concerns: *"I had a really bad calf problem...all I could do was jog"*.

### *Start of race*

The start of the race elicited more positive than negative experiences for both the successful and unsuccessful race. However, the successful race proved to be the most positive in nature, generating 75% positive and 25% negative RDT's. Positive cognitions for both races revolved primarily around race tactics: *"I focused on my own position"* and physical feedback: *"I felt like I was floating along"*. The HOST with the most negative RDT's was cognitive anxiety. Types of thoughts in this category included self-doubts: *"I didn't block out my leg [injury] and was worrying about it even though it wasn't hurting"* and external focus: *"I hoped that no-one else would shoot off"*.

### *In-race incidents*

Several 'in-race incidents' were considered. These were specific moments during the race that the athletes highlighted during their interviews. One in-race incident involved the process of passing other athletes. For the successful race, the athletes reported this in-race incident as being 75% positive and 25% negative in nature. More specifically, they focused on their positive tactical strategies: *"I focused on my own position...and kept an eye on the person I thought would be my main challenger"* and positive physiological appraisals: *"I just knew that I'd got more left"*. Only one female athlete identified any negative race cognitions: *"I was hesitant in overtaking. Although my body was saying yes, go, my mind was saying no"*. The unsuccessful race produced fewer RDT's in this regard. Cognitive anxiety

was experienced by two athletes: *"I felt apprehensive in overtaking"*. Two other athletes indicated that they experienced positive cognitions: *"It felt nice to pass"*.

The in-race incident of being passed by others, produced two RDT's for the successful race, namely the HOST's of negative physical symptoms: *"I started to have doubts about the pace"* and low confidence: *"My confidence dropped"*. In the unsuccessful race, 70% of RDT's were negative and 30% were positive. Four athletes reported experiencing negative cognitions: *"I thought, well that's it then and considered dropping out"*. Two female athletes experienced negative physical symptoms: *"You're hanging on...but there comes a point when you haven't got it. You can't pull away"*. Three athletes reported attempting to use coping strategies: *"I tried to think positively"*.

#### *Last phase of race*

The last phase of the successful race generated RDT's that were 80% positive and 20% negative. Positive perceptions of physiological status was cited by four athletes: *"I felt fine physically"*. High confidence levels were also noted by two female athletes and one male athlete: *"I knew when I got into the straight that I'd done it"*. Only one female athlete reported negative physical symptoms: *"I started to have doubts about lasting to the end"*. In direct contrast, the unsuccessful race produced 77% negative RDT's compared to 23% positive RDT's. In this scenario, half of the athletes reported experiencing negative cognitions: *"I thought try and get this one person. Then I thought, what's the point? What difference is it going to make? It was like a nightmare, almost like in slow motion"*. Three athletes, one male and two females, recalled experiencing negative physiological states: *"I had nothing to go, nothing there"*. Only one male athlete reported feeling in a positive physiological state: *"I felt very strong"*.

#### *Post-race*

Post-race RDT's were 75% of positive and 25% negative for the successful race. Positive cognitions included: *"I went through the line thinking, I'm going to the World Indoor Championships!"* and positive 'feeling states' included *"I was on a big high, and it was just, wow I've done it!"* Some athletes did experience negative RDT's: *"The first thing I did was look at the clock and I was disappointed...I was*

*just a second out [from qualifying for the Olympics] so it took an edge off the win”* and *“Half an hour later it just seemed like such a big anti-climax. Because you think, well yeah I’ve done it, but so what?”*. The unsuccessful race elicited more than twice as many negative than positive RDT’s. These negative experiences included: *“I just had a very disappointed feeling. Sort of totally gutted feeling”*, *“I didn’t want to talk to anyone. It was a total disaster. I can’t take anything positive away from the race”* and *“Frustrating. Your pride is dented and I was worried about what other people thought”*. Three of the more positive RDT’s were elicited from one male athlete and included: *“I didn’t actually go away sulking”* and *“I was reasonably satisfied”*.

Post-race attributions for the successful race were all positive in direction. The attributions most cited for the successful performance were positive training effects, identified by 5 athletes: *“My training had gone very well, you know, been uninterrupted, which is fairly key”*; positive mind set, cited by 5 athletes: *“I was full of confidence having run a PB in my last race”* and positive physical state, cited by 4 athletes: *“I think because I was in such good shape”*. The unsuccessful race was attributed to four main areas, three of which were cited for the successful race. Five out of the 8 athletes identified a negative mind set: *“The mental aspect. I probably could’ve run it better if I’d been a bit more positive about it”*; *“Lack of confidence. I had the wrong mental attitude towards it [the race]”*. Again, as with the successful race, training effects and physical state were also highlighted, only in a negative sense: *“I missed three weeks of training”* and *“I felt so terrible physically”*. Negative tactical effect was mentioned by two athletes: *“I think it was my preparation. I didn’t have time before to think about the race and I hadn’t got a race plan”*. All attributions, for both the successful and unsuccessful performances, were internal, unstable and controllable in nature.

An overview of the positive and negative RDT’s within the three time phases of pre-race, during race, and post-race, are displayed in Figures 3.5 and 3.6 below. Results for the successful race indicate an increase in positive experiences from pre-race to in-race, with a decrease in the number of positive RDT’s at the post-race phase. During the successful race, a decrease in negative RDT’s was noted throughout the three time phases. Negative RDT’s dominated the athletes’ recollections of the unsuccessful race.

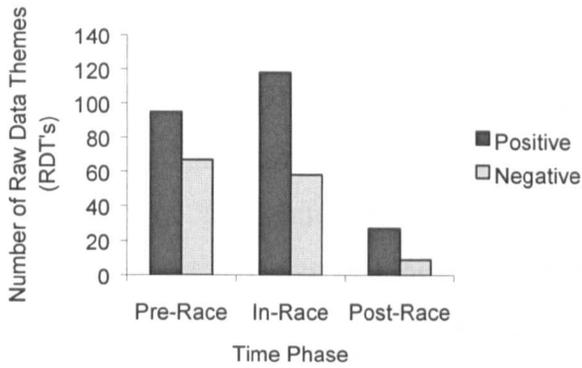


Figure 3.5 RDT's for successful performance

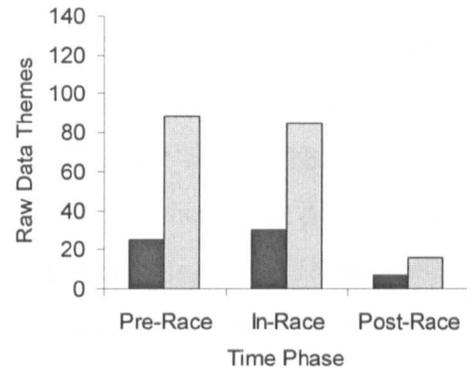


Figure 3.6 RDT's for unsuccessful performance

### 3.4 Discussion

The purpose of this study was to examine athlete experiences of successful and unsuccessful performances and their potential association with psychological momentum, with respect to positive and negative states. Results indicated that there were differences between successful and unsuccessful performances, in relation to the athletes' positive and negative experiences. This is in line with past research, which has shown distinct differences in mental states both before and during best and worst performances (Gould et al., 1992b; Orlick & Partington, 1988).

For successful performances, 256 positive RDT's and 134 negative RDT's were identified and categorised into 31 positive and 19 negative HOST's. This may suggest that during the successful performance 'momentum' is experienced as predominately positive in direction, however, negative experiences were also noted. For unsuccessful performances there were 218 negative RDT's, 27 negative HOST's, and 65 positive RDT's with 19 positive HOST's. In contrast, these results suggest that within the unsuccessful performance, athletes' experiences were predominately negative in nature. This may indicate that their more global sense of psychological momentum was also negative.

One possible explanation for the differences between the two performance experiences may be the level of self-confidence possessed by the athletes. Weinberg and Jackson (1989) suggest that self-confidence may help to induce a switch between debilitating and facilitative states. In the present study, high self-confidence

was identified in eight time phases during the successful performance. In contrast, low self-confidence was reported in seven time phases, during the unsuccessful performances. A contributing factor to the levels of self-confidence experienced during these performances may be experiences of pre-race training. In this regard, all the athletes stated that their training been going very well before their successful performances. This pattern was less prominent for the unsuccessful performances, with five athletes feeling that their training had not been going well. These findings support the hypothesis, postulated by Bandura (1977), that past performances are the strongest predictor of efficacy and future success. The findings also suggest that performance feedback, in terms of the training experience, may mediate levels of efficacy which in turn influence race experiences. These results also partially support research carried by Jones, Swain and Cale (1990), who found that attitude toward previous performance and effectiveness of recent training, were important situational antecedents for performance.

Consistent with Weinberg and Jackson's (1989) results, the male athletes in this study made more frequent references to higher levels of self-confidence during the 'in-race' time period than females. These results may be associated with previous research, which state that males exhibit greater levels of self-confidence than females (Mahoney & Avener, 1977; Jones, Swain & Cale, 1991). However, it was only during this time period that gender differences in self-confidence were noted.

A difference in the frequency of task and ego goals the athletes set for the successful and unsuccessful performances were noted. More specifically, for the successful performance the athletes set approximately twice the number of ego than task goals. For the unsuccessful performance, three times the number of ego goals were set compared to task goals. Interestingly for the unsuccessful performance, only one athlete perceived their goal to be achievable. This is in contrast to the seven athletes who felt that their goals were achievable for the successful performance.

The type of goal set and the perceived likelihood of achieving them may have had a bearing on positive and negative experiences and in turn performance outcome. Kingston and Hardy (1997) hypothesised that goals may exert an influence on behavioural and psychological factors, such as concentration and self-confidence. It

may be that in this case, the setting of more ego goals (the least controllable and flexible of the goals) for the unsuccessful performances may have helped to induce a predominately negative state for the athletes. A more evenly balanced setting of task and ego goals for the successful performance may have helped to create a more positive state. Positive perceptions of achieving the goals for the successful performance indicate that there is a link with high confidence levels.

The incidence of reported state anxiety was found to be greater during the unsuccessful performances than during the successful. Results also indicated that the perceptions of the anxiety were different for the two performances. During successful performances, anxiety was reported as being facilitative in nature, while unsuccessful performances elicited debilitating interpretations. These findings provide support for the existence of anxiety directionality (Swain & Jones, 1992; Jones 1993), and also support the notion that the interpretation of the anxiety symptoms are important rather than just the intensity levels alone.

All attributions given for the successful performances were, apart from one, internal in nature. Three athletes attributed external factors, namely the weather and work pressures, as one of the reasons for their poor performances during their unsuccessful race. This result appears to support work by Grove and Prapavessis (1995), that found that skilled athletes used more internal attributions after successful performances than for unsuccessful ones. In addition, the results also fail to support evidence that suggests females exhibit self-defeating attributional patterns (Watkins & Montgomery, 1989).

Finally, the similarity of findings for both genders resulted in the final content analysis being presented in an integrated format. However, some gender differences were identified. The most notable differences were the number and frequency of coping strategies used, with females reporting a higher use of pre-event psychological skills. The other most notable difference was the differing levels of self-confidence. Males made more frequent references to higher levels of self-confidence during races than females. The self-confidence results may be associated with previous research which states that males exhibit greater levels of self-confidence than females (Mahoney & Avenier, 1977; Jones et al., 1991).

Results suggest the existence of a general momentum pattern within each of the performance experiences. For the successful performances, positive experiences are increasingly in evidence within the three time phases. Within the same time frame, negative experiences decline. This results in an overview which shows pre-race (59% positive and 41% negative RDT's), in-race (67% positive and 33% negative RDT's) and post-race (75% positive and 25% negative RDT's). In contrast, within the unsuccessful performances, the number of negative experiences dominate the three time phases. However, within this primarily negative profile, positive experiences increased across the time frame and negative experiences decreased. Pre-race (78% negative and 22% positive RDT's), in-race (74% negative and 26% positive RDT's) and post-race (70% negative and 30% positive RDT's). These results suggest that negative momentum was the central experience. Overall, these results link a dominance of positive and negative experiences with positive and negative performance. The fluctuation of positive and negative experiences in performance demonstrates the dynamic nature of competition.

During the pre-race and in-race time periods, thoughts and feelings are seen to switch between positive and negative states. The antecedents of momentum were examined during these time phases, in terms of both internal and external factors, for example feeling physically tired, passing another athlete or being passed themselves.

The dynamic nature of cognitive appraisal and its effects upon thoughts and feelings can be sensed when comparing successful and unsuccessful performances. The week before the respective races, training and injury/fitness Higher Order Sub-themes had the greatest number of raw data themes. Before successful races, training was going well and only one out of the eight athletes reported injury or fitness problems. The opposite was found to be the case before unsuccessful races, with half the athletes citing some form of injury or fitness problem, and five feeling that training was not going as well as it should be. These factors were deemed as major determinants of their overall performance in their post race attributional responses. These results partially support research carried by Jones et al. (1990), who found that attitude toward previous performance and effectiveness of recent training, were important situational antecedents for perceptions of future performance.

The differences in the athletes' states approaching the successful and unsuccessful races raised a point of interest. For the successful races, although positive experiences were indicated, there was also a build up of negative cognitions' and feelings as the race neared. Doubts started to creep in, and both internal and external pressures were experienced. Coping strategies were employed to deal with these debilitating factors. For the unsuccessful races, the build up to the race was almost completely negative in nature, however few coping strategies were employed to help counteract such debilitating states. Concerns, such as the consequences of running badly and not wanting to run, were highlighted. These negative cognitions seemed more traumatic in nature when compared to the negatives experienced during the run up to the successful races.

The most debilitating time for the athletes, for both successful and unsuccessful races, was whilst standing on the line waiting for the gun to go off. Once the successful race began, athletes seemed to focus on more positive aspects, such as assessing position of self and others, and feeling comfortable. The few positive experiences cited during the unsuccessful race was during this first phase of the race, with confidence and positive physical stamina the two factors cited the most. Although positive cognitions and feelings remained throughout the successful race, athletes did identify negative factors during the race, such as a negative physical feelings when caught by other runners. In contrast, a sense of negativity was increasingly felt as the unsuccessful race unfolded. Differences in emotional and physical states experienced between the two performances was highlighted during the in-race incident of being passed by others. During the successful performance, athletes seemed to have a sense of being able to cope with the situation, with only two negative raw data themes cited. However, for the unsuccessful performance there seemed to be more intense feelings of despair, indicated in particular by the Higher Order Sub-themes of negative physical symptoms and negative cognitions.

During the last phase of the successful race, the positive states experienced by the athletes seemed to carry them through the negative physical symptoms and external pressures noted during this time. For the unsuccessful race, the realisation of a poor performance began to filter through during this last phase. During this phase negative emotions, such as anger and disappointment, occurred and one could get a

sense of the pain of failure and confusion the athletes were experiencing. The most traumatic in-race incident for two of the athletes was when they dropped out of the race. The anguish of making such a decision to drop out, and the thoughts and feelings associated with stopping, were clearly demonstrated in the raw data. The athletes seemed to experience a complete breakdown of physical ability.

The athletes seemed to be more aware in the unsuccessful race than in the successful race, of feeling physically tired. It could be argued that the athletes would experience a very similar level of physical exhaustion in races, regardless of their performance outcome. Morgan and Pollock (1977) have noted that elite runners use associative strategies and as such physical feedback is a powerful factor. It could be suggested therefore that the awareness and effect exhaustion has on athletes may be affected by psychological factors. In other words, negative cognitions may exacerbate the feelings of exhaustion in unsuccessful performances.

There were a total of six negative attributions given for unsuccessful performances. Only three athletes lay part of the blame for their poor performance on external factors. Post race thoughts and emotions for the successful race were clustered around positive aspects of their performances while only a few negative emotions were experienced.

The athletes' raw data seem to suggest that there are positive and negative effects carried through from past performances. For the successful race there seemed to be a negative carry over effect experienced by four of the athletes. These athletes felt that after such a successful race, there would be more pressure from both themselves and significant others to perform again at that high standard, in their next performance. In contrast, for the unsuccessful race, it was noted that some athletes drew on their negative emotions, such as anger and disappointment, and tried to use these emotions in a positive way. More research is needed to ascertain whether such perceived positive and negative states have a more enduring effect upon performances. Such work may tie in with the research of Bandura (1977), which states that past performances have a major impact upon the self-efficacy and future performance outcomes of individuals.

### **3.5 Conclusion**

This study examined pre-event, during and post event experiences of elite male and female middle and long distance runners, during perceived successful and unsuccessful performances. The findings from this study indicate that there are differences between the number of positive and negative experiences exhibited during successful and unsuccessful performances within a population of elite runners. Whilst these experiences alone, cannot signify/define momentum itself, it is argued that they may indicate the existence of more generic momentum states.

The utilisation of a qualitative approach helped to gain a greater insight into the thoughts and feelings of elite athletes who experience successful and unsuccessful performances. Such a methodology contrasts with past research, which has used archival or observer-perspective data in a quest to understand the phenomenon (Iso-Ahola & Mobily, 1980; Weinberg & Jackson, 1989; McClutcheon, 1997).

The use of time phases/in-race incidents throughout the data analysis was found to add to the context of the raw data. Such an inclusion allowed the thoughts and feelings of the athletes to be pinpointed to exact periods of time, making comparative analysis more robust. This important contextual feature has been lacking in past qualitative research in sport psychology (Scanlan et al., 1991; Gould et al., 1992).

**CHAPTER FOUR: PSYCHOLOGICAL MOMENTUM  
IN ELITE TENNIS PLAYERS**

#### 4.1 Introduction

The previous study highlighted differences in the number of positive and negative experiences before, during and after successful and unsuccessful performances. It was argued that although these experiences alone could not signify that psychological momentum was present, they could provide an indicator of its existence. A more detailed examination was therefore required to ascertain whether these positive and negative experiences were associated with a more global sense of momentum. Further, a definition of momentum from the athletes' perspective, and tracking potential shifts over a competitive performance, was sought.

Past research has emphasised individuals view momentum from differing perspectives and as such, no one definition of momentum exists (Vallerand et al., 1988; Miller & Weinberg, 1991; Burke et al., 1997) By gaining athletes' definitions of momentum in this study, the subjective nature of this phenomenon could be explored. It was also felt that examining the "during" performance time phase in a more precise manner, would allow perceived shifts in momentum to be linked to issues such as, perceived performance, and positive and negative experiences.

A new protocol was developed which would be sensitive enough to detect nuances of momentum shifts during performance. Whereas the previous study used a qualitative methodology, in the form of retrospective interviews, it was felt that a more eclectic protocol would create a more "moment-to-moment" account of perceived momentum. It was decided, therefore, to use a combination of both qualitative and quantitative techniques.

The qualitative strand was again in the form of retrospective interviews, however there are procedural developments from Study One to Two. The last study asked athletes to recall performances that the researcher had no prior knowledge of. Although the athletes indicated that they had no problems recalling events, it did inhibit the researcher asking more probing questions in relation to their performance. Therefore it was felt that by video-taping the performance and using it as a prompt for the interview process, this would

facilitate not only the athletes' recall of events, but also the researcher's ability to ask pertinent questions. Thus a more comprehensive tracking of a performance was expected/hoped.

The quantitative strand of the inquiry took the form of a questionnaire and archival data. Both techniques allowed direct comparisons to be made between individual athletes at specific points during their performances. In contrast to the qualitative process, where athletes were given more control over the timing of their input, the quantitative techniques were consistent in the timing of their measurements.

A second development in this study was the use of various data analysis techniques to compare and contrast findings. Statistical analysis, using archival data, content analysis and case studies were all used to examine momentum in greater detail. The use of these different approaches also allowed findings from alternative methods to be contrasted from an internal and external perspective.

For example, external comparisons could be made as the use of archival data could be discussed with past research (e.g. Iso-Ahola & Mobily, 1980; Richardson et al., 1988; Silva et al., 1988) and at the same time help to confirm or reject its use in predicting momentum when compared with other methodologies. The content analysis would make direct comparisons between winners and losers and where necessary, gender. It would also allow a comparison to be made with the findings from the previous study. Finally, through the development of case studies, a more detailed account of momentum was expected to evolve, identifying perceived shifts between two competing athletes. Finally, the findings from each analytical process could be discussed in terms of how the same data source could elicit different findings.

A change of sport was required to allow the potential shifts in momentum/fluctuations in momentum, to be measured in a more detailed manner. Whereas middle and long distance events involve many athletes competing in the same performance, it was felt that a more clearly segmented sport would allow a more focused appraisal of momentum.

The sport of tennis singles was chosen for several reasons. Firstly, it involves a direct contest between two players. As such, it allows an interactive comparison to be made between each player with regards to their performance, thoughts and feelings, and perceived momentum shifts. Because of the scoring system involved, detailed tracking of momentum could be carried out, making it robust when directly comparing players at specific times throughout the match.

Unlike running, tennis is an intermittent sport caused by “dead time”, such as at change of ends and between points and games, which makes the actual time the ball is in play very short. For example, the men’s Wimbledon final between Agassi and Ivanisevic in 1992 was played over five sets with a total match time of 170 minutes. The actual time the ball was in play was just over 33 minutes. Thus, playing time was 20% of the match time (Wicklin, 1992). This leaves players a great deal of time to appraise situations cognitively. Finally, the sport lends itself to easy access to view the players and therefore video-taping of performance was possible.

#### *Rationale for study*

The purpose of the present study was to examine in more detail the relationship between positive and negative experiences and gain athletes’ perspectives on what momentum means to them, and how it fluctuates over a competitive performance. The use of both qualitative and quantitative methodologies would allow for a deeper understanding of momentum through comparing and contrasting respective results.

## **4.2 Methodology**

### **4.21 Subjects**

The subjects comprised of 3 male and 3 female British tennis players. The players were defined as elite by their rankings within the Lawn Tennis Association and their competitive experience both on the national and international tennis circuit. The players were ranked in the British top ten. The elite males had an average age of 17 years and the elite females had an average age of 19 years.

### **4.22 Design of the Interview Schedule**

A standardised interview schedule was designed in accordance with Patton's (1980) recommendations (secondary appendix 3). The interview schedule comprised of three main sections and had been refined through pilot work. The first section was designed to familiarise the players with the interview process. It contained information on the nature of the research, including the time periods to be discussed, the right to decline to answer and/or terminate the interview and the confidentiality of the data.

The second section focused on three broad time periods. Namely, the week leading up to the match, the day of the match and the time after the match. Within each time period, specific factors were examined, specifically, cognitive anxiety, somatic anxiety, self-confidence/self-efficacy, emotions, attributions, coping strategies and perceived shift in psychological momentum. However, emphasis was placed on allowing the players to discuss issues important to them.

The third and final section was designed to elicit the players' reflections on the interview process. It included the opportunity for the players to seek further information about the research and/or the interview procedure. It also allowed the interviewee to respond to any concerns relating to the interview procedure. Based on the protocol used by Scanlan et al. (1989b), specific clarification and elaboration probes were used, This encouraged the depth of the questioning to remain consistent across all the interviews.

### 4.23 Design of the Questionnaire

A questionnaire was developed to measure the players' perceptions of their mental and physical states during the tennis match. These factors were examined over several time periods, namely waiting to go on court, end of warm-up, end of second game first set, end of first set, end of second game second set, end of match and where appropriate, end of second game third set and start of tie-break.

The questionnaire consisted of 7 items, namely cognitive anxiety, somatic anxiety, self-confidence, depression, anger, fatigue and energy, and was a hybrid of POMS (McNair, Lorr & Droppleman, 1971) and the modified CSAI-2 (Jones & Swain, 1992). POMS has been extensively used in sport psychology research (LeUnes & Burger, 1998) and shown to have a reliability coefficient ranging from .67 to .83 for each of the six factors. Although the modified CSAI-2 has not been as extensively researched, internal reliability coefficients have been reported as .83 and .72 for cognitive and somatic anxiety respectively (Jones & Hanton, 1996).

The present questionnaire measured intensity levels of each factor using a Likert scale from 1 (not at all) to 10 (very much so). In addition to intensity, a directionality measurement was also included. Based on the work of Jones & Swain (1992), this scale measured the degree the players felt their intensity levels were either facilitative or debilitating to their performance. The scale ranged from -3 (very unhelpful) to +3 (very helpful), with 0 signifying a neutral effect (see secondary appendix 4). The questionnaire was designed to tease out momentum sensitive factors and as such was deemed to have high face validity.

### 4.24 Procedure

Initial contact was made with the Lawn Tennis Association outlining the research procedure and asking permission to recruit British players. Players were then recruited through contacts made with a leading British tennis coach. A major British tennis tournament was used to collect data.

Two players, one male and one female were chosen by the coach on the basis that they should reach at least the second round of the tournament, thus allowing four matches to be analysed.

The players' opponents were contacted directly, after the tournament had been completed, having made initial contact with their coaches during the tournament to arrange their participation in the study.

Both the male and female players' first and second round matches were video-taped using a Panasonic AG-455BSVHS Proline videocamera and tripod. The camera was set up to cover as much of the court as possible. In the case of matches held on the main court, full coverage of the court was possible by placing the camera at the far end corner above the public seating. For the outside courts, the camera was placed on a balcony, with a wide angle lens allowing a view across the court cutting off only the very edges of the near side and far side corners. Each match was video-taped, starting from the time the first player walked onto court to the time the last player left the court. Each match lasted approximately one and a half hours.

All four matches were scored on a point by point system at the time of play. The score was kept in line with the server at the time *i.e.* if the server lost the first point in a game the score would be Player A: 0-15. This allowed continuity to be kept throughout the matches.

Three of the four matches were watched live and all were watched on two other (separate) occasions before interviews were held with the players. Interviews were held around the country at a time and place suited to each individual player's tennis schedule.

On arrival at the interview, players were asked to read and sign the informed consent form (secondary appendix 5). The interview procedure was explained to them and they were given a copy of the questionnaire, with an explanation of how to fill it in during the match. The questionnaire was administered before the start of the video tape: "Waiting to go on court", and at key times

throughout the match: “End of warm-up”, “End of the second game of the first set”, “End of the first set”, “End of the second game of the second set”, “End of the match” and where appropriate: “Start of the tie-break”. They were also given a score sheet, which outlined each point of the match. This was used to orientate both the player and researcher whilst watching the video-tape.

The interviews were recorded using a Dictaphone, with specific scores stated by the researcher throughout the match. Each interview lasted on average 2 hours. At the end of the interview players were given a video-tape of their match.

#### **4.25 Pilot Study**

Two pilot studies were carried out to refine the testing procedure. The first pilot study involved video-taping a two set tennis match, played between two junior tennis players. Two videocameras were used, positioned on tripods at either end of the court. The videos were edited and the match was viewed on a split screen, with one view of the court on the top of the screen and the other view of the court at the bottom.

An interview schedule was developed, which required few changes from the one used in the main study. In addition to the interview schedule, a questionnaire was developed using six factors from the Profile of Mood States (POMS) questionnaire (McNair, Lorr & Droppleman, 1971). The intensity of tension, depression, anger, vigour, confusion and fatigue were measured using a Likert scale ranging from 1-10. See secondary appendix 4 for revised questionnaire.

The players were interviewed using the videotape of the match as a prompt. Feedback was gained from both players with regards to the interview process. Three issues arose from this feedback.

Firstly, the players had difficulty in understanding the term “vigour”. Because of this, this factor was omitted from the revised questionnaire.

It was noted that the players spent a great percentage of the time talking about technical and tactical issues. Although important, it was deemed necessary to explore their thoughts and feelings about the match as well. The interview schedule was amended to include such issues as confidence, anxiety and attributions, in addition to possible momentum shifts. In line with this change, it was felt that the questionnaire should reflect the interview schedule and as such, cognitive anxiety, somatic anxiety and self-confidence were added. Due to the interpretation of multidimensional anxiety, it was felt that a measurement of directionality would be beneficial.

Finally, both players found the videotape of great benefit in recalling the match. However, they felt that one camera, covering the whole court, would be sufficient.

The second pilot study was used to gain feedback on the revised questionnaire. Due to the non-specific nature of the questionnaire, two cross-country runners were used. They were asked to fill out the questionnaire at the start and the end of a race. Feedback was positive, with both the semantics and speed/ease of filling it out, seen as fully acceptable. It was therefore decided that no further changes were needed.

## **4.26 Data Analysis**

The data were subjected to three separate analysis procedures. Firstly, a statistical analysis was conducted on the data obtained from the score lines of tennis matches.

### **4.261 Statistical Analysis**

- *Scoring system*

A point by point scoring system, taking note of server and receiver, was utilised to follow 4 tennis matches played at a major British tournament. One first round match and one second round match were examined, in both the ladies' and mens' singles events, resulting in a total of 82 games. Tie-breaks

were not included within the analysis, however all the games leading up to tie-breaks were included.

- *Descriptive Statistical analysis*

Two by two contingency tables were used to determine whether winning or losing the first point in a game could predict game outcome. Separate tables were produced for the server and receiver and winners and losers (secondary appendix 6 for raw data).

The interview data were examined through two separate procedures. Firstly, the data were subjected to content and frequency analyses (Côté et al., 1993).

#### **4.262 Content and Frequency Analysis**

- *Transcription*

The interviews were transcribed verbatim, which produced 243 pages of single-spaced interview data. Preparation and initial inductive analysis were carried out in line with the protocol of Gould et al. (1992a). However, several additions were made to the original protocol.

- *Coding*

Each of the eight tennis players were coded, using numbers 1 to 8. Therefore every Raw Data Theme (RDT) could be traced back to an individual player. In addition to this coding, each RDT contained a score line. This signified at what point in the match the RDT was stated. The score was given in terms of the match winner and server of a particular game. For example: 2. 6-4/3-5/40-30, signifies that Player 2, the server, was the ultimate winner of the set (6-4). Player 2 was down 3 games to 5, but was up 40-30 in the game when they made the quote.

- *Colour co-ordination*

The final addition to the analysis was colour co-ordinate the RDT's. The winners were shown in red while the losers were in blue. All the winners RDT's were shown first, followed by the RDT's of the losers. This was done in numerical order, Player 1, Player 2 *etc.* to maintain continuity across the analysis. This allowed for a more visual inspection of the data to separate the winners and losers. By adding personal and situational information, each RDT could be viewed in context.

- *Justification for categorisation*

All RDT's were categorised under specific Higher Order Sub-Themes (HOST's) depending on the context they were stated in. For example, if the RDT of "*I felt anxious*" was placed under the heading of "Debilitative Cognitive Anxiety", then the player indicated that this was debilitative for him/her during the same part of the interview.

- *Trustworthiness*

Follow-up deductive analysis provided additional verification of the inductive analysis. Triangular consensus was reached on all themes with two independent qualitative researcher.

- *Generation/Grouping of data*

A total of 3264 Raw Data Themes (RDT) were identified, 1506 RDT's by the female players and 1660 RDT's by the male players. From these, a total of 801 Higher Order Sub-Themes (HOST) emerged, 409 HOST's from the females and 392 HOST's from the males. Many of these HOST's were repeated both for the two genders and throughout the time periods examined. Eight specific time periods were highlighted, namely, Week Before the Match, Morning of the Match, Arrival at Tennis Centre, Practice, Warm-Up, First Set, Second Set and Post-Match. The first and second sets were further segmented into 6 areas: Cognitive Anxiety, Somatic Anxiety, Self-Confidence, Coping Strategies, Technical Cognitions and Emotional Response.

- *Tabular results*

Further analysis was conducted on the content analysis. Separate tables were produced for males and females to indicate the number of positive, negative and neutral RDT's for each of the 8 time periods and the specific areas (primary appendix 1 and 2).

#### 4.263 Case Study Analysis

The final analysis conducted on the interview data resulted in the presentation of case studies. The outline for each case study followed the same pattern.

- *Scoring of match*

A score sheet was produced which displayed the match using a point by point analysis. The server for each game is underlined in bold, with each point of the game notated until the end, where the score is indicated in bold. The sheet was designed to be read in columns, starting from the top left hand side of the sheet.

- *Graphical representation*

Data from the questionnaire were used to produce a graphical representation of the matches. Both the intensity and directionality of the seven factors were shown. Individual and intersectional graphs were also developed for each of the four matches. Results are discussed in terms of individual players' perceptions of momentum and interactions between both players in each match.

- *Broad overview of match*

Firstly, a broad overview of the match, covering pre-match, during match and post-match time periods, was presented for each player. This involved taking specific quotes from the players which helped to tell the story of their thoughts and feelings at each of these specific times.

- *Review of key moments*

Key points, games and aspects of psychological momentum, as perceived by each of the players, were obtained from the interview data. A table was developed to summarise which player indicated at what stage they perceived

these key moments to occur. Using this information a more in-depth write-up was performed concentrating on the specific games in question. Information concerning the set, the game and the server at the time was presented at the start of each subsequent game. The score was presented in terms of the set winner, for example: First Set, 0-3, Player 1, the third game in the first set is discussed. Player 1 won the set, but is currently 0-2 down. When specific points were highlighted as being key, this was shown along with the information, *e.g.* First Set, 0-3, 15-40, Player 1. Specific quotes, taken from the interview transcripts, were used to enrich the case study write-up.

- *Summary of case study*

A brief overview of the case study was designed to summarise the key issues relating to each player.

### 4.3 Results

#### 4.3.1 Descriptive Statistical Results and Discussion

##### *First point outcome vs game outcome*

Results show that during the four matches, 68% (56 games) of the games were won by the players who won the first point, and 32% (26 games) of the games were lost.

These findings suggest that without taking the status of serve or the match outcome into consideration, winning the first point predicted a greater likelihood of winning the game.

##### *First point outcome whilst serving and receiving vs game outcome*

Results indicated that when players were serving and won the first point, 42 games (91%) of the games were won and only 4 games (9%) of the games lost. When the server lost the first point, 22 games (61%) were won, while 14 games (39%) were lost.

**Table 4.1 First point outcome whilst serving vs game outcome**

	<b>% of Games Won</b>	<b>% of Games Lost</b>
<b>Win Point</b>	91%	9%
<b>Lose Point</b>	61%	39%

Consequently, when players were receiving and won the first point, 14 games (39%) of the games were won while 22 games (61%) were lost. When the receiver lost the first point, 4 games (9%) of the games were won and 42 games (91%) were lost.

**Table 4.2 First point outcome whilst receiving vs game outcome**

	<b>% of Games Won</b>	<b>% of Games Lost</b>
<b>Win Point</b>	39%	61%
<b>Lose Point</b>	9%	91%

These findings demonstrate that more than twice the number of games are won when the server wins the first point (91%) compared to when the receiver wins the first point (39%). Indeed, even when the server loses the first point, (s)he goes on to win 61% of games.

*Match outcome vs game outcome*

Match winners who won the first point in a game won 73% of those games and lost 27% of games. When they lost the first point in a game, they won 39% of those games and lost 61%.

**Table 4.3 Match winners vs game outcome**

	<b>% of Games Won</b>	<b>% of Games Lost</b>
<b>Win Point</b>	73%	27%
<b>Lose Point</b>	39%	61%

In contrast, match losers who won the first point in a game won 61% of those games and lost 39% of games. When match losers lost the first point, they went on to win only 27% of those games and lose 73%.

**Table 4.4 Match losers vs game outcome**

	<b>% of Games Won</b>	<b>% of Games Lost</b>
<b>Win Point</b>	61%	39%
<b>Lose Point</b>	27%	73%

Results illustrate that there is less of a difference between winners and losers as far as winning and losing the first point is concerned. More specifically, winners win only 12% more of those games in which they win the first point, compared to losers. Match winners also win 12% of those games in which they lose the first point in a game.

Direct comparisons with past research cannot be made due to the different statistical approaches taken. However, from the findings above it can be seen that there are distinct differences in the number of games won when players win the first point, compared to losing the first in a game. Although differences were found between the variable of match outcome and winning the first point in a game, the differences appeared to have far less of an impact compared to the variable of serving/receiving.

Serving, it seems, leads to a greater number of games being won, compared to receiving, whether the first point is won or lost. Such a result may be due to the nature of the serve itself and the cognitions associated with it. The serve is the only shot in tennis that the player has complete control over. As such, players often associate holding serve as something they are 'expected' to do. This appears to be reflected in the findings, where 91% and 61% of games are held whether players win or lose the first point.

If the argument of holding serve is extrapolated, then receiving serve is seen as more of a challenge. The likelihood of breaking the opponents' serve will be lower. This is borne out in the findings, with only 39% and 9% of games won when the receiver wins or loses the first point respectively.

These findings indicate the importance of holding serve in relation to the greater number of games being won. It also points towards the importance of winning the first point whilst receiving. Although the number of games won are less than if the player had been serving, results show a four fold increase in the number of games won, compared to when the player loses the first point.

A factor, which the analysis cannot explain, is the cognitive appraisal associated with winning or losing the first point in a game. Clearly more games are won when the first point is won, but the underlying mechanisms of such a finding can not be explained by numerical statements alone.

It could be hypothesised that winning the first point in a game would increase the players' confidence level and in turn help to increase his/her performance and potential for positive momentum to occur. However, as past research has argued, individual cognitions are lost in the analysis of archival data (Burke et al., 1997; Miller & Weinberg, 1991; Vallerand et al., 1988). Therefore the use of statistics alone fails to tell the "story" behind points being lost and won. The bigger picture, incorporating thoughts, emotions and play are lost/hidden behind numbers. To overcome this problem, content analysis was carried out on the qualitative data to offer a more in-depth view of the competitive situation.

#### **4.3.2 Content Analysis**

##### **4.3.3 Winners' Results**

The results from the winners during the pre-match time phase indicated that there were 113 positive Raw Data Themes (RDT's), 93 neutral RDT's and 54 negative RDT's.

*Week leading up to match* [see primary appendix pages 307 and 359]

In the week leading up to the match, 16 positive RDT's and 5 neutral RDT's were identified. The most cited Higher Order Sub-Theme (HOST) was positive perceptions of training, with all four players stating that training had gone well: "*Training was going very well out in the States*". None of the players identified any injury or fitness problems during this time.

*Morning of the match* [see primary appendix pages 308 and 360]

Twenty-three positive RDT's, 13 neutral RDT's and 15 negative RDT's were cited during the morning of the match. All 4 players gave their respective matches high importance: "*Very [important]. I mean in the eyes of the LTA and the main guys that run the LTA, they're all watching and I think in their eyes it is a very big tournament*" and experienced either external or internal pressures from the tournament: "*Because I feel this is a big tournament, you've got a higher rank than her, because your family's watching, I do put a lot of pressure on myself*". Three out of the 4 players stated that their confidence was high during the

morning of the match and all players exhibited positive cognitions: *"I could just go out and do my game and do what I love, which is just to go and play"*.

*Arrival at tennis centre* [see primary appendix pages 310 and 362]

Twenty-six positive RDT's were identified from a total of 106 RDT's during the time period at the tennis centre. Having arrived at the tennis centre, the female players experienced debilitating cognitive anxiety: *"Felt a bit daunted."* and externally and internally induced pressure: *"There was more pressure because she was a younger player...I was supposed to win"*. No such anxiety or pressure was evident with the male players. Three of the 4 winners had confidence in beating their opponent.

The players set primarily task goals for their matches. Only one female set the goals of winning: *"Winning was the main thing"*. Both the female players' game plans were set in conjunction with their coaches. According to the number of RDT's, the female players utilised more coping strategies (18 RDT's) compared to the male player (1 RDT): *"In my mind I was thinking, don't put pressure on yourself. Don't worry about it, it's only a tennis match"*. Practice went well for 3 of the 4 winners, with no negative RDT's cited at this time.

*Warm-up* [see primary appendix pages 316 and 365]

All 4 players perceived their warm-up to go well: *"[It was] like a buzz. I was seeing the ball so much better. Then I was over the moon!"*. Their somatic anxiety reduced during this time and by the end of the warm-up all the players were ready, both mentally and physically, for their matches: *"Felt totally ready for the match"*.

*First set*

During the first set, 280 positive RDT's, 176 neutral RDT's and 175 negative RDT's were identified.

*Cognitive anxiety* [see primary appendix pages 319 and 367]

Sixteen of the 19 positive RDT's for cognitive anxiety revolved around a lack of cognitive anxiety and perceived pressure: *"I wasn't worrying about anything"*.

In addition to this reduction, 12 RDT's pointed towards the idea that their opponents were suffering from pressure and/or cognitive anxiety: *"He's probably shaken up a little bit"*. Twenty-five RDT's were negative in direction: *"My nerves affected my game plan"*.

*Somatic anxiety* [see primary appendix pages 321 and 369]

Twelve negative RDT's and 13 positive RDT's were identified for somatic anxiety: *"My legs are still heavy and my arm's still a bit wobbly"*; *"I feel more relaxed. I feel like I can start to play properly now"*.

*Confidence* [see primary appendix pages 322 and 370]

All four players cited 70 positive RDT's for confidence. Quotes encompassed issues of high levels and/or increases in confidence: *"Confidence was unbelievable there"* and confidence gained from and with play: *"Feeling pretty confident now because I played a good point there"*. Only 10 negative RDT's were reported: *"Really lost confidence now"*.

*Coping strategies* [see primary appendix pages 324 and 372]

Coping strategies were in evidence during the first set, with 45 positive RDT's, focusing primarily on positive and reassuring self-talk: *"Told myself to stick with it"*. Few negative statements were reported (9 RDT's). All four players acknowledged the issue of concentration, with twenty RDT's cited: *"I don't think I'm in the present now. I think I'm not really concentrating that well"*.

*Technical cognitions* [see primary appendix pages 326 and 374]

Technical issues produced 108 positive RDT's. On the whole these focused around the areas of perceptions of the serve: *"It felt easier serving"* and specific points and games: *"The advantage points are really good"*. 81 negative RDT's were identified. These appeared to cluster around technical and tactical errors: *"I think I just made the wrong choice of shot"* and task irrelevant thoughts: *"It almost seems like things have stayed in my head from the first point...It's like subconscious...it was affecting the way I was playing"*.

*Emotional response* [see primary appendix pages 335 and 385]

A total of 63 RDT's were cited for emotional response in the first set. Twenty-five of these were positive in direction: "*Over the moon there. First game [won]*". Frustration and annoyance with self and play helped to make up the 38 negative RDT's: "*Frustrated at that unforced error*".

*Perceptions of momentum* [see primary appendix pages 337 and 387]

Players identified 5 key points and/or games during the first set: "*This turned out to be a big game at 2-3*" along with 8 moments when they perceived the momentum to be with them. Six occasions were identified when they felt their opponent had gained the momentum: "*Momentum's slightly with her now*" and 3 occasions when they perceived the momentum to have leveled off.

*Second Set*

The second set produced a total of 228 positive RDT's, 138 neutral RDT's and 176 negative RDT's.

*Cognitive anxiety* [see primary appendix pages 338 and 388]

From this total, 42 RDT's were clustered around cognitive anxiety. Twenty-four RDT's were negative and concerned themselves with negative cognitions on play and perceived pressure on self: "*Concerned I might lose the lead*"; "*Felt more pressure on me now*". Thirteen RDT's were positive in direction, with lack of pressure and lack of cognitive anxiety the most cited HOST's.

*Somatic anxiety* [see primary appendix pages 340 and 390]

Reduction in and lack of somatic anxiety produced 13 of the 14 positive RDT's for somatic anxiety: "*Felt nice and relaxed*". Only 10 negative RDT's were found under this area, including over relaxed: "*Bit too relaxed on that point*" and negative physical symptoms: "*My arm started to tense up*".

*Confidence* [see primary appendix pages 341 and 391]

Of the 67 RDT's acknowledged under confidence, 60 were positive in direction. They fell into HOST's such as, increase in confidence: "*Confidence shot back up*" and confidence gained from play: "*Love game gave me confidence*". Seven

negative RDT's were noted, 3 of which were under the HOST of over confidence and 3 under decrease in confidence levels: "*Got a bit too cocky*"; "*Confidence dropped in the last three games*".

*Coping strategies* [see primary appendix pages 343 and 393]

Sixty-eight RDT's were identified under the heading of coping strategies, 30 of which were positive. These were spread over several HOST's, including encouragement self-talk: "*Told myself to keep trying*" and positive use of relaxation: "*Calmed myself down by breathing slowly*". Players cited 18 RDT's for neutral RDT's, 17 of which were related to concentration issues: "*Told myself to concentrate*". Only 8 RDT's were negative, with half coming under the HOST of negative affirmations: "*Shit! Back to deuce*".

*Emotional response* [see primary appendix pages 352 and 407]

Nineteen positive RDT's were elicited from the male players for positive emotional response: "*Feeling pretty pleased*". The female players cited no positive RDT's. Thirty-two negative RDT's were identified by all four players, 22 by the males. Frustration, annoyance and disappointment were the most cited emotions.

*Technical cognitions* [see primary appendix pages 345 and 396]

Two hundred and ninety-nine RDT's were obtained for technical cognitions, 92 of which were positive. Although the males cited almost twice as many positive RDT's than the females, both sets of players' positive thoughts revolved around breaking: "*Felt I had a chance to break*", positive perceptions of points, games and general play: "*Played a good service game*". One hundred and twelve RDT's were classed as neutral, such as: "*Thinking about where to serve*". Finally, 95 negative RDT's were identified. Negative perceptions of the game and loss of concentration were the most cited HOST's for the females, while perceived wasted chances and past performance cognitions were the most cited HOST's for the males.

*Perceptions of momentum* [see primary appendix pages 353 and 409]

Players identified 5 key points and/or games during the second set: *"This point could turn the match around"* along with 3 moments when they perceived the momentum to be with them. Three occasions were identified when they felt their opponent had gained the momentum: *"Things have swung back to her"*.

*Post-match* [see primary appendix pages 354 and 411]

The post-match time phase produced 63 RDT's, 51 of which were positive and 6 RDT's which were negative. Players exhibited positive emotions and relief after winning their matches: *"Thank God it was over!"*. The female players had more than three times more positive perceptions (13 RDT's) of the match compared to the males. The females attributed their wins to primarily internal factors (11 RDT's), such as being tactically and technically better, and more confident: *"[I was] maybe more confident than she was"*. Only one external attribution was cited, relating to opponent's poor play: *"She didn't play the crucial points well"*. The males also attributed internal factors to their performance outcome (8 RDT's). These related to perceived control, technical/tactical issues and pressure exerted on opponent. Two external RDT's were identified, namely coach influence: *"[An] old coach came up to me and said a couple of mental things...you've got it...you're a guy with a lot of heart...It did help me"* and opponents' poor play.

#### **4.34 Losers' Results**

The results from the losers during the pre-match time phase indicated that there were 104 positive RDT's, 111 neutral RDT's and 40 negative RDT's.

*Week leading up to match* [see primary appendix pages 307 and 359]

In the week leading up to the match, 7 positive RDT's, 8 neutral RDT's and 10 negative RDT's were identified. Both female players stated that they were carrying injury/fitness problems and that they had negative perceptions of training: *"I wasn't hitting the ball great"*. One male player was recovering from injury, but felt that training had been going okay. The other player felt training had gone well and had no injury or fitness problems.

*Morning of the match* [see primary appendix pages 308 and 360]

From a total of 53 RDT's collected during the morning of the match, 25 RDT's were positive, with 23 RDT's cited by the males. Seven RDT's were negative, all cited by the males. For example: "*Second round match added pressure on me*". Although both females stated that their matches were important, they also felt that it wouldn't be the most important tournament of the year. One male player gave the match high importance, while the other player did not. Only one male player made mention of high confidence levels: "*Felt confident that I could beat him*". Although the males cited 7 RDT's under the HOST heading of positive cognitions, they experienced a combination of both positive and negative experiences, for example: "*I saw the match as a great opportunity*"; "*I knew it would be tougher than the first round*". Three players, two male, used coping strategies during this time: "*Told myself I would be okay*".

*Arrival at the tennis centre* [see primary appendix pages 310 and 362]

Arrival at the tennis centre produced 28 positive RDT's, 54 neutral RDT's and 11 negative RDT's. Only one player, a female, experienced debilitating cognitive anxiety: "*I was apprehensive about the way I was going to play. Really whether I'd go out there playing well or whether I'd go out there slightly heavy in the legs...Just how the match was going to go*". While both female players had a lack of somatic anxiety and confidence in winning their matches, the male players made no reference to these issues.

The players set primarily task goals for their matches: "*Goal was just to focus on how I was going to play*". One male and one female set the goal of winning in conjunction with task goals: "*To win the second round match and to focus on my game plan*". One female player's goals were set in conjunction with her coach. Three players used coping strategies: "*I had a few friends there, so I was relaxing with them. So it was pretty good. I felt it really took my mind off it for a bit*". Practice went well for all the players, although one male and one female player felt there was some negative elements present during this time: "*My feet weren't working as well as before, but that was mainly because...I was getting over [jetlag from] America*".

*Warm-up* [see primary appendix pages 316 and 365]

A total of 68 RDT's were identified during the warm-up. Three of the four players felt the warm-up had gone well: "*Did what I wanted to do...All I was trying to do was focus on good footwork and try and strike the ball early*". Indeed, positive perceptions of the warm-up were in evidence, with 35 positive RDT's and only 8 negative RDT's present. Both the female players felt that their opponents would be experiencing cognitive anxiety at this time: "*She was probably nervous...[I picked up on it] in her body language. The way she walked, the way she was rushing*". Three players felt confident in their play and two players stated that they were ready, both mentally and physically, for their matches.

*First Set*

During the first set, 200 positive RDT's, 196 neutral RDT's and 288 negative RDT's were identified.

*Cognitive anxiety* [see primary appendix pages 319 and 367]

For cognitive anxiety, six positive RDT's, 24 neutral RDT's and 27 negative RDT's were found. Three players identified pressures with their play, focusing primarily on holding serve: "*More pressure on me to hold than to break*". The males elicited 8 RDT's for the HOST of negative serve cognitions: "*I was concerned I might miss first serves*". While three players felt the need to exert pressure on their opponent: "*Wanted to use the next game to put pressure on him*".

*Somatic anxiety* [see primary appendix pages 321 and 369]

For somatic anxiety, 10 positive RDT's, 4 neutral RDT's and 32 negative RDT's were collected. All four players experienced debilitating somatic anxiety and negative physical symptoms: "*Felt a rush of blood to my head*". This made up 25 of all the negative RDT's. The positive RDT's were made up primarily of a reduction and/or lack of somatic anxiety: "*Butterflies had gone now*". Two players felt that their opponent was tensing up.

*Confidence* [see primary appendix pages 322 and 370]

Thirty-one positive RDT's and 7 negative RDT's were found for confidence. The greatest number of RDT's (12) was under the HOST of confidence gained from play: *"Got more confidence from winning the last game"*. All four players stated that they experienced good confidence levels at some stage throughout the first set. Negative perceptions of confidence included doubts about the serve: *"Still lacking confidence on my serve"*.

*Coping strategies* [see primary appendix pages 324 and 372]

A total of 35 positive RDT's, 8 neutral RDT's and 17 negative RDT's were present under coping strategies. All 4 players used positive self-talk: *"Tried to keep positive by talking to myself"* with 3 of the players also using negative self-talk: *"Told myself that I was stupid"*. Only two of the players identified thoughts on concentration issues.

*Technical cognitions* [see primary appendix pages 326 and 374]

Technical issues produced 95 positive RDT's. On the whole these focused around the areas of positive perceptions of the serve, good game plan and chances of breaking: *"Felt I had a chance to break"*. 151 negative RDT's were identified. These appeared to cluster around tactical and technical errors: *"Didn't keep my eye on the ball"* and task irrelevant thoughts: *"Thought about the score instead of the job at hand"*. One hundred and fifty-nine neutral RDT's were based around technical issues: *"Thinking about making the first serve"*. Although the female players tended to remain focused on the present, the male players had a tendency to reflect back on past games: *"I was thinking about past games even though I knew I shouldn't be thinking about the past"*.

*Emotional response* [see primary appendix pages 335 and 385]

A total of 78 RDT's were cited for emotional response in the first set. Twenty-three of these were positive in direction: *"Felt pretty pleased"*. Frustration, annoyance and disappointment with self and play helped to make up the 54 negative RDT's: *"Frustrated at losing the first point"*.

*Perceptions of momentum* [see primary appendix pages 337 and 387]

Players identified 13 key points and/or games during the first set: *"First point was crucial"* along with only 1 moment when a male player perceived the momentum to be with him. Two occasions were identified when they felt their opponent had gained the momentum: *"Thought he had a bit of momentum"*.

*Second Set*

The second set produced a total of 241 positive RDT's, 185 neutral RDT's and 190 negative RDT's.

*Cognitive anxiety* [see primary appendix pages 338 and 388]

From this total, 59 RDT's were clustered around cognitive anxiety. Twenty-six RDT's were negative and concerned themselves with negative cognitions on play for the females: *"Didn't know how to stop the errors"* and perceived pressure on self and on own play for the males: *"There's pressure on me to hold here"*. Fourteen RDT's were positive in direction, with opponents perceived pressure cited the most: *"Pressure's on her to hold serve"*. The females produced 7 RDT's for the HOST of lack of cognitive anxiety: *"Wasn't negative about the double fault"*.

*Somatic anxiety* [see primary appendix pages 340 and 390]

Fourteen positive RDT's were identified for somatic anxiety: *"Felt pretty loose"*. Nine negative RDT's were found, including over relaxed: *"Relaxed a bit too much"* and negative physical symptoms: *"Felt tension in first serves"*.

*Confidence* [see primary appendix pages 341 and 391]

Of the 57 RDT's acknowledged under confidence, 49 were positive in direction. They fell into HOST's such as, increase in confidence: *"Confidence went up a bit"* and confidence in play: *"Felt pretty confident in that shot"*. Seven negative RDT's were noted, for example: *"He's knocked my confidence"*.

*Coping strategies* [see primary appendix pages 343 and 393]

Ninety-five RDT's were identified under the heading of coping strategies, 62 of which were positive. These were spread over several HOST's, including positive

affirmations: *“Do everything you can”* encouragement self-talk: *“Come on, you’re getting there”* and positive use of aggression: *“Told myself to be aggressive”*. Players cited 22 RDT’s for neutral RDT’s, 8 of which were related to concentration issues: *“Told myself to focus on the serve”*. Only 11 RDT’s were negative, with 9 RDT’s coming under the HOST of negative affirmations: *“Story of my life!”*

*Emotional response* [see primary appendix pages 352 and 407]

Thirteen positive RDT’s were elicited from the male players for positive emotional response: *“Feel really happy at the moment”*. The female players cited only one positive RDT: *“Pretty pleased with myself”*. Forty-six negative RDT’s were identified by all four players, 29 by the males. Frustration, annoyance and disappointment were the most cited emotions.

*Technical cognitions* [see primary appendix pages 345 and 396]

Three hundred and seventeen RDT’s were obtained for technical cognitions, 88 of which were positive. Although the males cited more than twice as many positive RDT’s than the females, both sets of players positive thoughts revolved around positive perceptions of the serve, breaking: *“Opportunity to break here”*; positive perceptions of shots and general play: *“Felt I was timing the ball alright”*. One hundred and thirty-eight RDT’s were classed as neutral, such as technical and tactical cognitions: *“Thinking about my tactics”*. Finally, 91 negative RDT’s were identified. Tactical and technical errors: *“I was too far behind the baseline”*, negative perceptions of the serve: *“Losing points on the second serve”* and negative perceptions of the opponent good play: *“He played two big serves”*, were the most cited HOST’s. It was also noted that the male players acknowledged 20 RDT’s on task irrelevant thoughts, such as past performances.

*Perceptions of momentum* [see primary appendix pages 353 and 409]

Players identified 17 key points and/or games during the second set: *“4-4 is a really big game”* along with 2 moments when they perceived the momentum to be with them. Three occasions were identified when they felt their opponent had gained the momentum: *“He’s getting on a roll”*.

*Post-match* [see primary appendix pages 354 and 411]

The post-match time phase produced 115 RDT's, 20 of which were positive and 87 RDT's which were negative.

Players exhibited negative emotions and disappointment after losing their matches: *"Angry that I was 5-0 up in the tie-break [and lost the match]"*. The male players had more three times more positive perceptions (15RDT's) of the match compared to the females. Despite the loss, the males cited 12 RDT's under the HOST of positive perceptions of the match: *"I was quite pleased with the way I played...I gave everything I had to give"*. The players attributed their loses to both to internal factors such as lack of training (3 players), lack of match play (2 players) and technical and tactical failure (4 players) and external factors relating to their opponents' good play (3 players): *"He kept me back a bit more. He kept a better length...He didn't let me play my game"*.

#### **4.35 Definition of Psychological Momentum**

[see primary appendix pages 357 and 414]

Although only 7 players acknowledged the existence of psychological momentum: *"Yeah [I think it exists]. I did a lot of work about it with my last coach"* all 8 players went on to define what they perceived momentum to mean to them.

Five players identified the first point in a game as being important: *"The first point is really important. [It] gives you a bit of a cushion. Serving or receiving, which ever...Get the first point"*. Three of the male players also felt that the first game in a set was important: *"It's important to win the first game in a set...It gives you an edge. It's psychological"*.

Five of the 8 players perceived themselves to be in control of momentum: *"I think it's how I play [that affects momentum]. I can pull the momentum back"*. One female player was unsure of whether she had control of momentum or not: *"I don't really know [if momentum's down to me or not.] If the opponent hits a good streak and just hits winners here and there and everywhere, I suppose"*

*momentum's in her favour slightly*". Two players stated that they were aware when they perceived to have gained or lost the momentum: *"You know if you have it or not"*.

Three players discussed the issue of shifts in momentum. They all felt that momentum could change after only one or two points: *"Momentum can change in a couple of points"*; *"Occasionally, one point can change momentum"*. These comments are in line with temporal pacing of momentum shifts made by 3 players: *"It changes quite frequently I think. In little ways...[It] just swings so easily from one [player] to another"*. Only 1 player felt that momentum changes slowly: *"It's not very often just one point does it, but I suppose if it's match point it can. But otherwise I think it's gradually"*.

Gaining positive momentum was defined by 5 of the players as involving positive effects on their play: *"When I do have momentum...I'm doing the right thing. Going ahead and doing my game plan and getting it right. I feel like when I'm doing that, the momentum is with me, whether I'm winning or losing the match. I mean if the things I'm working on are going well...that's momentum for me"*; *"I'm playing better at that stage. I'm not going to lose the point. I'm not going to lose the game. The other person is weaker in that stage of the match than you are. So everything is on your side. You're the one in the winning position now"*.

One player talked of the positive effects it had on her game: *"I'll try more riskier shots [with momentum]...It raises my game. I might take a ball out of the air...I've got more guts. I'm braver...[and] the shots usually come off"*. This player explained that for her, momentum was associated with confidence: *"It raises my performance because I feel more confident...So my game is a lot freer and easier"*.

This link with confidence was acknowledged by 3 other players: *"Once you get confident...everyone else knows you're playing well and they're going on court with a little bit [of] fear and you're going on there thinking you're playing well. You're going on court with a little bit of an edge all the time. So just keep the*

*roll going”; “Your confidence goes up [and] their’s goes down a bit...If you’ve got self-belief then just one point can suddenly give energy”.*

Two players discussed negative momentum effects on their game: *“Performance maybe gets a little worse because I panic when I realise that some things are running away”; “She’s doing better at that stage of the match and a couple of errors come and creep in”.*

#### **4.4 Content Analysis Discussion**

##### *Definition of psychological momentum*

Both the winners and the losers acknowledged that momentum plays a part in their game. Although not all the players agreed on the same definition of momentum and how it affects their game, key issues were highlighted. The most cited issues were, the importance of the first point in a game, perceived self-control of momentum and the involvement of positive play, all of which were cited by five players. Temporal pacing of momentum shifts and the link with confidence was also noted by the players.

This diversity in definitions for psychological momentum is consistent with the argument put forward by several researchers (Burke et al., 1997; Miller & Weinberg, 1991) which highlight the subjective nature of the phenomenon.

Perceived self-control and positive play were the most cited factors associated with positive momentum. These findings suggest that players perceive themselves to be in charge of gaining positive momentum. These findings are consistent with past research (Burke et al., 1997; Vallerand et al., 1988).

For example, in a tennis based study, Burke et al. (1997) found that spectators associated good performance with the existence of momentum. Events such as a sequence of good points, break of serve and aggressive/assertive play were seen as precipitating momentum. In addition to this, a combination of good play from one player and poor play from their opponent was also seen as a factor for

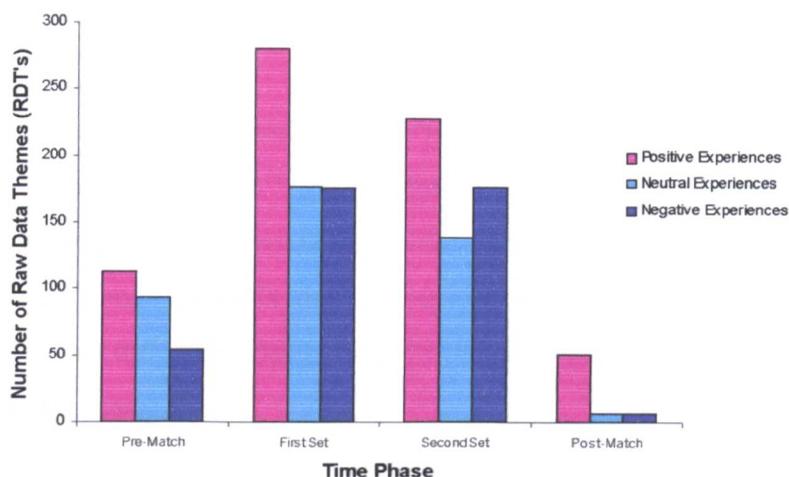
momentum to exist. Winning the first point, found in the present study, was not however found to be a contributing factor to the existence of momentum.

A finding inconsistent with Burke et al. (1997) was the temporal pacing of momentum shifts. The present study found that momentum could change within the space of one or two points. Burke et al. (1997) found shifts in momentum required a series of shots or play as opposed to one single event.

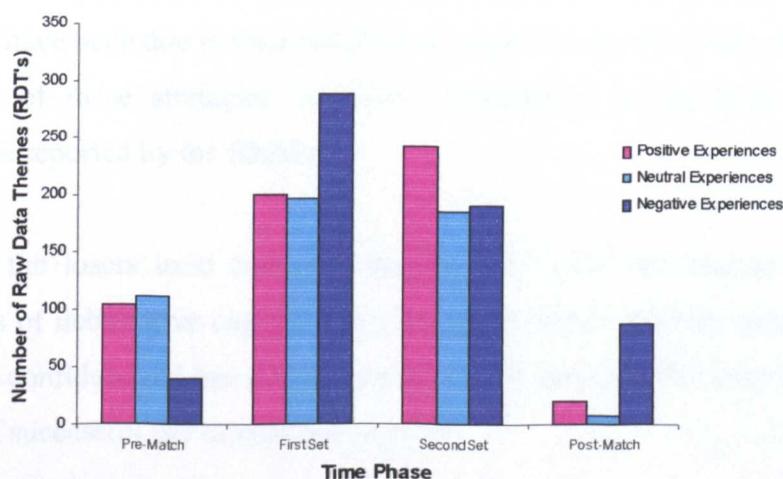
Although all the players associated performance issues with momentum, they also highlighted psychological issues. Four players indicated that confidence plays a part in positive momentum. Such a finding is consistent with previous work, which has shown that confidence is associated with momentum (Iso-Ahola & Blanchard, 1986; Miller & Weinberg, 1991; Vallerand et al., 1988).

#### *Experiences during time phases*

During all time phases, the winners exhibited more positive experiences than negative experiences (figure 4.1). This was most apparent during the pre-match period, where positive experiences outnumbered negative experiences by 2:1 and the post-match period where there were 8 times more positive than negative experiences reported. In contrast, the losers reported a greater number of positive experiences than negative experiences during only two of the time phases, namely, pre-match and second set [2.5:1 and 4:1 respectively]. See figure 4.2



**Figure 4.1 Number of RDT's for winners' time phases**



**Figure 4.2 Number of RDT's for losers' time phases**

#### *Pre-match time phase*

In the week leading up to the match, distinct differences were found between the winners and losers. Firstly, all of the winners felt that training had gone well and they were injury-free, while two of the losers felt that training had not gone well, with three players also showing concern over injuries or fitness problems.

All of the winners experienced pressures, either internal or external, to perform well. Only two of the losers acknowledged the existence of such pressures. Such a finding may be due to the significance the players' felt about their

matches. All four winners perceived their matches to be of high importance while only one of the losers indicated match importance.

During the morning of the match, three of the losers, two males and one female, utilised coping strategies. No such methods were in place for the winners. The positive mental and physical states the winners identified at this time may explain why such methods were not needed. For example, three of the winners indicated that they experienced high levels of confidence. Only one of the losers fell into this category.

Having arrived at the tennis centre, the female winners were found to be suffering from debilitating cognitive anxiety. Yet despite this, both these players, along with one male player, had high levels of confidence. The finding that the female players used coping strategies more than the male players at this time may have been due to their debilitating cognitive anxiety levels. Successful execution of these strategies may have contributed to the high levels of confidence reported by the females.

Three of the losers used coping strategies, with only one female exhibited symptoms of debilitating cognitive anxiety. Both female players indicated that they were confident and had a reduction in somatic anxiety. This may have been a result of successful use of coping strategies.

Apart from one female, who set task and ego goals, the winners set task goals for their matches. One male and one female loser set task and ego goals, while the other two losers set task only goals. Past research has shown that athletes often set more than one goal to give themselves a better chance of achieving at least one of them (Jones & Hanton, 1996). This may have occurred in the case of the losers. The two players who set both task and ego goals, although losing the match, managed to achieve their task goals.

Three of the winners and all of the losers felt that practice had gone well. However, two of the losers also indicated that there were some negative aspects within their practice session. The warm-up was also perceived positively. All of

the winners were pleased with the way it had gone, with three of the losers sharing a similar perception. Interestingly, three of the losers made reference to high levels of confidence during this time, yet none of the winners discussed their levels. Despite this, all of the winners felt both mentally and physically ready for the match, whereas only two of the losers felt the same way. This finding partially supports previous research, which has shown that perceived readiness can predict both cognitive anxiety and self-confidence (Hanton & Jones, 1995; Jones et al., 1990).

#### *First set time phase*

The losers exhibited more than four times more negative than positive experiences for cognitive anxiety throughout the first set. Their cognitive anxiety revolved primarily around aspects of their own game, such as their serve, although reference was made by three of the players for the need to put pressure on their opponent. The difference was such smaller for the winners, with only a third more negative than positive experiences. Mahoney et al. (1987) found elite athletes experienced less problems dealing with anxiety rather than having less anxiety per se. This finding may be extrapolated to include winners. In other words, that the winners in this study may have had more control over their cognitive anxiety than the losers. However, it must be remembered that all the winners won the first set, so they may have had less reason to feel debilitating in the first place.

Negative somatic anxiety experiences were found in equal proportion to positive experiences for the winners. For the losers, three times more negative experiences than positive experiences were found. All four players exhibited debilitating somatic anxiety through out the first set. These findings may again be due to the winners relaxing into their game and winning the first set and the losers eventually conceding the set.

Both the winners and losers identified more positive than negative experiences for confidence. This was particularly true for the winners who were seven times more positive than negative. Results from the losers showed that they were four

times more positive. Such a finding is interesting in light of the fact that they also experienced the same fold for negative experiences for cognitive anxiety. It may be that when the losers play what they perceive as a good point, their confidence levels are high, whereas what they perceive as a poor point, has greater negative ramifications.

All eight players used coping strategies at various stages during the first set. The winners had five times more positive than negative experiences, while the losers had twice as many positive than negative experiences. A study by Gould, Eklund and Jackson (1993) found that successful Olympic wrestlers had better developed and practised, and more automated coping strategies than less successful wrestlers. It may be that the winners in this study experienced more positive experiences of coping strategies due to similar processes. Automated use of coping strategies may also account for the winners lower levels of negative experiences for cognitive anxiety.

All eight players used positive self-talk, however, three of the losers also used negative self-talk. Such self-talk was used after what they perceived as a poor point and was derogatory in nature. All four winners indicated that they experienced problems with concentration during this set. Only two of the losers experienced the same fate. It could be that the winners were at a higher level of concentration whilst playing well and any slip may have resulted in a poor point.

Technical issues for both the winners and losers produced a similar number of positive and negative experiences. The winners were slightly more positive, while the losers were slightly more negative. The losers were slightly less focused on the present than the winners. Three of the losers, two males and one female, tended to either look back to previous points or jump ahead to future ones. Two of the winners, one male and one female, were found to do the same thing. This lack of focus could be detrimental to their performance. Task irrelevant thoughts may induce errors in play. Indeed, they acknowledged that their mind wasn't on the job.

Emotional response throughout the first set was seen to be predominately more negative in direction for the losers, with twice the number of negative experiences to positive ones. This is perhaps not surprising due to the set outcome for these players. However, the winners' experiences were slightly more negative in nature as well. All 8 players were negative about poor play. The losers thoughts revolved around lost points and games, while the winners were concerned about not playing to standard they expected of themselves. A potential contributing factor to their negative emotional experiences.

The losers identified 13 points and games that they perceived to be key in the first set. The winners identified only 5 such occasions. The winners felt that they had possession of positive momentum 8 times during the set with their opponent possessing momentum six times. At only one time during the set did one loser feel that they had momentum and one loser feel that their opponent gained it. This was in spite of the fact that they identified almost three times more key points and games in the set than the winners.

#### *Second set time phase*

Both the winners and losers exhibited twice as many negative than positive experiences for cognitive anxiety. All four winners felt pressure on themselves during this set, whereas only two of the losers (the males) identified such pressure. This mirrors the finding during the pre-match period. During this time, the winners felt they were expected to win their matches and it may be that during the second set these thoughts surfaced once again. They were in the lead and needed to maintain their winning form to fulfill theirs and others expectations. This set was therefore crucial to them and as such may explain why they exhibited more negative experiences compared to the first set.

Only the male losers experienced pressure during the second set, as they did during the pre-match period. The males may have been exhibiting more ego oriented thoughts compared to the females. The males may have felt pressure to win the match and in the second set, being one set done, the realisation of this goal slipping away may have induced debilitating cognitive anxiety in the form

of pressure. The females on the other hand, did not show any signs of pressure in the lead up to the match. They did not perceive the match to have great importance and as such may not have viewed losing it as negatively as the males during the second set.

The winners had an even split of positive and negative experiences for somatic anxiety. This finding replicates the types of somatic experiences found during the first set. For the losers, somatic experiences were slightly more positive than negative. This was in contrast to the very negative perceptions of somatic anxiety from the first set. This may be due to the losers, in particular the females, adopting the mentality that they have nothing to lose now. This may have caused them to loosen off and be freer in their shot making.

Two winners, one male and one female, felt that they may have been over relaxed. This may have been caused by their high levels of confidence and in some cases, over confidence. More than eight times more positive than negative experiences were highlighted by the winners for confidence. This was despite the negative cognitive anxiety experiences shown during the same time. The losers also exhibited a greater number of positive than negative confidence experiences.

Both groups of players used predominately emotion-focused rather than problem-focused coping strategies (Folkman & Lazarus, 1985). This replicated the finding from the first set. However, the losers used almost twice as many coping strategies than the winners. In light of their situation, having lost the first set, the losers may have felt more need to bring both their game and mental state to a greater level than the winners through the use of such strategies.

Interestingly, both the male winners and losers exhibited similar patterns for emotional response. They showed a greater number of positive emotional responses than the females, yet at the same time showed more negative emotional responses than the females. However, the losers demonstrated a greater overall negativity compared to the winners, with more than twice the number of negative experiences.

Both the winners and losers showed an equal distribution of positive and negative experiences for technical cognitions. There were however gender differences. The males, regardless of match outcome, had twice as many positive than negative technical cognitions compared to the females. They also experienced more task irrelevant thoughts, for example, focusing on past performances and wasted chances. It appears that such thoughts were not enough to affect overall match outcome for the winners, but may have impaired the losers performance.

More than three times as many key moments were identified by the losers compared to the winners. This is in line with the findings from the first set which found more than twice the number of key moments for the losers. The number of times the winners perceived to have momentum was less than was found for the first set, yet more than the losers. Both the winners and losers felt that their opponents had momentum on three different occasions. A number similar to the first set for the losers, yet exactly half for the winners. Therefore, although the winners felt they had momentum less in the second set compared to the first set, they also perceived their opponent to have less momentum.

#### *Post match time phase*

The winners displayed more than eight times more positive than negative experiences during this time phase. In contrast, the losers were four times more negative than positive. Such a finding is perhaps not surprising due to the fact that the losers did not win their matches.

There were no significant differences between the types of goals the players' set, regardless of whether they won the match or not. This is in direct contrast to the previous study, which found that task goals were set more often for successful performances and ego goals set more often for unsuccessful performances. This difference could be due to the nature in which the performance outcomes were measured. The first study used a subjective measurement of performance (successful and unsuccessful), while in this study, performance was carried out on a purely objective plane (won and lost). As

such, it did not allow for the individual interpretations of the performance to come through. Because of this, a player may have still perceived the match to be successful despite losing the match.

Gender differences were noted for both the winners and losers. For the winners, the females were three times more positive than the males. For the losers, the males were three times more positive than the females. In light of past research, which has suggested that males exhibit greater levels of self-confidence compared to females (Mahoney & Avenier, 1977; Jones et al., 1991), this finding was unexpected.

The attributions given by the winners for their performance were predominately internal in nature. They attributed their wins primarily to positive technical and tactical issues and positive mental state, including high confidence and perceived control. Interestingly, in spite of the fact that all the winners felt that training had gone well, only one player made reference to this as a cause of performance outcome. One player even stated that training had no effect on the match outcome. No reference was made to lack of injuries or fitness problems. All the internal attributions were controllable, with the majority of them being unstable in nature.

The only external attributions made were by one male, who felt a pep talk with an old coach helped him in his match and one male and one female player's brief reference to opponents' poor play. Opponent attributions were unstable and uncontrollable, for example, "*He didn't attack the net on his serve*".

The losers used a combination of internal and external attributions to help explain their loss. Three of the players, two males and one female, indicated that training had an effect on their performance. Two of the players had previously stated that training had not gone well in the week leading up to the match. The two females also cited lack of match practice. As with the winners, the all the losers attributed technical and tactical issues to their downfall, this time in a negative sense. Despite reference being made by three of the players about injury or fitness problems in the week leading up to the match, no

mention of this made in their attempt to explain their performance outcome. As was found with the winners, the losers' internal attributions were predominantly unstable and controllable in nature. These results partially support the previous study, where effectiveness of recent training was seen as important situational antecedents for performance.

Three of the players, two males and one female, attributed external factors, their opponent, for the cause of their performance. A total of 19 RDT's compared to only 3 RDT's from the winners. Indeed, there was a greater total number of RDT's in relation to causes for match outcome for the losers than for the winners (49 RDT's compared to 24 RDT's). This may have been due to the losers searching for more explanations to help satisfy their disappointment over their loss.

These findings suggest that the winners may be protecting their self-esteem through the use of internal attributions (Nisbett & Ross, 1980). Although findings from sport based studies have been equivocal with regards to self-serving bias, Mullen and Riordan (1988) carried out a meta-analytic review of studies examining this phenomenon and found that self-serving bias did exist. Grove and Prapavessis (1995) argued that past research has produced equivocal findings due to the failure to consider the ability level of the athletes. In their study on squash players of high and low ability, they found the high ability players internalised success more than failure. The findings from this the present study appears to be consistent with Grove and Prapavessis' (1995) work.

Gender differences were found for the types of attributions the players made. The males identified five times as many external attributions compared to the females (20 RDT's compared to 4 RDT's). There was a greater parity found for internal attributions, with the males eliciting 28 RDT's and the females 31 RDT's.

Research on gender differences and attributional responses have been equivocal. Some studies, such as Watkins & Montgomery (1989), have found that females exhibit self-defeating attributional patterns while males exhibit

self-enhancing patterns. In contrast, other studies have shown that gender is not significantly related to attributional dimensions for performance outcome (Russell, 1982; Biddle & Hill, 1992a, 1992b; Morgan, Griffin & Hayward, 1996).

However, the vast majority of research carried out in this area has examined non-elite athletes. It may be that in the elite populations such a gender difference may exist. In sport at its highest level, winning is often thought as being more important than playing well (Biddle & Hill, 1992a). For an individual sport such as tennis, losing may be seen as more detrimental to the males' ego than females'.

The findings from this analysis show distinct patterns of positive and negative experiences for winners and losers. For the winners, positive experiences outnumber negative experiences during all four time phases. In contrast, for the losers, the number of negative experiences is greater than positive experiences during two time phases. The data therefore points towards the existence not only of the phenomenon of psychological momentum, but also general momentum patterns within each performance outcome.

Despite the advances made with the use of content analysis in comparison to the statistical procedure, with the thoughts and emotions of the players being recorded, shortcomings were still evident. Due to the nature of the analysis procedure, quotes and paraphrases were taken out of context. In spite of the inclusion of contextual anchoring, such as tagging the quotes to identify the player and adding the score at the time which the quote was taken, each players' 'story' was lost. The synthesis between concepts was unable to be developed. For example, "*I felt too relaxed and wasn't really concentrating on what I was doing*". The story of momentum seemed to be incomplete. In addition to this, direct comparisons between players competing against each other could not be considered. Only broad evaluations could be made for winners and losers. To address these criticisms, case studies were carried out to try and gain a fuller picture of the momentum story.

## 4.5 Case Studies

## 4.51 Case Study One: Player 1 vs Player 2

- Score Sheet: 6-4 6-4

<u>Player 2</u>	<u>Player 2</u>	<u>Player 2</u>	<u>Player 1</u>	<u>Player 2</u>
0-15	15-0	0-15	15-0	0-15
15-15	15-15	15-15	30-0	15-15
30-15	30-15	15-30	40-0	30-15
40-15	40-15	30-30	40-15	40-15
		40-30		40-30
1-0	3-2	40-40	1-1	40-40
↓	↓	A-40	↓	A-40
<u>Player 1</u>	<u>Player 1</u>	40-40	<u>Player 2</u>	40-40
15-0	0-15	A-40	0-15	A-40
15-15	0-30	40-40	0-30	
30-15	0-40	A-40	0-40	3-4
40-15	15-40	40-40		↓
		40-A	1-2	<u>Player 1</u>
1-1	2-4	40-40		0-15
		40-A	<u>Player 1</u>	0-30
<u>Player 2</u>	<u>Player 2</u>		15-0	0-40
0-15	0-15	4-5	30-0	15-40
15-15	0-30	↓	40-0	30-40
15-30	0-40	<u>Player 1</u>		
15-40	15-40	0-15	3-1	4-4
30-40	30-40	15-15		
40-40		30-15	<u>Player 2</u>	<u>Player 2</u>
40-A	3-4	40-15	0-15	0-15
40-40			15-15	15-15
A-40	<u>Player 1</u>	6-4	30-15	15-30
40-40	15-0		30-30	15-40
A-40	15-15	<u>Player 2</u>	30-40	
40-40	30-15	15-0	40-40	4-5
40-A	30-30	30-0	40-A	
40-40	30-40	30-15		<u>Player 1</u>
40-A	40-40	30-30	1-4	0-15
40-40	A-40	40-30		15-15
A-40		40-40	<u>Player 1</u>	15-30
	4-4	A-40	0-15	30-30
2-1		40-40	0-30	30-40
		A-40	0-40	40-40
<u>Player 1</u>			15-40	A-40
15-0		1-0		
15-15			4-2	6-4
30-15				
40-15				
2-2				

• Graphical Representation

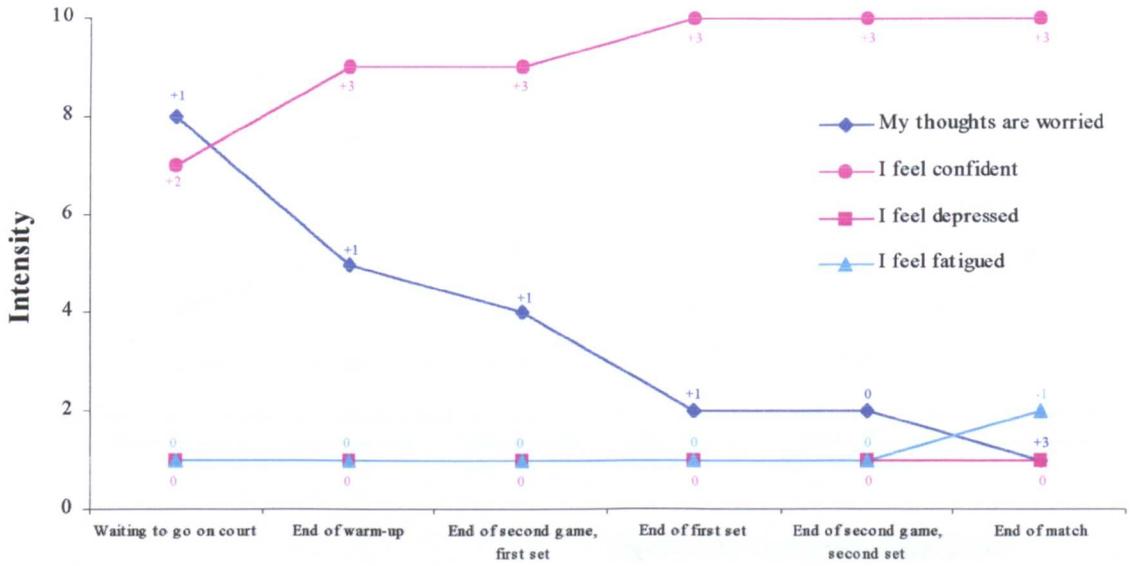


Figure 4.3a Case Study One: Winner

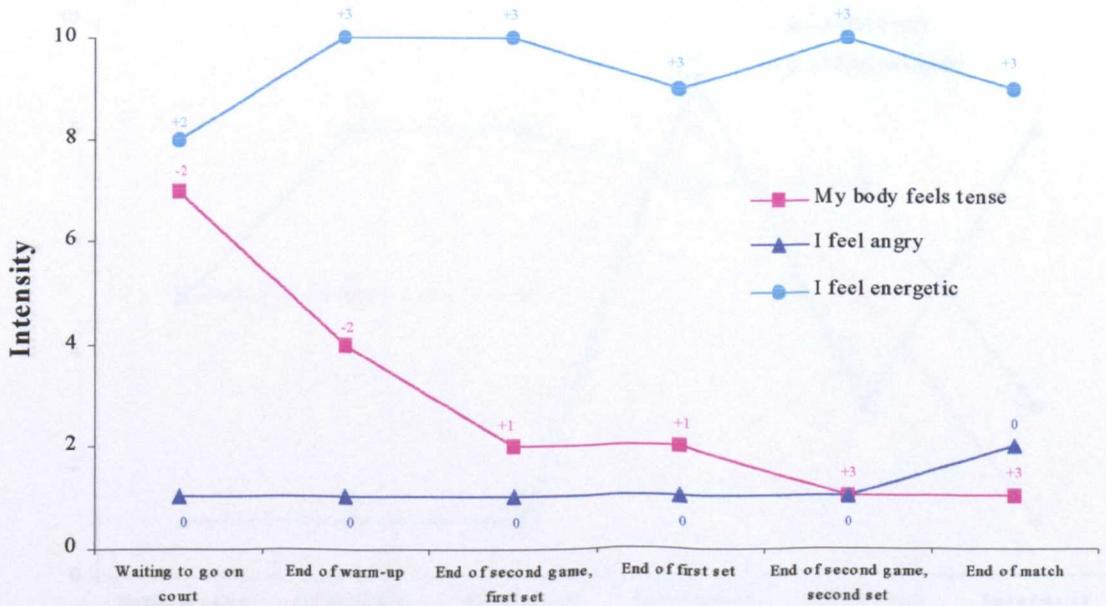


Figure 4.3b Case Study One: Winner

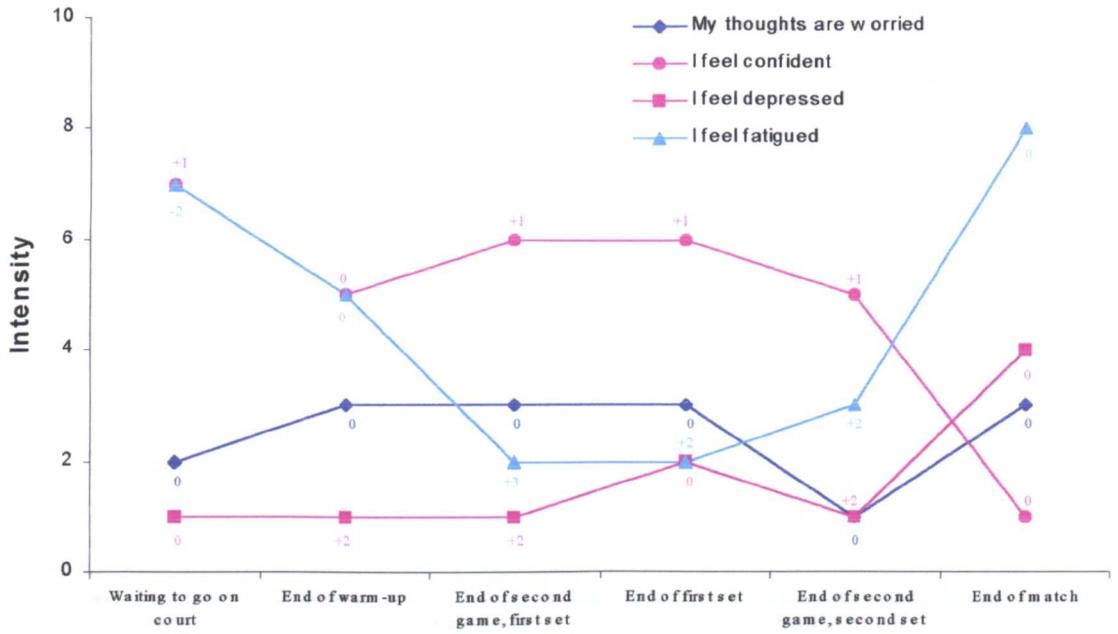


Figure 4.4a Case Study One: Loser

Figure 4.4a Case Study One: Loser

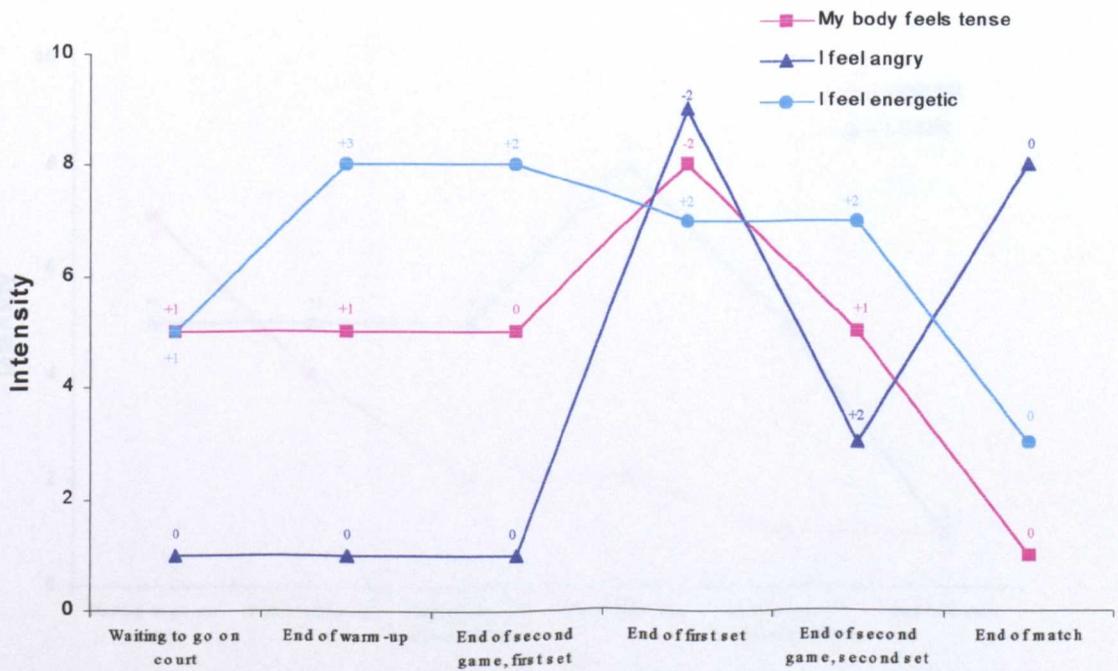


Figure 4.4b Case Study One: Loser

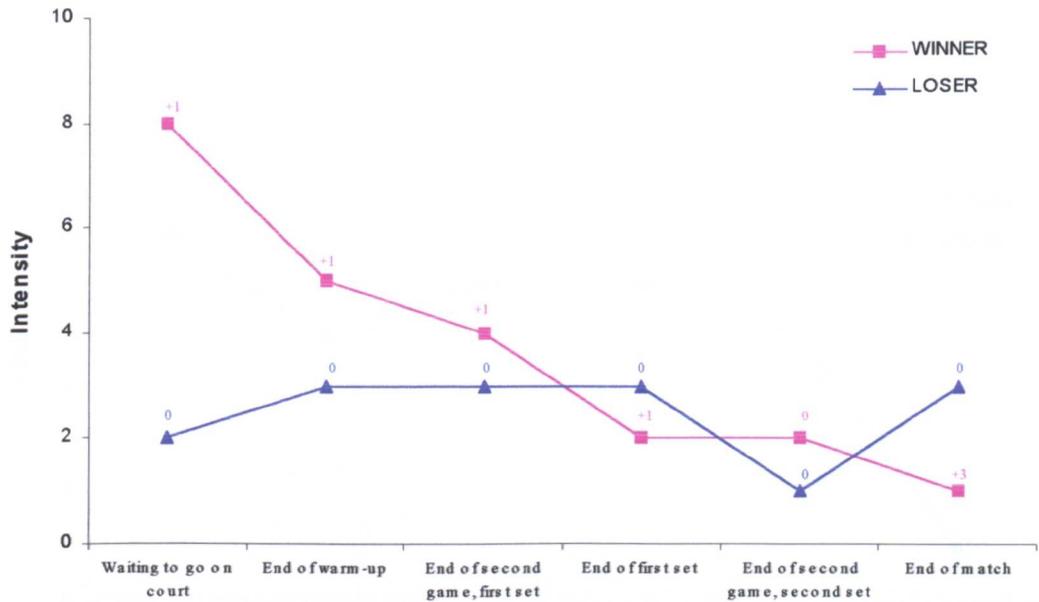


Figure 4.5 Case Study One: Cognitive anxiety comparisons

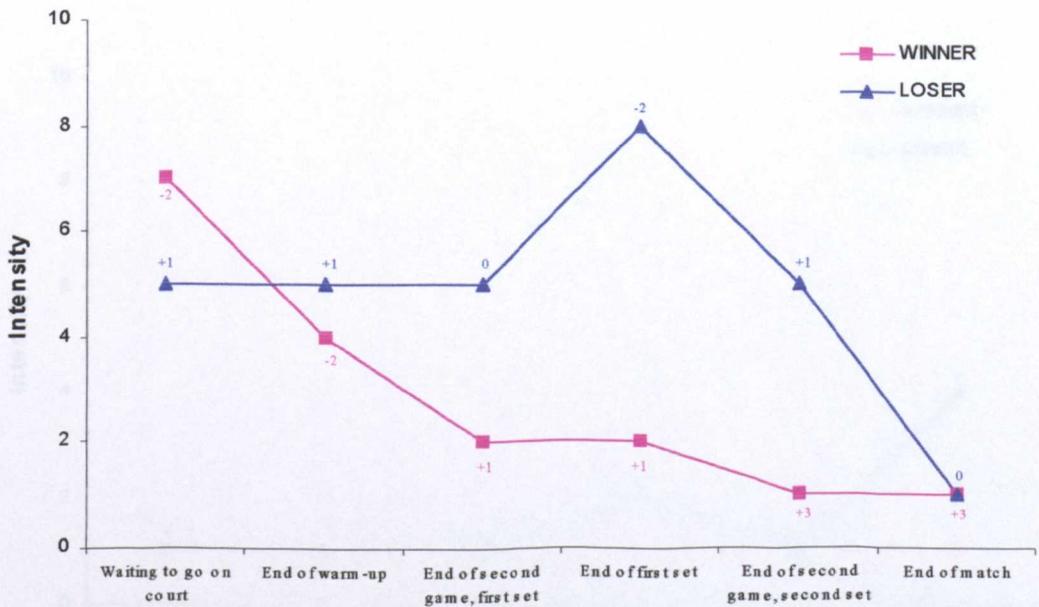


Figure 4.6 Case Study One: Somatic anxiety comparisons

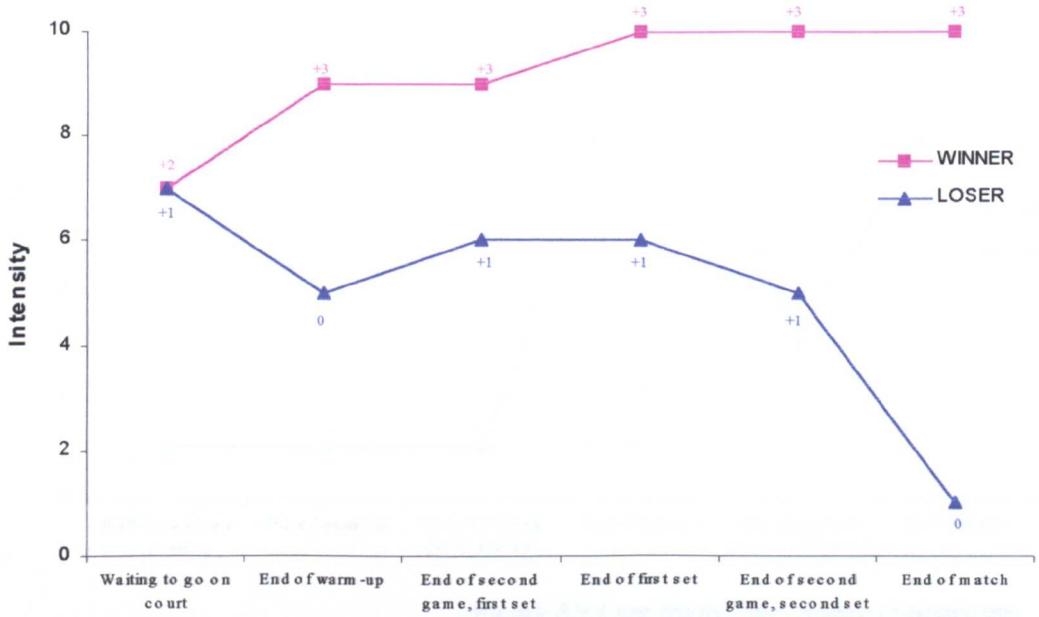


Figure 4.7 Case Study One: Confidence comparisons

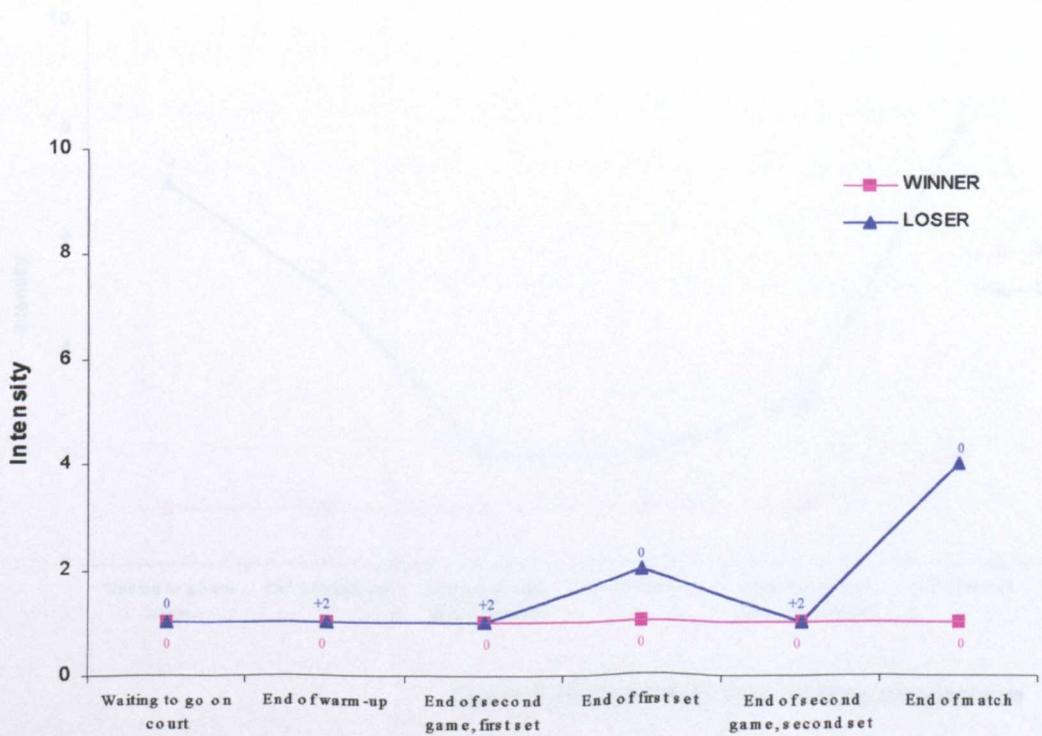


Figure 4.8 Case Study One: Depression comparisons

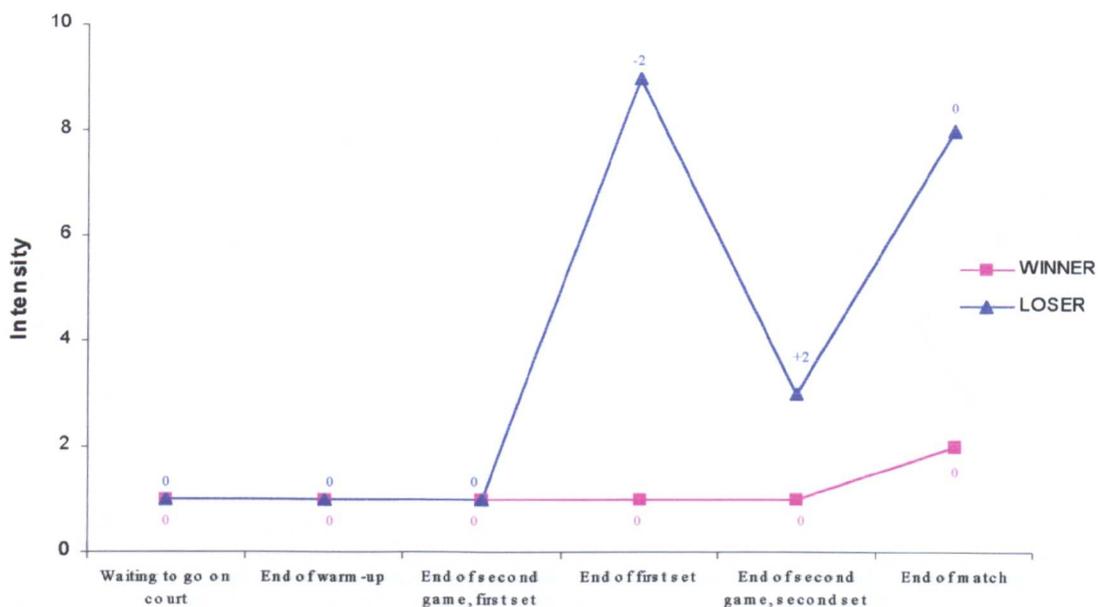


Figure 4.9 Case Study One: Anger comparisons

• Comparison of graphical data



Figure 4.10 Case Study One: Fatigue comparisons

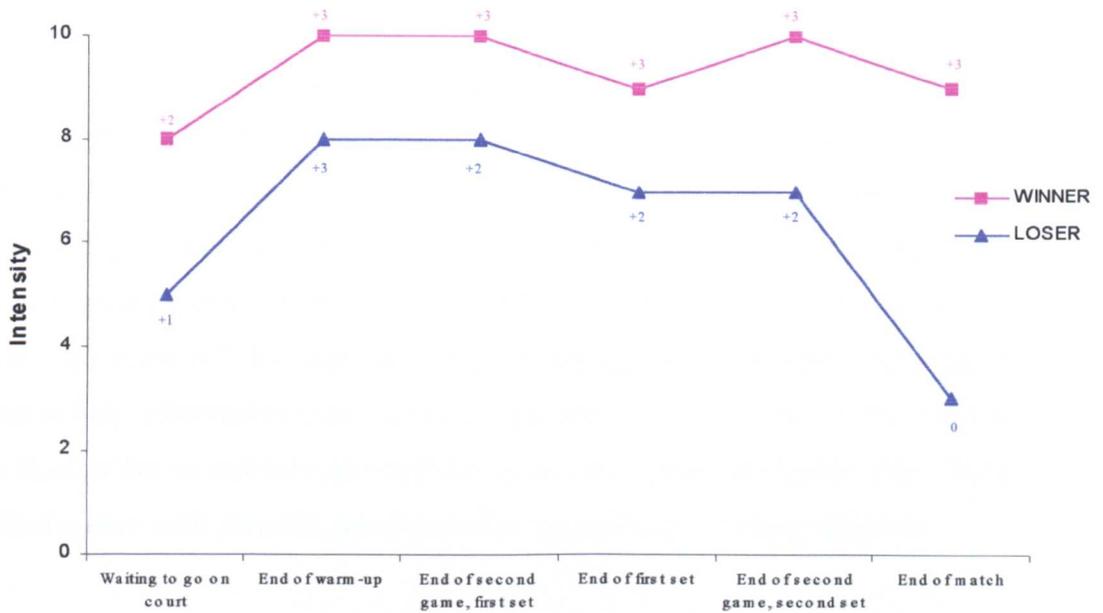


Figure 4.11 Case Study One: Energy comparisons

- *Comparison of graphical data*

Player 1: As the match proceeded, a divergency between cognitive anxiety and confidence occurred. As confidence increased and was maintained, cognitive anxiety decreased. Somatic anxiety intensity also decreased in a similar fashion to cognitive anxiety. Fatigue intensity was low until near the end of the match, when it increased. Energy remained high throughout the match. Depression and anger were rated as very low and were unchanged throughout the match.

Player 2: Cognitive anxiety remained low throughout the match, while confidence, on the whole, fluctuated from high to average until the end of the match where it decreased. Somatic anxiety followed a similar pattern to confidence. An inverted-U pattern was found for fatigue, while energy remained average to high until a big decrease at the end of the match. Anger rose dramatically at the end of the first set and end of the match. Depression remained low until a small increase at the end of the match.

- *Broad overview of match*

## **Player 1**

### **Pre-match**

Player 1 felt that training had been going well the week leading up to the match. She put this down to the lack of concerns off the court: *“Unless you’ve got problems outside of tennis, there’s no reason for me not to be training well”*. She rated the match as very important to her, and that this importance may have had a negative effect: *“I think it had a detrimental effect on my tennis, because I was a bit nervous”*. Her only goal was to win the match, and she had a game plan to help achieve this goal: *“I know [opponent] well, so I knew what I had to do against her in order to play better and to win...I knew my game plan...but I talked it over with [coach], just incase he came up with anything different”*.

Player 1 woke up excited on the morning of the match but had concerns about playing well: *“I was excited but also nervous. Worried that maybe I wasn’t going to perform well. Yes, I was nervous, butterflies and things...but I think in a good way because it made me aware of how I was feeling and how I had to be”*. When she arrived at the tournament site, she used various coping strategies to deal with these nerves: *“I just sort of took myself away from the surroundings and everyone talking [about the matches]”*. She also used self-talk to try and reassure herself: *“In my mind I’m always thinking, don’t put pressure on yourself. Don’t worry about it, it’s only a tennis match. I don’t know [if it worked]. I haven’t found another way that makes me feel better, so I suppose it’s working at the moment, but I was still nervous out on court”*.

Although she said she felt confident going into the match, as she was ranked higher than her opponent, she indicated that this also added pressure: *“This is a big tournament. You’ve got a higher rank than her. I do put a lot of pressure on myself”*. The pressure seemed to affect her goal orientation: *“Makes you very outcome conscious”*.

### **During match**

During the warm-up, Player 1 stated that she had calmed down considerably. However, she complained that she still felt a degree of physical tenseness: *“Your body feels sort of jellyfish...More in my arms. My legs get heavy and then my arms get wobbly”*. She perceived her opponent to be suffering from nerves as well: *“I did notice that she wasn’t very consistent at all...[It made me] a bit more confident, because then you see that obviously she’s nervous”*. By the end of the warm-up, she felt she had loosened off and was ready, both physically and mentally, for the match.

This coincides with the graphical data obtained from the questionnaire. Her anger, fatigue and depressed states were all rated as +1 on the intensity scale and 0 on the directional scale. Her cognitive and somatic anxiety both dropped in intensity from waiting to go on court. Interestingly, these drops did not result in a more positive perception for direction. Somatic anxiety remained at -2, while cognitive anxiety remained at +1. Both her energetic and confidence states increased in intensity and remained positive in direction.

By the end of the second game, first set, Player 1 continued to experience a drop in cognitive and somatic anxiety intensity. In particular, her somatic anxiety dropped resulted in a positive increase in direction, from -2 to +1. She commented during the second game that her physical condition had improved: *“I was moving up to [the ball]...My legs weren’t so heavy now”*. She also indicated a decrease in cognitive anxiety: *“It’s leveled now, not so nervous. Got the advantage and my returns are good”*. She felt that her level of confidence was still high: *“Pretty high. About the same as the start of the match”*. This was confirmed from the questionnaire data. Finally, her levels of anger, depression and fatigued remained the same as before. Indeed, there is no graphical change in any of these factors until the second set.

Having won the first set 6-4, Player 1 cognitive anxiety intensity dropped again, while the intensity of her somatic anxiety remained the same. No directional change was noted for either factor. Her confidence, although unchanged at +3 for direction, increased in intensity. These fluctuations were described in a

quote from the player: *“Relief. And, okay, now you’ve got the first set. A big part of the match is finished. I feel more relaxed. I feel like I can start to play properly now because I haven’t got the pressure. If the worst comes to the worst and I lose this set, we’re still levels”*. The only other graphical change was a slight drop in energetic intensity, but she still perceived this level as very positive, rating it as +3 in directionality.

At the end of the second game of the second set, Player 1 confidence and cognitive anxiety intensity levels were unchanged. The directionality of confidence remained at +3, while cognitive anxiety dropped slightly from +1 to 0 in direction. She described her confidence throughout the second game. At 30-0: *“Being confident now”*. At 40-0: *“Got an easy point, so I can gain a bit more confidence”*. She also felt that she had the momentum at this time. A factor which may be linked to her high level of confidence. Her somatic anxiety level decreased in intensity and increased in direction, from +1 to +3. During this second game, she stated that she felt more relaxed. At 15-0: *“Relaxed a little bit”*. At 40-15: *“Still fairly relaxed now”*. Despite no mention in the interview, the questionnaire data showed a slight increase in energetic intensity, though no change in directionality, remaining at +3.

### **Post-match**

On completion of the match, Player 1 experienced a slight decrease in intensity for energy levels, while exhibiting a slight increase in fatigue intensity. Depression remained unchanged throughout the whole match, for both intensity (+1) and direction (0). The intensity of her anger increased only marginally. This change could be linked to the rating she gave her performance: *“My concentration was going in and out, especially in the second set. And I didn’t play as well as I wanted to play...[I would rate it as] very, very average”*. Her anger appeared to have no effect upon her depression levels. Confidence levels remained constant over the whole of the second set, to the end of the match. This may be explained by the achievement of her goal, which was to win. She was also pleased that areas she had been working on in practice, had paid off during the match: *“One of the huge things that really pleased me...was that I*

*didn't feel that I'd played that well, but...I knew that there were things that...I was working on...[which] does actually help me".* Her somatic intensity level was unchanged from the beginning of the second set. Her cognitive anxiety intensity dropped slightly and became more positive in direction, from 0 at the start of the second set to +3. This seemed to reflect her interview data: *"Thank God that's over!...It was quite a daunting match and I didn't enjoy it. I didn't have to think about it any more"*.

She attributed her win to being the better player: *"I had more to hurt her on the day, tactically, technically and mentally"*. She felt that her training had no effect upon her performance outcome, but did concede that her confidence levels may have helped: *"Maybe I was more confident on the day to beat her, than she was to beat me"*. In winning the match, Player 1 clearly achieved her goal.

## **Player 2**

### **Pre-match**

Player 2 had sustained any injury three weeks before this match. Because of this, she felt that her training had been impeded: *"I hadn't trained that much because I was injured"*. However, she did compete in a tournament the week before this match and beat one of the top seeds.

Although not perceived as very important, she did want to do well at the tournament and in this match. She did not expect to win the match, but felt she was in a good position to challenge her opponent: *"I knew that I would be a dangerous floater...It was the kind of match that I look forward to because I'm sort of the underdog and I'm not expected to win. But I know I am capable of winning"*. She rated her chances of winning at 40:60. She set the goal of wanting to play her best: *"I just wanted to go out there and do my best really...Just sort of going to go and see how it went"*.

The morning of the match was spent trying to relax. As the match was later on in the day, she used strategies to switch off from tennis: *"I try not to think too*

*much. Because if I start thinking about things too much, then it makes me nervous...I stayed with friends...sort of chatted about they had been up to...Watched a few matches...popped into town...Just dossed about really. Just tried to switch off from it".* Her confidence remained high and her perceived pressure was minimal: *"I put some pressure on myself, but I know I can't be expected to win the [tournament]...When I'm on court, it's me...no pressure from anyone else".*

### **During match**

Player 2 experienced some somatic anxiety as she walked out onto court, but perceived this to be a good thing for her performance: *"A little bit of butterflies going onto court...It's probably a good sign. I mean it's something that shows that you care".* She was pleased to have got on court, after the long wait. At the start of the warm-up she complained of feeling a bit sluggish: *"I felt a bit rusty, but I was just trying to relax and keep hitting really".* She stated that she still felt a bit tense and began to have some doubts about her play: *"I was thinking I don't want to have a horror, 6-0 6-0".* As the warm-up went on, she felt that she was looser and was hitting the ball better. The data obtained from the questionnaire showed a slight increase in cognitive anxiety intensity, confirming the interview data, but the directionality was neutral, which suggests that the concerns of losing to love were not as detrimental as first suspected. Graphically, her somatic anxiety level remained constant in both intensity and direction. Her energy level increased in both intensity and direction, while her fatigue level decreased in intensity and increased in direction. Such an interaction mirrored the interview data. Her confidence level, she felt, was: *"About average".* Questionnaire data showed a dip in intensity for confidence from waiting to go on court, to the end of the warm-up. However, the intensity was rated as average, as stated in the interview data. Finally, her levels of depression and anger were rated as +1 and +2 and 0, respectively, for direction. She observed that her opponent was feeling anxious: *"I think she'd have been very nervous playing...I'd say the all the pressure's on her. She'd done well in the summer...and I was quite a dangerous floater".* Although she felt the

pressure was on her opponent, she did not perceived this as having any effect on her.

At the end of the second game of the first set, Player 2 had very few fluctuations in her questionnaire data. Somatic and cognitive anxiety, anger, depression and energy intensity levels were all unchanged from the end of the warm-up. Her fatigue intensity level dropped from 5 to 2 and direction increased from 0 to +3. This was a point of interest as her energy intensity remained constant. There appeared, therefore, to be no interaction between these two factors. The lack of fluctuations for the five factors, may be due to a comment she made at the end of the first game: *"When I'm winning then I don't really think very much as all. I'm on automatic pilot"*. Her confidence intensity and direction levels increased slightly. This may have been due to holding her serve in the first game: *"Feeling more confident now. Got the game under my belt"*, and having played some good points in the second game: *"A shot like that definitely gives you confidence"*.

At the end of the first set, Player 2 experienced fluctuations in four of the seven factors. Cognitive anxiety, confidence and fatigue intensity levels remained static. The greatest increase was for anger, which increased from 1 to 9 in intensity and 0 to -2 in direction. This shift was displayed in her interview data: *"I was pissed off...I'm just annoyed...angry"*. She also indicated an increase in somatic anxiety, from a 5 to a 8 in intensity and 0 to -2 in direction: *"Feeling tense definitely and that was probably not good"*. Her slight drop in energy intensity, from 8 to 7 may have accounted for her admission that she was not moving well around the court during the last game in the set: *"I'm making mistakes...not moving"*. The final fluctuation was for depression, which increased from 1 to 2 for intensity and +2 to 0 for direction, suggesting that it had little effect for her. This seemed to be borne out in a comment she made at the end of the set: *"I don't feel depressed, I feel angry"*.

At two all in the second set, energy intensity was the only factor not to fluctuate, remaining at 7. The greatest fluctuation, both for intensity and direction, was in anger. Intensity had dropped from 9 to 3 and direction

increased from -2 to +2. This drop in intensity coincided with a drop in intensity for both cognitive and somatic anxiety. The interview data confirmed this: *"I've forgotten the frustrations of the first set...[I'm] not really worried...I did feel tense, but less tense than I did before"*. Confidence and depression both decreased in intensity by one point on the Likert scale; Fatigue intensity increased by the same margin. No comments were made by Player 2 about these fluctuations.

### **Post-match**

After losing the match, Player 2 experienced an increase in intensity for cognitive anxiety, fatigue, depression and anger. The greatest increase being for fatigue and anger, both of which increased by threefold. Although Player 2 did not specifically indicate feeling of fatigue in her interview data, she did express her anger about the match outcome: *"Pissed off...I had opportunities and I just wasted them"*. Her increase in fatigue may be related to the decrease in intensity for energy, which fell by five points. Confidence intensity dropped and so too did somatic anxiety. A point of interest is the directionality for all seven factors. Regardless of their ratings for the last time period, at the end of the second game of the second set, Player 2 rated them all at 0 at the end of the match. This suggests that despite fluctuations in their intensities, her cognitive appraisal created a neutral perception.

She rated her performance as average: *"I'd say five...very average"*, and attributed her loss primarily to internal factors: *"I'd say I probably lost the match. I mean she played well at times but I basically gave her points. The important points in the match...[It was down to] lack of match play and practice...Just rustiness really"*. She did not accept the fact that her injury had any bearing on the match outcome: *"My preparation hadn't been ideal because of my injury...but I mean...I'd just put it down to lack of match play"*. Her goal of wanting to play her best, was not achieved.

- *Review of key moments*

**Table 4. 5 Study one summary of key moments**

<b>PLAYER 1 vs PLAYER 2</b>	
<b>PLAYER</b>	<b>SCORE</b>
<b>FIRST SET</b>	
Player 2: Key game	0-1
Player 1: Key point	0-1/15-0
Player 2: Momentum up and down	1-1/40-40
Player 1: Momentum with self	2-2
Player 1: Lack of momentum	2-3
Player 1: Momentum with opponent	2-3/0-30
Player 2: Key game	3-4
Player 2: Key point	4-4/0-15
Player 2: Key game	4-4/40-40
Player 2: Key point	4-4/40-A
Player 2: Key game	5-4
Player 2: Key point	5-4/0-15
Player 1: Momentum with self	6-4
<b>SECOND SET</b>	
Player 2: Key game	0-1
Player 1: Momentum with opponent	0-1
Player 1: Momentum with self	1-1
Player 2: Changes in momentum	4-1
Player 2: Key game	4-2
Player 1: Changes in momentum	4-2/15-40
Player 2: Key game	4-3
Player 1: Momentum with opponent	4-3/0-40
Player 1: Loss of momentum	4-3/0-40
Player 2: Key game	4-4

**First Set****Game 0-1****Player 2 serving**

It was important for Player 2 to hold her serve in the first game of the set. She viewed this game as one of the key games in the match. She felt that she was still suffering from some nerves, but not enough to disrupt her play: *"I'd be a little bit nervous, but not anything silly"*. When she missed some first serves, she attributed this to a combination of poor technique and lapse of concentration: *"Just bad technique. The throw-up was lack of concentration. It wasn't down to nerves"*. Having held the game, she increased her confidence and began to think ahead to the next game: *"Feeling more confident now. Got the first game under my belt, name on the scoreboard. Let's see what she's got to offer on her serve"*.

Although Player 1 did not feel that this was a key game, she was still disappointed in losing it. Her goal was to break her opponents serve and play some good points. In failing her short term goal, she attributed it to her nerves: *"Just pushing [the shots] too far...You see, to that one [15-30], I didn't move my feet or anything...My legs were still heavy, arms still a bit wobbly. Just not into the match"*. Going back to the chair, Player 1 conceded it was not a good game, however, she tried to focus on the next game: *"I didn't think a great deal. It wasn't one of my best games. I'd be thinking now about my first service game. I'd be a bit more easy because I'm serving"*.

**Game 1-1****Player 1 serving**

Player 1 saw the first point as key to the outcome of the game: *"It's quite important to win the first part of the game"*. Going up to serve for this point, she experienced negative emotions: *"Panic, mostly"*. However, she won the point, which she felt helped her to calm down a bit. After winning the game, she felt that her feet were not as heavy as in they were in the first game, and that she had settled down into the match: *"It's levelled now, [so] not so nervous. Got the advantage and my returns are good. It felt good to get that game under my belt. [My confidence] is pretty high"*. Despite this confidence, she still had some

concerns about her opponents serve though: *“Her first serve can be quite difficult to return. Especially when you’re nervous and your feet aren’t moving”*.

Player 2 explained how her match cognitions would change, depending upon how well that match was going: *“If I’m winning, I switch off. I’m on automatic pilot...It’s only when I’m losing or it’s a very tight match, where I have to think I have to do different things in order to change things”*. Although Player 2 lost the game, she expected her opponent to hold serve, so was not disappointed with the outcome. Indeed, the only point that she won, at 15-15, helped her confidence level: *“Definitely gave me confidence. It was a long rally. I was quite clever to hit the baseline”*.

## **Game 1-2**

### **Player 2 serving**

Player 2 felt pressure to hold serve in this game. She felt that she relied on her good serves to carry her through her matches: *“My serve is one of my strengths...it helps to win a load of points... and if I lose my serve...”*. At 15-40, she focused on staying positive: *“Not sort of panicking too much, because I mean, it’s only two points”*. She executed two good first serves and drew the score level at 40-40. This helped to increase her confidence. She traded points with her opponent, playing six advantage points, before eventually winning the game. She felt that the momentum was shifting back and forth throughout the game. It was not helped, she felt, by the lack of match play and its consequences: *“[I wasn’t] moving my feet, which was down to lack of match play. I’m feeling a bit stiff...I was a bit tighter because of the stiffness in the arm. I felt I lost my rhythm slightly”*. She went on to explain that because of this, she did not feel in control of the match: *“I couldn’t dictate what I wanted to do”*. Winning the game on the third game point, brought relief to Player 2: *“Thank God for that!”*. She reflected on the game long enough to give herself credit for her serves: *“At 15-40, I hit good serves. A lot of good serves in that game, so”*.

Player 1 sensed that her opponent was under pressure: *"I though she was really nervous"*. At break point, at 15-40, Player 2 again noted her opponent's nerves: *"Now she's really under pressure. That's her first game with really a lot of mistakes...She's still making errors, which shows she's really nervous"*. During the six advantage points, Player 1 experienced fluctuations, not specifically in momentum, but in mood state. Losing her first advantage point: *"Good serve. That can be quite annoying. Just annoying. It didn't really affect my confidence"*. Losing the deuce points: *"It's frustrating. You just want to finish it off. Sometimes you make an unforced error. Frustrating"*. She reflected on the game when she sat down at change of ends. Using self-talk, she tried to get herself in a more positive frame of mind: *"If I get down on myself in my head, then I do try and step out and look down and see what's happening, and try and be realistic"*.

### **Game 2-2**

#### **Player 1 serving**

Player 1 went on to win this game quite comfortably. She perceived that she had momentum and went on to explain why she felt: *"I'd say [momentum] was lying with me. I just won the last game and I got very close to breaking her [on the last game]. So she hasn't got close to breaking mine"*. The outcome of the last few games, in conjunction with her perceived momentum, allowed her to view the match very favorably: *"From here I can see that I will win the match"*.

Player 2 had very little to say about this game, except that she felt her opponent's play with still a bit patchy: *"She's hitting some good shots, but she's hitting some bad ones as well"*. She expected her opponent to hold serve and did not perceive the momentum was with her opponent.

### **Game 2-3**

#### **Player 2 serving**

Player 1 felt that she had lost a degree of concentration during this game. At 15-0: *"I'd be a bit annoyed with myself. Maybe concentrating less. Didn't get right back into it, because I won my serve I'd be thinking it was a good game. Maybe a bit too relaxed"*. She felt that momentum was neither with her nor her

opponent: *"I wouldn't say it was either way. It depends a lot on this [next] game. See how I concentrate here"*. She seemed to link momentum with her concentration level: *"Concentration is a big factor. Just realising when you have momentum and holding onto it, rather than having momentum and thinking about something else entirely. It's a big part of the game"*.

Player 2, although frustrated with her errors, had very little to say on this game. She had the game and being in the lead, switched off at the change of ends. No reference was made to momentum.

### **Game 2-4**

#### **Player 1 serving**

Player 1 highlighted a shift in momentum at 0-30: *"I'd say a momentum change there. It's shifting back to [opponent]"*. She linked this shift in momentum and the loss of the game, to a lack of concentration: *"A bad game. I'd be pretty annoyed with myself about that. Just not concentrating. Why aren't you concentrating? You have to concentrate now, 2-4"*.

At 0-30, Player 2 was aware of her opponents annoyance: *"I'm aware of [her annoyance], but I don't pay much attention to her behaviour. It doesn't much difference"*. It seemed that Player 2 was unaware that her opponent felt she had lost her momentum and that she had gained it. In breaking serve, Player 2 thought her opponent had given the game to her: *"[I've] not done much. She's basically given me the points. She gave me that game"*. She did not feel that she had gained any momentum, but did indicate that her confidence level was affected in a positive direction: *"I was feeling pretty confident. I had a break and I was 4-2 up"*.

### **Game 3-4**

#### **Player 2 serving**

Player 2 felt that this was a key game in the set. She had broken her opponents serve in the last game and wanted to consolidate by holding her own serve. When she lost the game, her thoughts focused back on the previous games: *"Frustration having got the advantage and then let it slip. Been disappointed"*

*with that...I jumped up the steps to fall back down again. I've got to be ready to start all over again".*

Player 1 broke her opponents' serve and perceived her concentration to have improved. She explained the use of self-talk, to gain an increase in her concentration: *"The way I talk to myself when I'm playing a match. It's as if someone else, my coach, [is talking]. I'll actually speak to myself, saying my name. Say, this isn't good enough \*, you've got to start concentrating".* She did not become complacent about the return of her concentration: *"3-4, still not definitely back in it yet, though. So keep concentrating...It's improved, but I still need to have the consistency there. I can't forget about it because I've played one reasonable game. I certainly can't allow myself to think it's easy".*

#### **Game 4-5**

##### **Player 2 serving**

Player 2 perceived this to be another key game in the match. Her opponent had won the previous game and pulled the score back to 4-4. The situation was starting to tell on her: *"Bit of pressure on me now. Feeling a bit tight".* Losing the first point, on what she perceived to be a bad line call, was seen as one of two key points in the game. When she reached 15-15, her thoughts turned to the lost first point: *"That was quite a big point, because I would have been 30-0 there, instead of 15-15. That was a very big point...The first point makes you feel more confident. Instead [I'm] on the defensive a little bit. I'm catching up".* The length of the game, in combination with eventually losing it, gave added significance to the lost point at 0-15: *"That point would be even more important because of the length of the game. I [was] 40-30 up, which means I would have won the game! So I'm having a long game, which I eventually lose".* Player 2 found her standard of play fluctuated during the game. She internally attributed for the loss of points: *"I'm quite negative now. I always think it's my fault that the other person's winning, as opposed to them actually playing well".* The second key point was during the second break point: *"That is a good serve and this is a shocking forehand! That was what I lost the game on. I remember that because it was a good serve. I lose it here now".* She blamed the loss, once again on internal attributions: *"My technique wasn't very good. I got a bit*

*excited and I came in and went down on it. I mean that was terrible*". The loss of the game left her in a negative state of mind: *"I'm just pissed off right now...Just annoyed at that game"*. She did however, maintain her confidence in coming back in the set: *"Never feel that I've lost that set. Not until the last point in the set"*.

Player 1 was relieved to have held onto her serve in the last game and wanted to stay positive in this game, to be in with a chance to break. At no times during this game, did Player 1 feel that there were any key points. However, like Player 2, she felt that her game was fluctuating. At 15-15: *"It's kind of off and on again. There's no real pattern to the points"*. She felt that at times her mind was on the past, for example, at 30-40: *"I don't think I'm in the present now, actually. I think I'm not really concentrating that well...I shouldn't need to be forced...to make myself concentrate"*. At 40-A, the lapses in concentration were having a debilitating effect on her: *"I'm very annoyed with that. I've played all good strong points and suddenly to throw in that...You can tell it's going round in my mind. She's an advantage up, she's more relaxed"*. It was only after winning the game, that she analysed where her lapses of concentration occurred: *"It's the advantage points I'm playing well, because I have to play them well or I'm going to lose the game. I'm forcing myself to do it. So maybe...I'm relaxing and thinking, it's deuce here, well okay. The in the advantage points, it's Oh God! The advantage points are really good and the deuce points are longer, we're rallying more"*. Player 1 won the game on her second break point.

#### **Game 6-4**

##### **Player 1 serving**

Player 2 was annoyed at having lost the last game. Her negative mental state: *"I'm frustrated and I'm irritable. I'm wanting to play a couple of good point. I'm pissed off!"*, was lifted temporarily when she won the first point in the game, a key point for her: *"That's what I needed, definitely"*. However, she went on to lose the next four points, the game and the first set. She described the spiral of negativity she experienced: *"More irritable and frustrated. Probably not thinking about it consciously, but a little bit pissed off about that"*

*[last] game. In making the mistakes, I sort of increased the frustration". She indicated how this negativity affected her play: "Three backhands I've missed in that game and it's supposed to be your best shot. That's dire". Her thoughts, having lost the set, were on the lead she had lost earlier in the set: "Pissed off. Christ, 4-2 up serving, then to get back to deuce. Dodgy line call, two sitting shots. Just given it away".*

Player 1 felt relieved to have held onto her serve to win the first set. She perceived that the pressure was off her now and she could relax: *"A big part of the match is finished. I feel more relaxed. I feel like I can start to play properly now because I haven't got the pressure. If the worst comes to the worst and I lose this set, we're still levels...I think my game will change now...I'll move around easier".* Player 1, in winning the first set, felt that she had the momentum.

## **Second Set**

### **Game 0-1**

#### **Player 2 serving**

Player 2 felt this game was a key game in the match. She described the importance of it: *"First game in the set is massive. Especially the second set. Having lost the first one and lost the last four games...I need this game to get over [losing the last set]".* She allowed two game points to slip away, but won the game on the third: *"It seemed like a long game. Three deuces. Third time lucky".* Winning the game helped her to restore some confidence in herself: *"That would have been good for my confidence. That made quite a big difference".*

Player 1 experienced yet another lapse in her concentration during this game. She also highlighted the fact that she wasn't as relaxed as she wanted to be, despite her comments after the last set: *"Annoyed because I'm not concentrating. Probably not relaxed".* She felt that her opponent had managed to relax and increase her level of play: *"I think \* is now quite relaxed. She's stepping up her game".* She attributed her loss of the first game in this set on both internal and external factors: *"I shouldn't have lost that game...obviously*

*concentration is lost again... But she was serving such a great one...She relaxed a bit as well, so she'd raised her game".* Having lost that game, she perceived the momentum to be lying slightly with her opponent: *"...but not a great deal"*.

### **Game 1-1**

#### **Player 1 serving**

Player 1 regained her concentration and went on to win the game, to level the score. She felt she had relaxed in this game and also thought her opponent looked relaxed. Having won the game, she perceived the momentum to be with her.

Player 2 was looking to break her opponent in this game. The confidence she gained from winning the last game gave her the impetus to keep thinking positively. However, she lost the game and attributed it to lack of match play: *"Shots like that are through lack of tennis balls. I'd probably feel quite embarrassed about that. Crap game"*. Losing the game did not dishearten her, but she did admit to feeling tense.

### **Game 4-1**

#### **Player 2 serving**

Having lost the last two games to love, Player 2 wanted to get back into the match. She gave herself credit when she won a point, for example at 30-15: *"That was a good shot \*"*, but was aware that she was not playing as well as she had hoped: *"It's all going very pear-shaped at the moment"*. When she lost the game, she used self-talk to urge her on: *"Come on, let's make the score respectable. Get a few more games. See what happens"*. She highlighted that this game elicited a bit change in momentum.

Player 1 sensed that her opponent was upping her level of play. At 30-15 she began to think more about the types of thoughts she was experiencing: *"She's playing a bit better now. Putting a bit more pressure on. So that will kind of make me think a bit...making myself aware of how my mind's been working the last couple of games, if I'm starting to switch off at any stage"*. She concluded

that her level of focus had gone down in comparison to the last couple of games: *“Last couple of games I was focusing really well. This game, not so much. Kind of in and out...still thinking about tennis, but it’s not really intense”*. When she won the game on the advantage point, her thoughts strayed into the future: *“Thinking, okay, continue this and you’ve won it. But I might also be jumping ahead too much and thinking, okay, two games and you’ve won this”*. She tried to use self-talk to bring herself back to the present: *“I don’t block it out. I talk it through to myself, sort of say, well no, that’s not the case because you know what can happen in those situations”*. Although her confidence levels were up, she made no mention of any perceived momentum shifts.

#### **Game 4-2**

##### **Player 1 serving**

Player 2 stressed the need to win this game and its importance in the match: *“Fairly important, yeah! I need to break her.”* She broke her opponent and won the game quite comfortably. This gave her some extra confidence: *“A little bit more confident. Okay \*, come on. Let’s see if you can hold your serve now”*.

Player 1 felt the pressure had eased off her coming into this game. It was because of this lack of pressure she felt she lost her serve and the game: *“[I] probably wasn’t so intense because I’ve relaxed a little bit. Because I’m relaxed...[I] definitely lost concentration”*. At 0-40, for example, errors started to creep in: *“Just not focusing well”*. Although she did not perceive this to be a key game, she was very disappointed in losing her serve: *“Be annoyed there. Just threw it away”*.

#### **Game 4-3**

##### **Player 2 serving**

In winning the last game, Player 2 felt that this was another key game. The confidence she gained from breaking her opponent allowed her to be more positive in this game: *“I’ve done something worth being positive about”*. Although she felt she was playing well, indeed increasing her level of play: *“I’ve got a bit better. I’m much better than in the game when I lost the first set.”*

*I've gone up again to how I was in the beginning of the first set", she maintained that she was winning because of her opponents poor play: "The thing is though, it's mainly her making mistakes here. I'm not making as many mistakes, but she's making more, definitely...which is why I'm winning games". She felt that there were times during the game where she did not take her chances. At 40-40: "It's like you've got a little gap to come into there and you're not wanting to take it. Come on!". These losses of perceived opportunities caused her to become negative: "It's going very pear-shaped". She did utilise positive self-talk to win game point: "Come on now \*. She can't be feeling great at the moment. Let's try and take advantage of it". Her positive self-talk continued after winning the game: "That's the way now. Back in the game now. Let's see what we can do. This game the pressure's on her. Come on!".*

Player 1 sensed there was more pressure on her in this game, than there had been in the past. She also sensed that her opponent was starting to relax: *"\* is relaxing now because she has nothing to lose, really. Two-four down, the match is nearly finished. Maybe she can sense a little bit of change in momentum". This perceived change in momentum appeared in her self-talk: "She can feel the change. You're going to have to do something about it". Despite pulling back to deuce, Player 1 was still having problems with her concentration: "That's given me confidence, but it's still not enough. I'm focusing on match point". Reflecting back on the lost game, she felt that she had allowed her opponent back into the match: "That was a bad game...What a waste. Didn't play very well at all. I'm letting her back in". She was aware of the need to improve her mental state: "I'm not working probably hard enough on the court...mentally".*

#### **Game 4-4**

##### **Player 1 serving**

This was the final key game for Player 2. She felt the pressure was on her opponent to hold serve: *"She's lost two game on the trot. I'm creeping back. I'm never going to give up. She knows that. So she's got to go out there and hit good shots, because I'm not going to give it to her". Having this positive mentality allowed her to relax a bit more. She reached 40-0 and felt she was*

playing well. She seemed to attribute this to focusing on each point and not jumping ahead: *“Very much, one point at a time. Focus on each point”*. The two points she lost in this game, she saw as being down to her opponents good play, rather than anything she did wrong: *“She’s had to come out and hit two good points”*. Pulling the set back to 4-4, having been 4-1 down, gave Player 2 a great deal of confidence: *“Confidence feeling a lot better. I’m back in the game again. The game’s on. So we start again here, now. I’m back on the same step”*.

Player 1 felt more pressure on herself in this game. At 0-40, she sensed that things had changed: *“Mentally things have definitely changed. It’s swung back to \* and I really need to start concentrating. I lost [momentum] and then she gained it. She can probably sense that from me”*. She lost the game on her serve and this had a detrimental effect upon her level of confidence: *“[My confidence] is not that high. It dropped quite quickly in three games, because I didn’t play them very well”*. Despite the drop in confidence, Player 1 eventually went on to win the match.

- *Summary of case study one*

Distinct differences were found for the graphical data for both players. The results from Player 1 exhibited a decline in cognitive and somatic anxiety, an increase in confidence throughout the time phases. Feelings of anger, depression and fatigue remained low, while levels of perceived energy were high. In contrast, Player 2 data indicated peaks and troughs for all seven factors throughout the same period.

When data for each factor were analysed for direct comparison, results showed divergent patterns. These tended to be more positive in direction for the winner (Player 1) and more negative for the loser (Player 2). However, interestingly Player 1 showed higher levels of cognitive anxiety for four out of the six different time phases.

Four games during the match went to two or more deuces. Each of these games was on Player 2's serve, of which she held and won three of them. Player 1 indicated that she experienced a decrease of concentration during three of these lost games, in particular on advantage points, and during other times highlighted as key moments. This loss of concentration was associated with an increase in perceived pressure, negative emotions and either an over relaxed state or not being relaxed enough. Player 2, in winning three of these games indicated an increase in confidence.

Player 2 identified ten key moments during the match, either points or games and won six of them. In contrast, Player 1 only identified one key moment, which she won.

The key issues emerging from the data appeared to be maintenance of concentration for Player 1 and stability of factors such as confidence and energy for Player 2.

4.52 Case Study Two: Player 3 vs Player 4

- Score Sheet: 6-3 6-3

<u>Player 3</u>	<u>Player 3</u>	<u>Player 3</u>	<u>Player 3</u>	<u>Player 4</u>
15-0	0-15	15-0	15-0	0-15
30-0	0-30	30-0	30-0	0-30
40-0	15-30	30-15	30-15	15-30
	15-40	30-30	40-15	30-30
<b>1-0</b>	30-40	40-30	40-30	30-40
↓	40-40	40-40		40-40
<u>Player 4</u>	A-40	A-40	<b>3-1</b>	40-A
0-15			↓	40-40
15-15	<b>4-1</b>	<b>6-3</b>	<u>Player 4</u>	40-A
30-15	↓	↓	0-15	
40-15	<u>Player 4</u>	<u>Player 4</u>	15-15	<b>3-6</b>
	15-0	15-0	30-15	
<b>1-1</b>	15-15	30-0	40-15	
	15-30	40-0		
<u>Player 3</u>	30-30	40-15	<b>2-3</b>	
0-15	40-30	40-30		
15-15		40-40	<u>Player 3</u>	
30-15	<b>2-4</b>	A-40	0-15	
40-15		40-40	15-15	
	<u>Player 3</u>	A-40	15-30	
<b>2-1</b>	15-0	40-40	30-30	
	15-15	A-40	30-40	
<u>Player 4</u>	30-15	40-40	40-40	
15-0	30-30	A-40	A-40	
30-0	40-30			
30-15		<b>1-0</b>	<b>4-2</b>	
30-30	<b>5-2</b>			
30-40		<u>Player 3</u>	<u>Player 4</u>	
40-40	<u>Player 4</u>	15-0	15-0	
40-A	15-0	30-0	30-0	
40-40	15-15	40-0	40-0	
40-A	30-15	40-15		
	30-30		<b>3-4</b>	
<b>1-3</b>	40-30	<b>1-1</b>		
			<u>Player 3</u>	
	<b>3-5</b>	<u>Player 4</u>	15-0	
		15-0	30-0	
		15-15	30-15	
		30-15	40-15	
		30-30		
		30-40	<b>5-3</b>	
		<b>1-2</b>		

• Graphical Representation

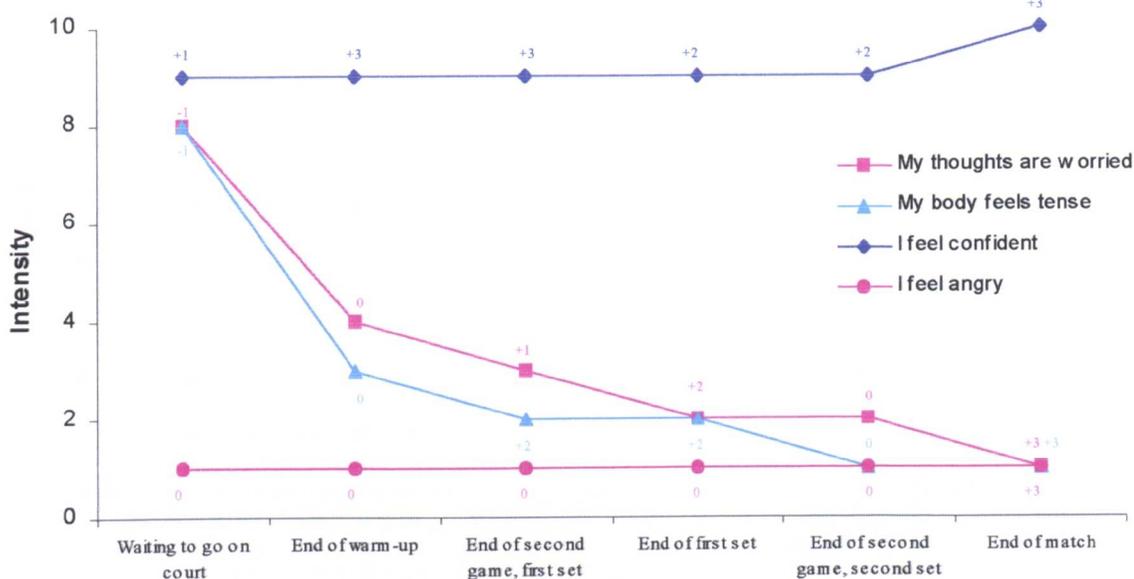


Figure 4.12a Case Study Two: Winner

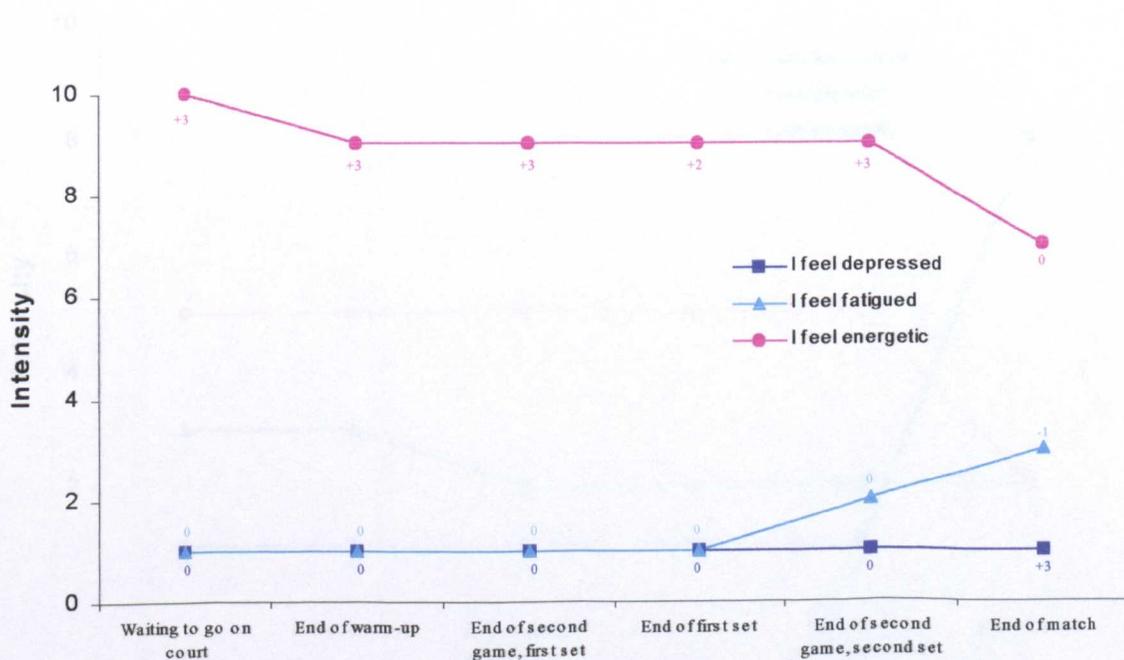


Figure 4.12b Case Study Two: Winner

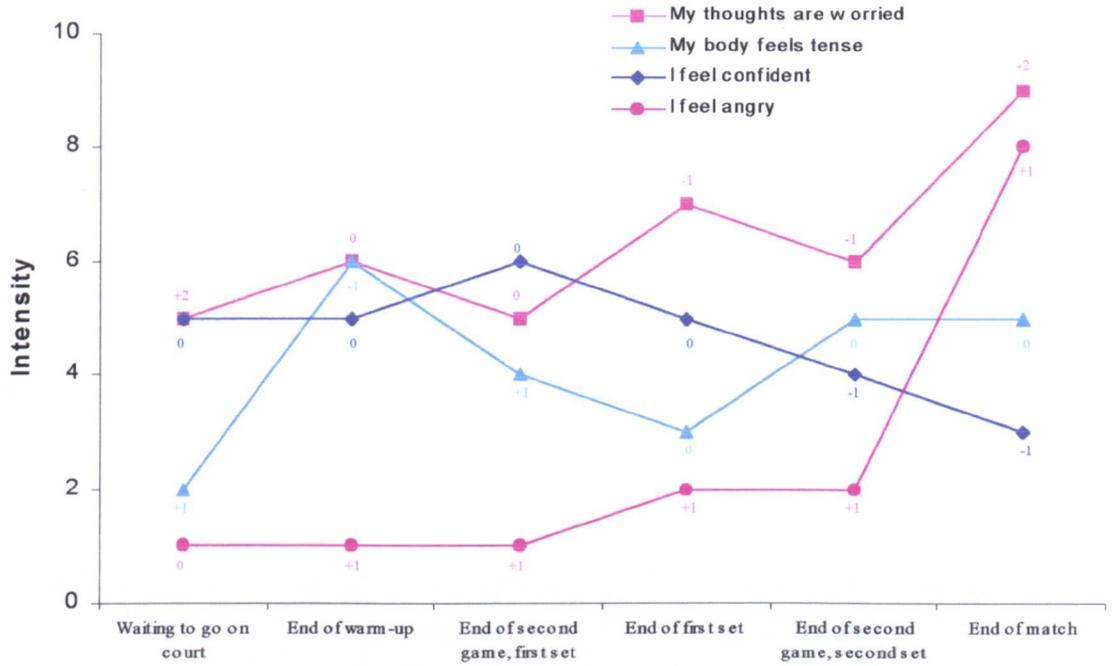


Figure 4.13a Case Study Two: Loser

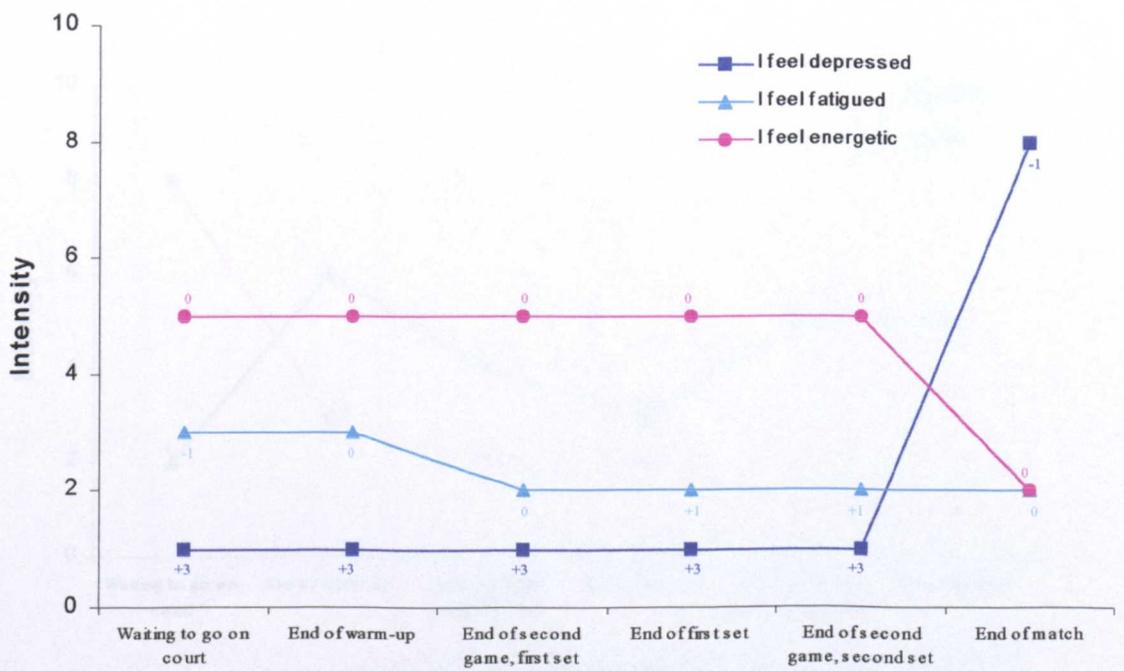


Figure 4.13b Case Study Two: Loser

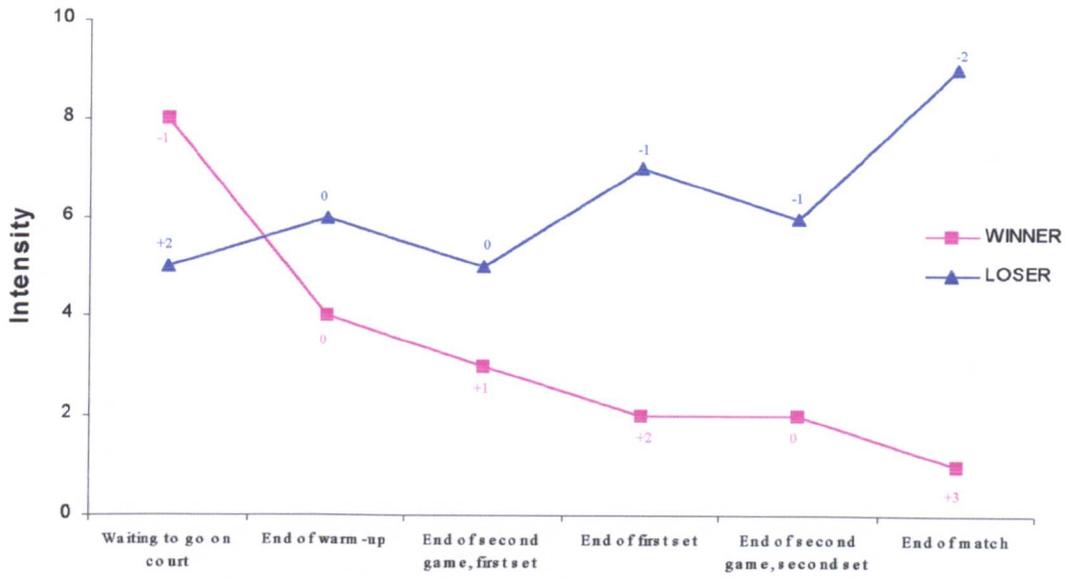


Figure 4.14 Case Study Two: Cognitive anxiety comparisons

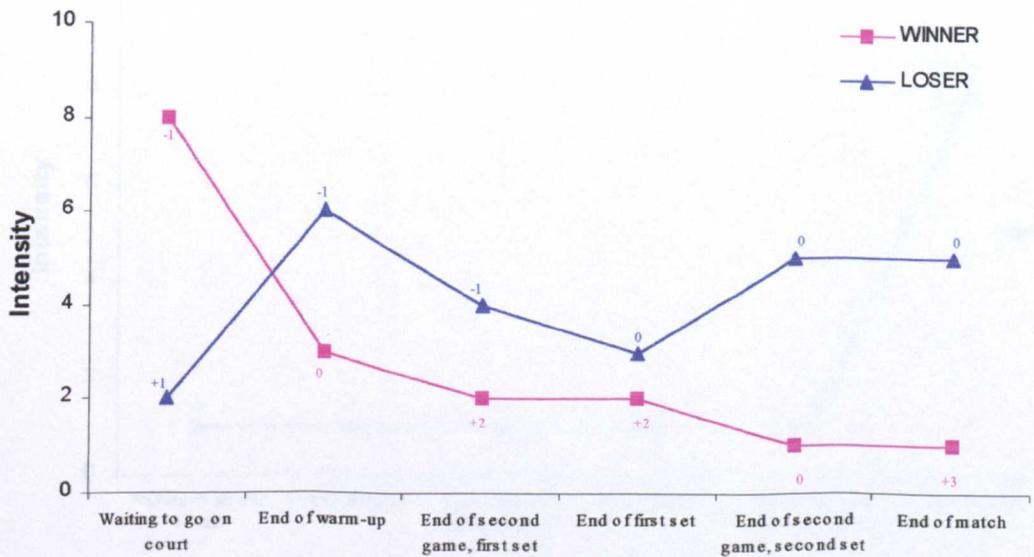


Figure 4.15 Case Study Two: Somatic anxiety comparisons

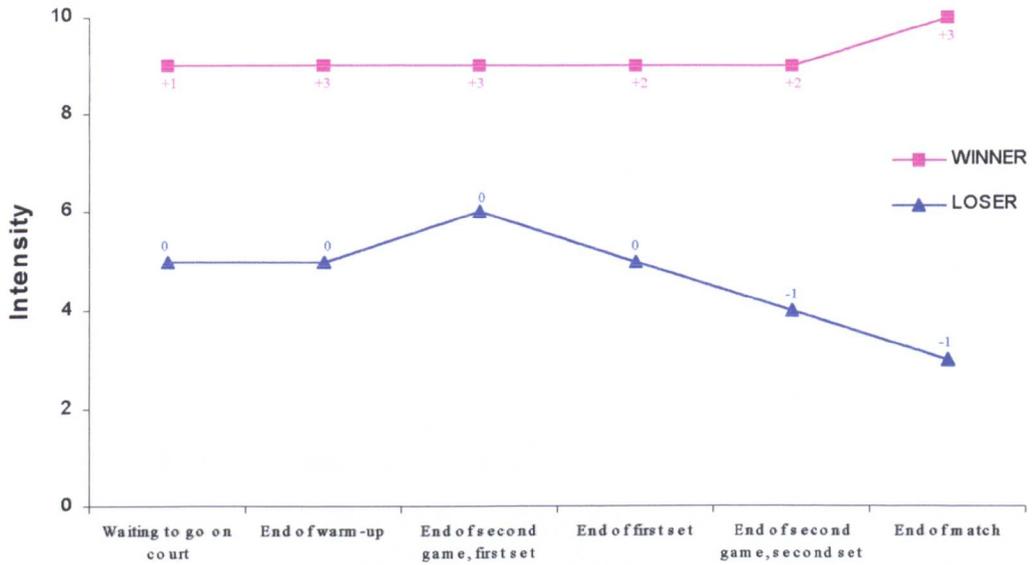


Figure 4.16 Case Study Two: Confidence comparisons

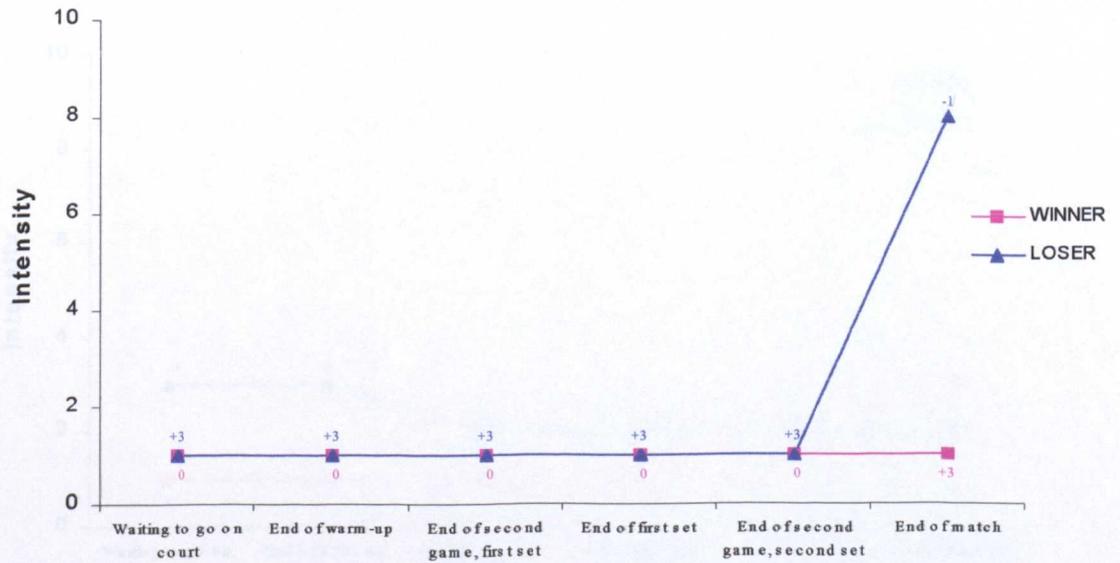


Figure 4.17 Case Study Two: Depression comparisons

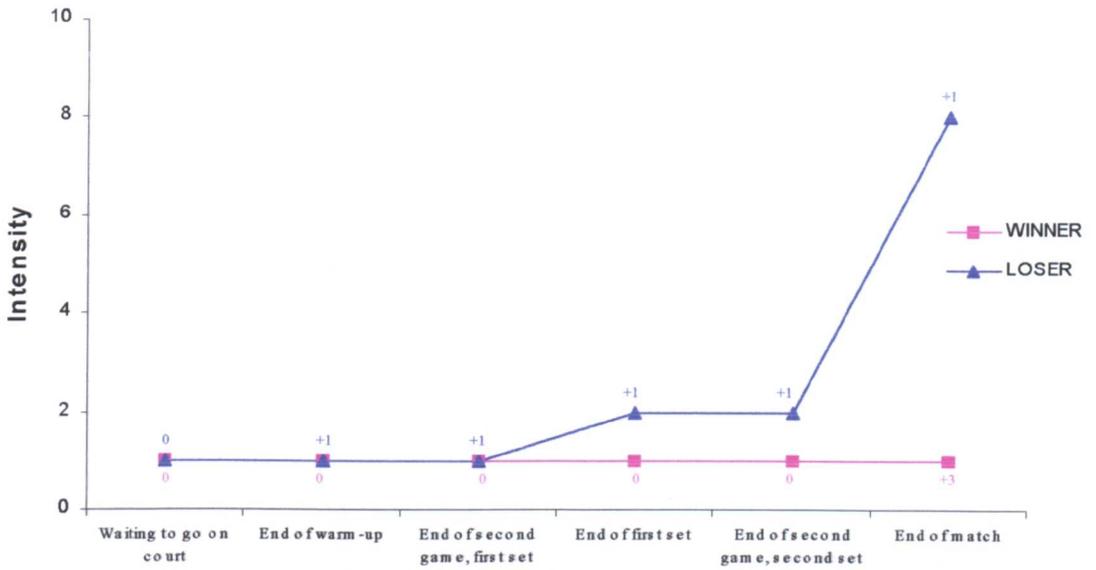


Figure 4.18 Case Study Two: Anger comparisons

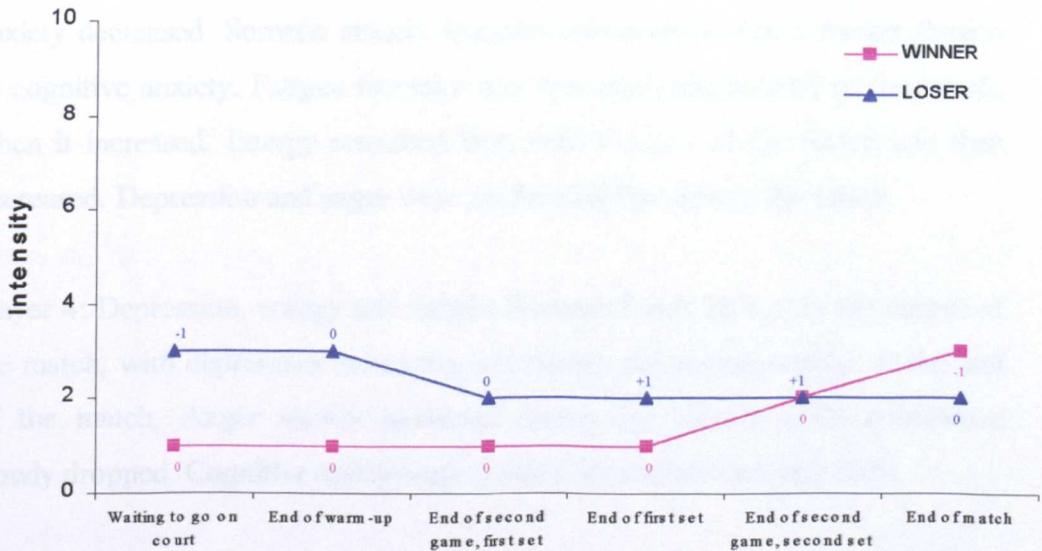
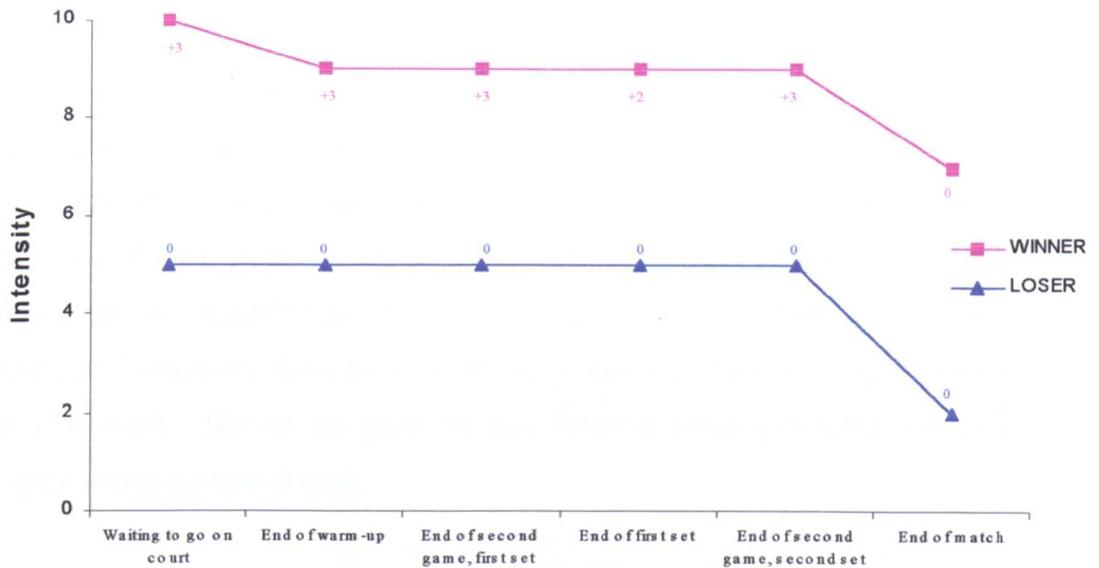


Figure 4.19 Case Study Two: Fatigue comparisons



**Figure 4.20 Case Study Two: Energy comparisons**

- *Comparison of graphical data*

Player 3: As the match proceeded, a divergency between cognitive anxiety and confidence occurred. As confidence increased and was maintained, cognitive anxiety decreased. Somatic anxiety intensity also decreased in a similar fashion to cognitive anxiety. Fatigue intensity was low until near the end of the match, when it increased. Energy remained high until the end of the match and then decreased. Depression and anger were unchanged throughout the match.

Player 4: Depression, energy and fatigue fluctuated very little over the course of the match, with depression increasing and energy decreasing rapidly, at the end of the match. Anger slowly increased during the match, while confidence slowly dropped. Cognitive and somatic anxiety fluctuated back and forth.

- *Broad Overview of the match*

### **Player 3**

#### **Pre-match**

Player 3 rated this second round match as having the same importance as the first round match. She had never played against her opponent before, but had seen her play in a tournament the week before. This, in addition to her coaches' knowledge about her opponent, appeared to help her preparation: *"I knew pretty much how she was going to play...I spoke to [coach] about what we were going to do in the match and basically arrived at a game plan...It definitely [helped], otherwise I might not have know what she played like because I haven't seen her that much"*. She set no goals for this match and stated that she was just going out and see how it goes.

On the morning of the match, Player 3 woke up feeling more relaxed and positive than she did for her first round match: *"A bit nervous...feeling more excited than yesterday, because I knew I wouldn't be as nervous today...Just got everything out the way for the first one and I can relax for this one"*. She was excited about the prospect of playing well: *"I could just go out and do my game and do what I love, which is just to go and play and not think about too many different things"*. She was very confident in winning the match: *"Nine out of ten I was going to win the match today. I was the better player, with more experience, so I felt I was going to win"*.

Once she arrived at the tournament site, her somatic anxiety started to increase: *"I was a little bit more nervous...because everything was going on...Getting a nervous feeling inside, just jittery...but in a good way"*. Despite perceiving her thoughts as positive: *"I wouldn't have any negative thoughts"*, she felt there was more pressure on her in this match, compared to her last match: *"In both matches I was supposed to win them...I would say there was more [pressure] because she was younger, definitely...She's supposed to be quite a good player when she's older"*. She appeared confused as to where the pressure was coming from, either externally or internally. Although she stated that there was no pressure from external sources: *"No-one put pressure on me. Probably from myself"*, external influences did impinge on her thoughts: *"Just knowing that*

*[I'm supposed to win], is what everyone else is thinking...parents, coaches around, the manager [of women's tennis], British Tennis, everyone".*

### **During match**

Player 3 felt a bit nervous going out onto court, but perceived the warm-up to be okay: *"Feeling a bit nervous, but in the warm-up I wasn't too bad...[My] legs still not 100%, but they were fine"*. As the warm-up went on, she began to loosen off: *"I was feeling pretty relaxed now. Just playing. I didn't feel tired at all from the day before...I was still a little bit nervous though"*. By the time the match was ready to start, she felt she was ready to play: *"Just a little excited. Just ready to go. Just wanted to get on with it now"*.

Questionnaire data mirror the interview data. Depression, fatigue and anger intensity levels were all rated as 1, at the end of the warm-up, and not seen as either beneficial or detrimental (0 rating for direction). Indeed, there is no change for any of these factors until the second set. Her energy intensity level dropped marginally from 10 to 9, but was still perceived as being positive in direction (+3). Her confidence level was both high (9) and facilitative to her performance (+3). Both her cognitive and somatic anxiety intensities dropped from waiting to go on court, from 8 to 4 and 8 to 3 respectively. Interestingly though, these drops were not perceived as being particularly beneficial to her and were rated as 0 for direction, having been -1 beforehand.

At 1-1 in the first set, the level of energy for both intensity and direction was the same as the end of the warm-up, namely 9 and +3. Confidence levels also remained the same. This was reflected in Player 3's interview transcript: *"I was confident with the way I served in the last game, so I'll be feeling pretty confident now"*. Cognitive and somatic anxiety intensity levels both dropped on one point on the Likert scale, and were rated as 3 and 2 respectively. The drops in intensity were perceived as being more positive in nature, with cognitive anxiety increasing from 0 to +1 and somatic anxiety increasing from 0 to +2. The low levels of anxiety intensities, in parallel to their positive directionality,

may have resulted/influenced in Player 3's positive perceptions of play: *"Reasonably happy with my own play"*.

By the end of the first set, little had changed in the way of fluctuations in for the seven factors. The only intensity to change was for cognitive anxiety, which fell from 3 to 2. The direction of cognitive anxiety increased from +1 to +2. Although not stated in the interview data, such a result could be expected due to Player 3 winning the first set. Only two other factors, confidence and energy, fluctuated in directionality, both slipping from +3 to +2. However, both still remained positive in direction.

At 1-1 in the second set, Player 3 again experienced few fluctuations in intensity. Only somatic anxiety and fatigue levels had changed. She exhibited an increase from 1 to 2 in fatigue, however her perceptions of this increase were not negative in any way, remaining at 0. Such an increase in fatigue was not unexpected due to the point she had reached in the duration of the match. Her energy levels, although staying steady at 9, did increase in direction from +2 to +3. An interesting point, in light of her increase in intensity for fatigue. Somatic anxiety intensity fell from 2 to 1 and with this drop, directionality fell from +2 to 0. So despite a decrease in intensity, Player 3 did not perceived this to be having a positive effect for her. The intensities and directions at this stage were all seen as being positive or having no effect to Player 3.

### **Post-match**

On completion of the match, anger and depression were rated as 1 on intensity and +3 on direction. Confidence level increased from 9 to 10 and was perceived to be very positive (+3). Both cognitive and somatic anxieties were rated as 1 for intensity and +3 for direction. These results are hardly surprising, as Player 3 had won the match. Fatigue intensity level increased slightly, from 2 to 3 and Player 3 perceived this to be negative (-1), despite the fact that the match had finished. Her energy intensity level had decreased from 9 to 7, but this was not seen as being much of an issue, with the directionality rated as 0.

Player 3 was relieved to have won the match, but pleased with the way she had played: *“Pleased that it’s all over and done with now. In the quarter-finals. I haven’t got much to lose”*. She compared her performance to her previous match: *“It was better than yesterday’s performance in terms of my concentration and I was just pleased over all”*. She rated her performance as seven out of 10 and attributed her win to internal factors of confidence and technical/tactical ability: *“Convinced that I knew I was the better player. Just knew I could play better. Didn’t have any doubts I was going to lose”*. Her goal of “seeing how it goes”, appeared to be achieved, with such a positive review of the match.

#### **Player 4**

##### **Pre-match**

Player 4 won a tournament the week before this match, which had a positive effect on her: *“My confidence was pretty high. I played people in the final who I hadn’t beaten the last three times”*. Despite this win, she conceded that her standard of play could be better: *“Although I won the tournament, I didn’t feel that I was playing unbelievably well”*. This did not however, give her cause for concern. She had sustained an injury which although affected her performance to some degree, did not feature highly in her concerns: *“I wouldn’t say I was hitting the ball great...[the injury] wasn’t getting any better, but it wasn’t getting any worse. I’d been playing with it for nearly four months by then, so I had kind of got used to it”*.

She perceived this match as important to the development of her tennis: *“It was important for the improvement of my tennis. I mean, it wasn’t the biggest match of my year. It wasn’t the biggest tournament of the year”*. Her goals for the match were reflected in this outlook on the match: *“Not outcome goals. I don’t generally set goals. I just go on knowing how I want to play and then I assess whether that was right or wrong after the match...[so] just to go out there and play and see what I needed to improve [upon]”*. The game plan she set to help her achieve this was done in conjunction with her coach. She aimed to focus on her own game and not worry about her opponent.

Player 4 woke up on the morning of the match feeling: *“pretty relaxed”*. Although she did not perceived this to be a pressure match: *“I wasn’t particularly tense because it wasn’t a pressure match for me. So I was pretty relaxed about it”*, she did have some concerns about the way the match would go: *“Just the way I was going to play. Whether I’d go out there playing well, whether I’d go out there slightly heavy in the legs...how the match was going to go...because the beginning of the match is crucial”*. She used coping strategies to prevent her from thinking too much about the match and getting nervous: *“I tend not to [think about the match] too early, because if I do it too early, sometimes I get a bit anxious. So I tend to do it an hour or so before the match”*. On arrival at the tournament site, she experienced some somatic anxiety: *“[I had some] butterflies, but I always get that”*. Her somatic and cognitive anxiety was seen as facilitative: *“That’s good, because if you don’t have it, I sometime go on a bit relaxed...So I think it’s good. It motivates me. I know I have to have it”*.

She felt confident she could play well against her opponent: *“I knew I would have to play well to beat her, but I went on pretty confidently because I knew she’d be nervous about playing a younger girl. I thought I had a good chance”*. She felt both mentally and physically ready for the match.

### **During match**

From waiting to go on court to the end of the warm-up, Player 4’s graphs indicated an increase in both cognitive and somatic anxiety intensities. Cognitive anxiety rose from 5 to 6 in intensity and from +2 to 0 in direction. Somatic anxiety, on the other hand, rose more steeply, from 2 to 6 in intensity and +1 to -1 in direction. Although no mention was made of an increase in anxiety in the interview data, clearly there was a degree of apprehension about the impending match, which was perceived negatively for somatic anxiety. All other factors remained level across time, and were perceived as either positive or having no effect. Confidence was rated at 5, which is confirmed from the interview: *“I’d say it was average to good”*, but not seen as having either a good or bad influence on her (0 in direction). Anger and depression were rated positively in direction and 1 for intensity. Fatigue levels at 3 in intensity, were

seen as having no impact (0 in direction). Energy was rated as average and like fatigue, having no impact.

Player 4 perceived her opponent to be suffering from nerves, during the warm-up: *"I thought it was quite obvious from the first stroke of the warm-up that she was trying to impose herself on me...but it didn't really bother me because she was just probably nervous"*. She picked up on these nerves through her opponents' body language: *"Generally the way she was...the way she was rushing a bit, the way she held herself on court"*. This gave Player 4 some comfort: *"I suppose it [helped] slightly, because I knew I can make a lot of balls, she might start to make a few errors...so it kind of gave me a bit of confidence"*.

By the end of the second game of the first set, Player 4 experienced a drop of one point, in both cognitive and somatic anxiety intensities. While the drop in cognitive anxiety was not perceived as being beneficial (0 directionality), she perceived the drop in somatic anxiety as being facilitative, with a shift from -1 to +1. Her confidence increased by one point, to 6 on the Likert scale. This was mirrored by her interview data: *"To get your first game on serve always boosts your confidence"*. Despite this increase she perceived her level of confidence as having a neutral effect on her. Anger, depression and energy levels for intensity and direction remained unchanged. A small decrease in fatigue was noted, with a drop from 3 to 2 on the intensity scale, but was perceived as neutral in direction. Interview data confirmed the positive trend of the questionnaire data: *"I was feeling quite comfortable at this stage"*.

Having lost the first set, Player 4 exhibited a rise in anger, from 1 to 2 on the intensity scale: *"Bit annoyed because I hadn't risen to the occasion. Hadn't managed to pick my game up...hadn't worked hard enough to win the set"*. Her cognitive anxiety intensity level increased from 5 to 7, which was perceived to be more negative than before (0 to -1 on directionality scale). Confidence intensity dropped to 5, but had little effect on her. This was borne out in her interview data: *"It's always hard when you lose the first set...but I knew I had come back from a set down before. I knew the match wasn't anywhere near*

over". There was a slight decrease in somatic anxiety intensity, but once again, this was not perceived as being helpful to her, rating only a 0 on the directionality scale. Finally, depression, fatigue and energy intensity levels were unchanged.

At the end of the second game of the second set, Player 4 remained stable for intensity and direction for anger, depression, fatigue and energy. Somatic anxiety intensity went up, from 3 to 5, but remained neutral in direction. The rise in somatic anxiety may have accounted for the unforced errors that were beginning to plague her game: *"At that point I just couldn't hit a good shot...unforced errors again"*. This may also accounted for the drop in confidence intensity from 5 to 4 and the negative perception this caused, with directionality changing from 0 to -1. Interestingly, although she stated that her deterioration in play was causing her some concern: *"I wasn't making her play enough balls and it was in the back of my mind...I was just disappointed with myself for not being able to pick up the standard"*. There was a drop in cognitive anxiety intensity, from 7 to 6. The directionality did however remain a -1.

### **Post-match**

In losing the match, Player 4 suffered an increase in cognitive anxiety intensity, from 6 to 9, which she saw as detrimental to her (-2 on directionality scale). This came through in her interview: *"I thought I played a lot worse than I did...I started worrying about my injuries as well, because it wasn't any better but it wasn't any worse...Everything was just a bit worrying"*. The intensity of her anger and depression increased dramatically, from 2 to 8 and 1 to 8 respectively. Again, this was seen in her interview data: *"I was really annoyed with myself. Pretty down I thought...I was just angry, upset, a bit disappointed with the way I didn't manage to pick up my tennis at all"*. Confidence, though perceived as debilitate (-1 on the directionality scale), decreased from 4 to 3. An expected level, considering she had lost the match and was unhappy with her standard of play. Her somatic anxiety scores were unchanged. This is perhaps not surprising, since the match had been completed. Finally, despite a decrease

in energy intensity, from 5 to 2, Player 4 did not perceive her fatigue level to have risen. It remained unchanged from the beginning of the first set.

Player 4 had difficulty in pinpointing as to why she felt she played the way she did and lost the match: *“I mean I hadn’t been playing great. I wasn’t on a hot streak. But there wasn’t a specific reason. Just one of those days really. I wasn’t bad mentally. So it wasn’t that I gave up or anything. Maybe just wasn’t my day on that day”*. She felt a lack of control during the match, feeling that there was nothing she could have done. She rated her performance as: *“About four. Below average”*. Her goal of wanting to see what needed to be improved upon, appeared to be achieved: *“I thought my serve had improved...My slice backhand was better. But I was pretty annoyed with all of my game really. When I went through it with my coach, it actually wasn’t as bad as I thought...put it in the larger picture”*.

- *Review of key moments*

**Table 4.6 Study two summary of key moments**

<b>PLAYER 3 vs PLAYER 4</b>	
<b>PLAYER</b>	<b>SCORE</b>
<b>FIRST SET</b>	
Player 3: Momentum with self	1-0
Player 4: Key point	1-0/15-0
Player 3: Momentum with self	2-1/30-30
Player 3: Momentum with self	3-1
Player 3: Momentum with opponent	4-1
Player 3: Momentum with self	5-2
Player 3: Key game	5-3
Player 4: Key point	5-3/30-30
<b>SECOND SET</b>	
Player 4: Key game	0-1
Player 3: Momentum with self	2-1
Player 3: Momentum not with opponent	2-1
Player 4: Key game	5-3

**First Set****Game 1-0****Player 3 serving**

At the end of the first game, which Player 3 won to love, Player 3 felt that the momentum was with her: *"I'd say the momentum's with me, definitely. I look more in the match than she does"*. Player 3 perceived that her opponent was suffering from nerves. It was these nerves, she claimed, that help induce a state of relaxation and confidence: *"It just seemed basically that she's more nervous than I am [which] has given me a lot of confidence...enough to forget about my nerves and to just play"*.

Player 4 was disappointed in her game as she felt her short term goal was not achieved due to increased levels somatic anxiety: *"I was disappointed in my game because one of my main aims was ...[to] make a lot of returns. I suddenly felt slightly tense in my body, which caused me to ...make a lot of unforced errors"*. She went on to explain/clarify the nature of her somatic anxiety and its relationship with the unforced errors: *"Slightly heavy in the legs...lead feeling, almost a rush of blood goes to your head and you just want to hit quick winners, quick points"*. Although she was disappointed with the game, she felt that her confidence was not affected: *"It didn't affect my confidence...I knew that this was the first game [with] no breaks"*.

**Game 1-1****Player 4 serving**

Having lost the first game, Player 4 highlighted that the first point in her service game, which she lost, was a key point: *"The first point, the crucial point, I snatched a bit on the approach, as I had been doing the game before"*. Despite losing the first point, she went on to hold her serve: *"Always a sigh of relief to get the first game under your belt"*.

Player 3, having held serve, used this game as a learning experience about her opponents serve: *"I know that she's got a good serve, so I won't put too much expectation on myself...the first few games are just getting used to the way she's playing"*. She acknowledged that her opponents serve was stronger than that of

her previous opponent. This awareness affected her match cognition's and mind set: *"I'm totally aware of how different it was from yesterday...[previous opponent] didn't have such a good serve. So in my service games I realise the importance of really staying concentrated, because I know it will be tough if she breaks your serve"*. Although there was some annoyance at lost points, Player 3 confidence from the previous game was utilised in a positive direction in preparation for her next service game: *"I was confident with the way I served in the first game, so I'll be feeling pretty confident now"*.

### **Game 3-1, including 2-1/30-30**

#### **Player 4 serving**

Despite losing the previous game, on two occasions, namely at 2-1/30-30 and the end of the 3-1 game, Player 3 stated that she perceived momentum to be with her. At 30-15 Player 3 felt an increase in confidence: *"Feeling a bit more confident now. I'm really concentrating on making my returns because once I'm in a rally situation with her, I think I'm the better player...when I do get the return in, she's losing the majority of the points"*. This assumption seemed to be borne out when Player 3 won two consecutive points to draw level at 30-30. It was these points that cause her to perceive that momentum was with her: *"The momentum is going now with me, because I just won these two points"*.

Her confidence increased again when she re-evaluated her game plan, which seemed to induce errors from her opponent: *"[Confidence has gone up] because...I've realised that I was playing defensively...from the back of the court... and realised that I had to step up and hit the ball"*. In breaking her opponents serve, Player 3 gained a further increase in confidence and perceived the momentum to be with her: *"Feeling pretty confident now, because I know I'm serving well and it gives you a big lift when you break someone's serve. [The momentum] is definitely with me"*.

Player 4 felt that she started the game well, but her unforced errors allowed her opponent back into the game. Although she did not perceive any momentum shifts to her opponent during this game, she did conclude that she was unhappy with the game: *"[I was] maybe going for slightly too much when it wasn't*

*necessary...I knew I shouldn't have been doing it. She played a couple of good points, [but] I did well to get back to deuce on a couple of occasions. Poor game really". She used positive self talk and tactical cognition's to keep positive about her break of serve: "I knew this happens in matches, so I wasn't getting particularly negative with myself. I was trying to forget that game. Try and get off to a really good start on the next game and put her under pressure".*

#### **Game 4-1**

##### **Player 3 serving**

At 0-30, Player 3 began to panic about her game: "*Panicking I might lose the game because faults have come in that weren't there at the beginning of the game*". After winning the game, she evaluated her play: "*I was very lucky I won that game. She made a couple of silly errors*". She felt that she could maintain her concentration even though she was 4-1 up: "*[I'm] not feeling super confident...I could be 3-2...That game sort of shook me up a little bit*". Despite Player 3 breaking her opponent in the last game and holding serve in this game, she felt that the momentum was with her opponent: "*[Momentum is] very slightly towards her, because she started to level slightly*".

Player 4 felt that she was putting her opponent under pressure in the first two points of the game: "*She played a good point, so it was good for my confidence that she could play a very good point and I could still win it. Second point I thought was quite loose for her, but again I was quite pleased. I was just trying to put pressure on 0-30*". The last four points in the game were perceived as being predominately due to her opponents good play: "*She was quite lucky on the first point...and played two good point after*". She was aware that she wasn't playing good tennis yet managed to remain positive: "*I was still very much in the match. I had two points to go 2-3...so I was trying to be positive. There was a lot of time to get back in there*".

#### **Game 5-2**

##### **Player 3 serving**

Having lost the previous game, Player 3 felt that her opponents rise in the level of her game directly affected her own standard of play: "*She's at her level now,*

*so it makes me more aware that I need to really concentrate. Because of her playing better, it's forced me to concentrate more. Whereas if she's still making loads of errors I can afford to be sloppy".* At 30-30, her opponent was causing her some concern: *"She's now playing a bit better. She seems more relaxed...going for a bit more. So that means she's scaring me a little bit".* Having held serve, Player 3 was still unhappy with her standard of play: *"Still not 100% happy...I'm making too many errors...I can't afford to lower my standard".* However, she felt that the momentum remained with her: *"I would think that the momentum's with me".*

Player 4 did not indicate that there was any momentum present, despite that fact that she was confident with her play: *"I made her win it slightly more than I had in the other games. Still made a couple of unforced errors...[but] she played a couple of good points in there. So it wasn't so bad".*

### **Game 5-3**

#### **Player 4 serving**

Player 3 perceived this to be a key game. She had won the last game and was in the position to break serve and win the first set. She perceived that her confidence level helped to increase her standard of play, and win the point at 30-30: *"My confidence helped me move in and play that point. When I'm not so confident, I don't really move my feet".* However, her concentration level appeared to let her down during the final two points of the game: *"Maybe lost a bit of concentration on those two points, not focusing well".* She attributed this to the score-line: *"[It was] maybe the score. [Felt I could let the game go] and still not miss one".*

Player 4 was aware that her opponent was getting more anxious and that it was having a positive effect: *"It was good because I could tell she was getting more tense, and I was really trying to put the pressure on at this stage. I was making her play more and more balls, because if she was getting down on herself, she might start missing...losing her shots".* Player 4 did not however perceive this to be a key game, merely a time to put pressure on her opponent.

### Game 6-3

#### Player 3 serving

Despite losing the last game, Player 4 felt that all the pressure was on her opponent to hold serve. Her thoughts focused around breaking her opponent: *“The pressure’s on her. If she didn’t hold this game, I’d be right back in the set. Her serve isn’t particularly big, so I thought I could try and make a good return, I’m right back in this match”*.

She viewed 30-30 as a key point: *“I thought 30-30 was crucial point. Again I missed a basic return. I’d be frustrated at the time”*. Although she lost the point, she used the frustration in a positive manner to bring the score to 40-40: *“...Bit of frustration in me...helped me slightly on that point...[it] fired me up, not wanting to miss another one”*.

The positive use of frustration was not, however, enough to win the set. Player 4 felt a mixture of negative emotions and negative match cognition’s: *“I was starting to get slightly down on myself. Probably a bit annoyed because I hadn’t risen to the occasion, hadn’t managed to pick up my game. I hadn’t worked hard enough to win the set”*. Although she found it hard to lose the first set, she continued to use positive self-talk to cope with the situation: *“It’s always hard when you lose the first set because you have to win the next two sets. But I knew I had come back from a set down before, I knew the match wasn’t over. I said let’s forget about that set, it’s done...just cut it off...just get on with what I had to do...which was trying to make her play a lot in the first couple of games”*.

Player 3 was confident coming into this game and proceeded to win the first two points. On the two occasions when her opponent came back to level, namely at 30-30 and 40-40, Player 3 was aware of the need to concentrate: *“[I was] annoyed with myself because I hadn’t concentrated enough...I’d be thinking, come on, concentrate on this one”*. There was no indication that Player 3 felt that 30-30 was a key point.

On winning the first set, Player 3 did not become complacent. She maintained focus on her standard of play: *“Aware that I may need to consistent with my*

*serve and continue focusing...just not drop my level. And if she raises her level, to raise it with her*". She felt her standard of play was down to concentration and focus.

## **Second Set**

### **Game 0-1**

#### **Player 4 serving**

Player 4 was keen to make a good start to the second set: *"I wanted to make a good first serve for the first point. Make her have to win all the points she wants to win"*. She proceeded to go on and win the first three points, but a double fault at 15-40, affected her play: *"I double faulted...the next couple of points I don't think I'd quite got my head round it. [Thinking] I should have won this game before"*. Doubts about her standard of play began to creep in: *"Errors coming in all over the place. I didn't know how to stop it. I was getting a bit desperate by that time"*. She started to query her ability: *"What's wrong with me? Why can't I just make a simple forehand? I was missing basic backhands...my best shots"*.

She managed to hold serve in what was the longest game of the match: *"I was aware that we both knew it was a big game because when either of us was making a mistake we were looking a little bit annoyed with ourselves"*. The importance of the game seemed to be heightened by the score-line: *"I was relieved. I'd been 40-0 up and if I'd lost that game she'd have got a lot of confidence from it and I'd have probably been quite annoyed by it"*. She gained confidence from the game and felt that the pressure was back on her opponent to hold serve: *"Confidence was probably slightly higher. I had to play a couple of good points...to win and the pressure's back on her now"*.

Player 3 felt the need to exert pressure on her opponent in this game due to a possible reduction in her anxiety levels: *"Trying to break this one...Aware that now she might relax a little bit, so just getting ready for what she's going to do"*. At 0-40, Player 3 began to experience cognitive anxiety: *"I'm a bit more panicky...[The] game's slipped away"*. However, her opponents double fault at 15-40 and a winning shot at 30-40, helped to increase her confidence levels:

*"I'm feeling confident now. I was 40-0 down and now it's just one point...away from being levels"*. Player 3 experienced negative and positive fluctuations throughout the four deuces and advantage points that followed. When her opponent gained advantages, she felt more negative and questioned her levels of concentration: *"Feeling a bit annoyed with myself...Feeling panicky a bit...Agitated that I'm not making it work...Just not concentrating to miss that...Coming out with silly errors [due to] concentration"*. However, when pulled the score back to deuce, she gained a more positive outlook: *"Feeling a bit more confident because she's doubled...Just really trying to win the deuce points"*. The overall perception of the game was negative in nature: *"Annoyed at that game because I didn't play very well. I could have won it...but I just concentrated on the deuce ball"*. She did not however feel that this game was a key game in the match.

### **Game 2-1**

#### **Player 4 serving**

Player 3 gained confidence from her play in this game, for example at 30-30: *"Given me confidence. A good return, back to 30-30"*. She felt that her concentration level had gone up while her opponent's level decreased. Having won the game, she perceived momentum to be with her: *"There's no momentum with [opponent] at all. It's just slightly with me"*.

Player 4 started to experience a negative mind set after losing this game: *"Quite disappointed with myself...Probably starting to get a bit depressed, getting angry with myself"*. She made no reference to any perceived momentum shifts.

### **Game 5-3**

#### **Player 3 serving**

Player 4, having won her service game, felt that this was a key game: *"It's pretty vital"*. Despite its perceived importance, she was unable to put enough pressure on her opponent: *"I thought I'd put the pressure on with a couple of good shots, and then the chance I got to take the initiative [I] missed it. I'd not done enough to put her under pressure"*.

Player 3 did not perceive this game as important. Her confidence was high: “*I don’t think she’s level enough to beat me, so I don’t feel scared at all*”. Her main concern was to hold her serve: “*Thinking, okay concentrate. You’ll make it a lot easier for yourself if you win this game than having to serve out for it*”. She also sensed a change in her opponent mental state: “*[I was] aware that she must be feeling a bit down*”.

- *Summary of case study two*

Results showed that although cognitive and somatic anxiety was perceived to be higher in intensity at the start of the time phase for Player 3 (the winner) compared to Player 4, both factors declined for Player 3 as time went on. For Player 4, these intensities increased. Energy and confidence intensity levels were higher for Player 3 compared to Player 4 throughout the entire time phase. Fatigue, anger and depression were found to be higher for Player 4 for several of the time phases.

Three games during the match went to two or more deuces. Each of these games was on Player 4’s serve and only one of these games were held and won. Player 4 attributed these losses to unforced errors and exhibited negative emotions during and at the end of each of the lost games.

Player 3 indicated that she experienced a maintenance and/or increase in concentration during the two games where she broke her opponent. However, she also experienced decreases in concentration throughout the match. These increases and decreases in concentration were blamed on external factors, such as the score and her opponent’s serve. For example, Player 3 reasoned that she had to maintain concentration due to her opponents serve being so strong.

Player 4 identified four key moments, points of games, during the match and lost three of them. Player 3, on the other hand, identified only one key moment, which she lost.

The key issues emerging from the data appeared to an improvement of concentration levels, compared to the previous round, for Player 3 and negative emotions associated with unforced errors for Player 4.

4.53 Case Study Three: Player 5 vs Player 6

- Score Sheet: 6-4 6-4

<u>Player 5</u>	<u>Player 5</u>	<u>Player 5</u>	<u>Player 5</u>	<u>Player 6</u>
15-0	0-15	15-0	15-0	0-15
30-0	0-30	30-0	30-0	0-30
40-0	15-30	30-15	30-15	15-30
	30-30	30-30	40-15	30-30
<b>1-0</b>	40-30	40-30	40-30	40-30
↓	40-40	40-40		
<u>Player 6</u>	A-40	A-40	<b>2-1</b>	<b>4-4</b>
15-0	40-40		↓	↓
15-15	40-A	<b>5-4</b>	<u>Player 6</u>	<u>Player 5</u>
15-30	40-40	↓	0-15	15-0
15-40	A-40	<u>Player 6</u>	0-30	15-15
30-40		0-15	15-30	30-15
40-40	<b>3-2</b>	15-15	30-30	30-30
A-40	↓	15-30	40-30	30-40
	<u>Player 6</u>	30-30		40-40
<b>1-1</b>	0-15	30-40	<b>2-2</b>	A-40
	15-15			40-40
<u>Player 5</u>	30-15	<b>4-6</b>	<u>Player 5</u>	A-40
15-0	40-15		15-0	40-40
30-0		<u>Player 5</u>	30-0	A-40
40-0	<b>3-3</b>	15-0	30-15	40-40
		30-0	40-15	40-A
<b>2-1</b>	<u>Player 5</u>	30-15		40-40
	0-15	40-15	<b>3-2</b>	A-40
<u>Player 6</u>	15-15			
15-0	30-15	<b>1-0</b>	<u>Player 6</u>	<b>5-4</b>
30-0	40-15		15-0	
40-0		<u>Player 6</u>	30-0	<u>Player 6</u>
	<b>4-3</b>	0-15	30-15	0-15
		15-15	40-15	0-30
<b>2-2</b>	<u>Player 6</u>	15-30		15-30
	15-0	30-30	<b>3-3</b>	30-30
	15-15	30-40		40-30
	15-30	40-40	<u>Player 5</u>	40-40
	30-30	A-40	15-0	40-A
	30-40	40-40	30-0	
	40-40	A-40	30-15	<b>4-6</b>
	40-A	40-40	40-15	
	40-40	A-40		
	40-A		<b>4-3</b>	
	40-40	<b>1-1</b>		
	A-40			
	<b>4-4</b>			

- Graphical representation

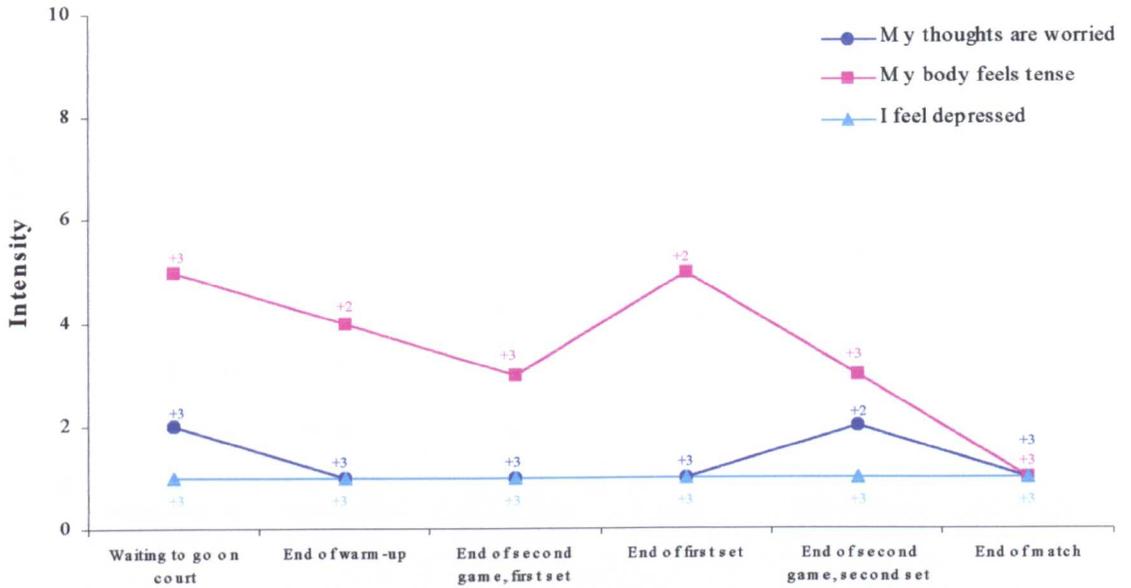


Figure 4.21a Case Study Three: Winner

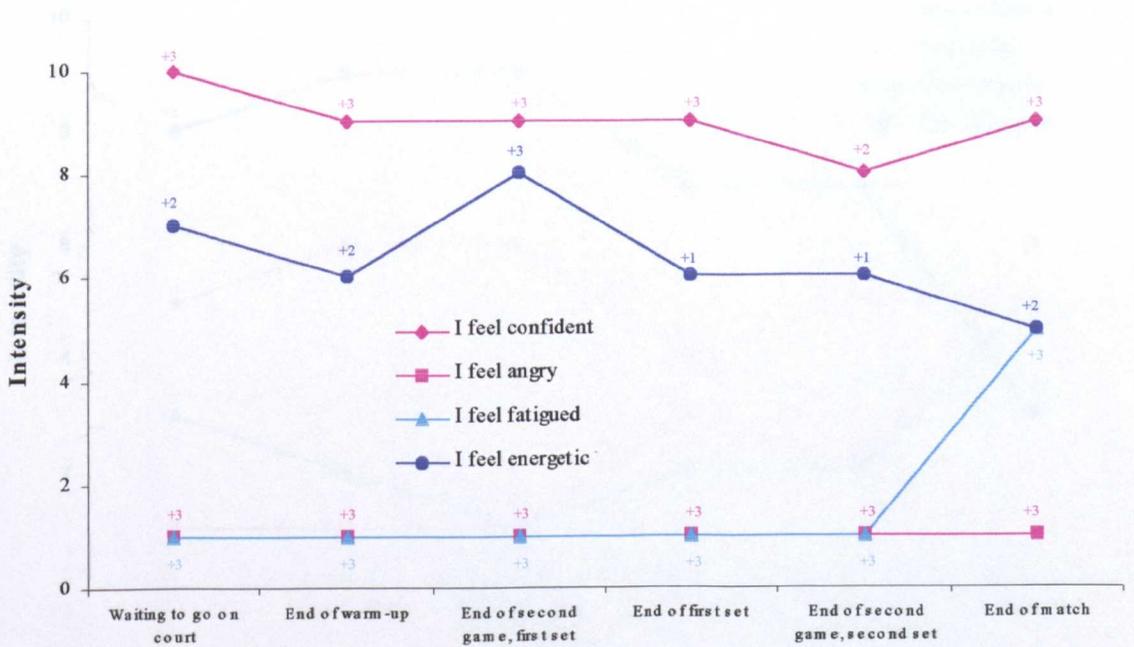


Figure 4.21b Case Study Three: Winner

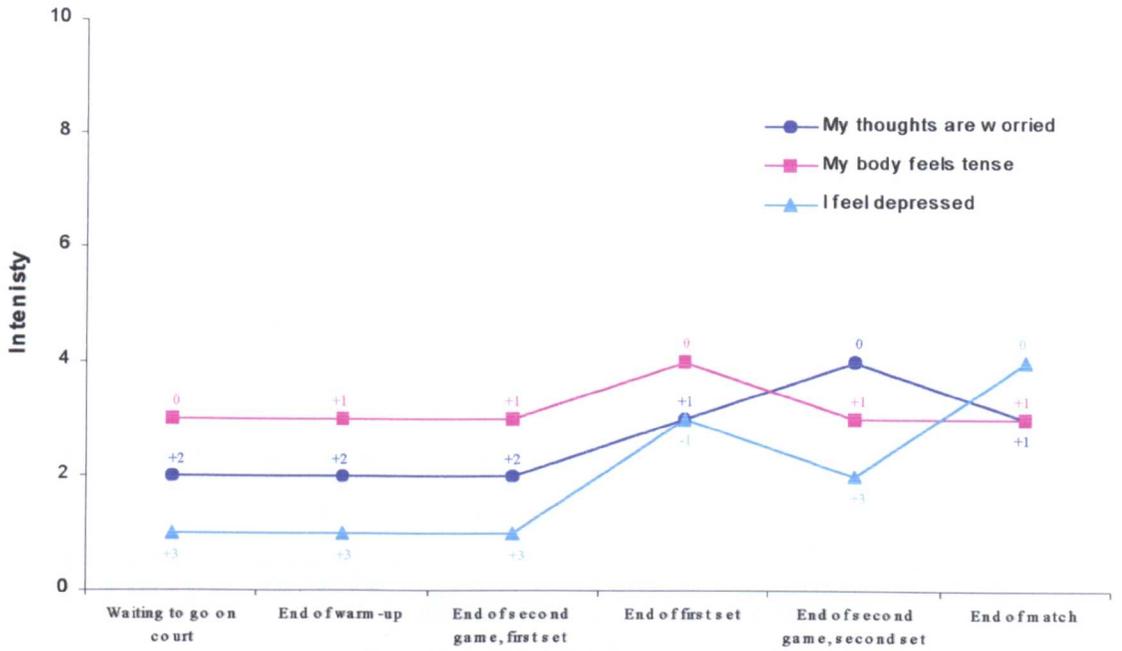


Figure 4.22a Case Study Three: Loser

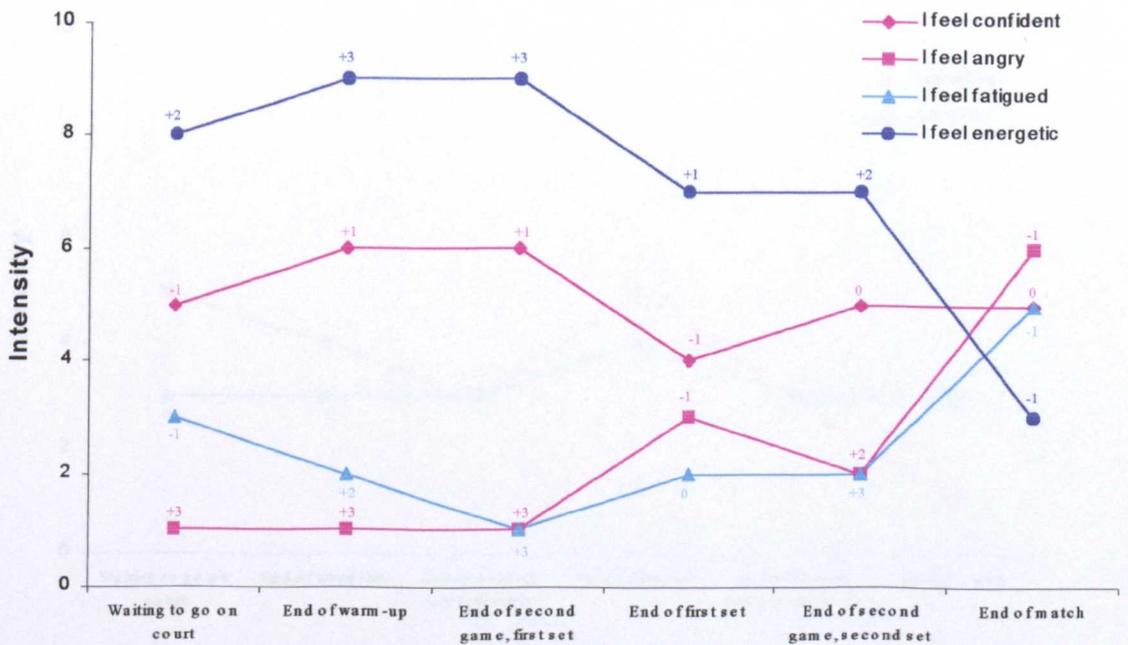


Figure 4.22b Case Study Three: Loser

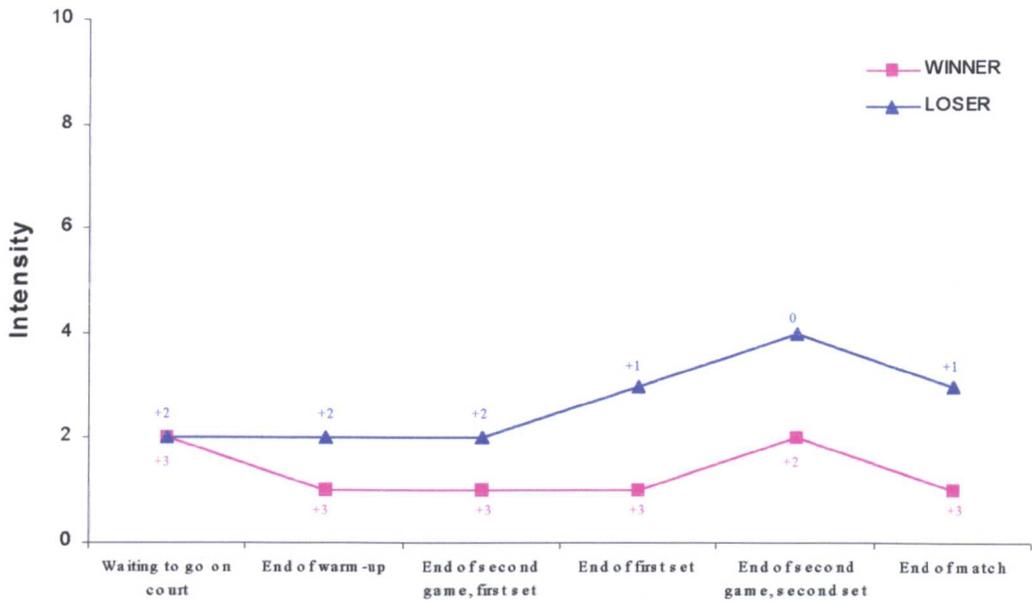


Figure 4.23 Case Study Three: Cognitive anxiety comparisons

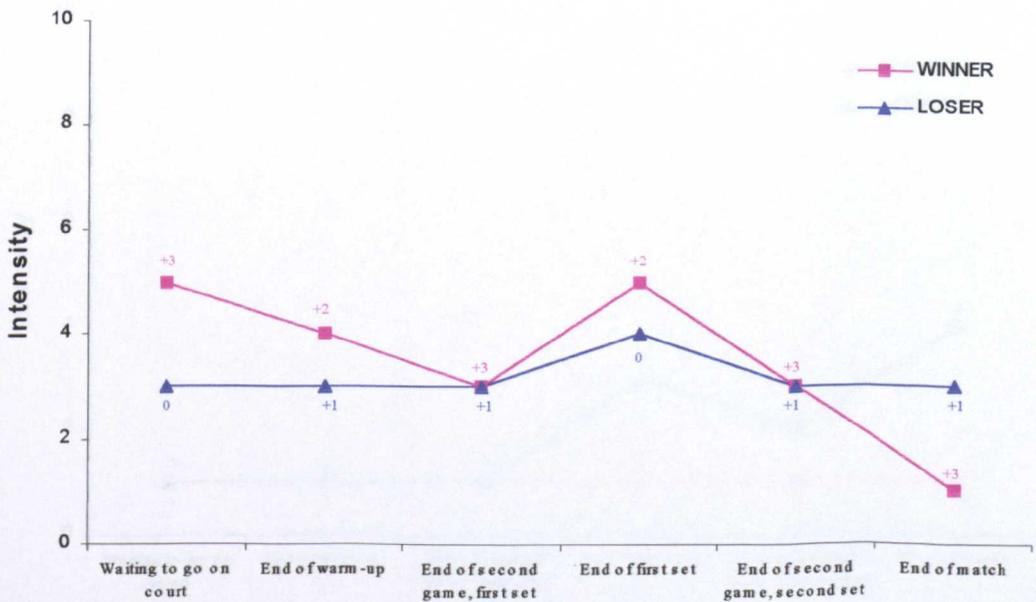


Figure 4.24 Case Study Three: Somatic anxiety comparisons

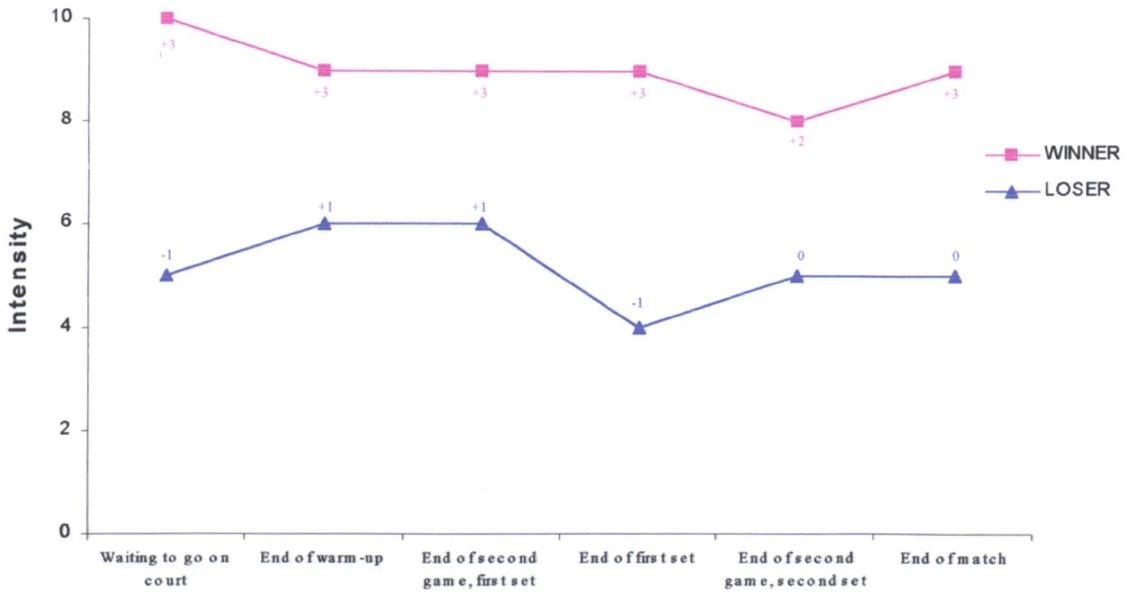


Figure 4.25 Study Three: Confidence comparisons

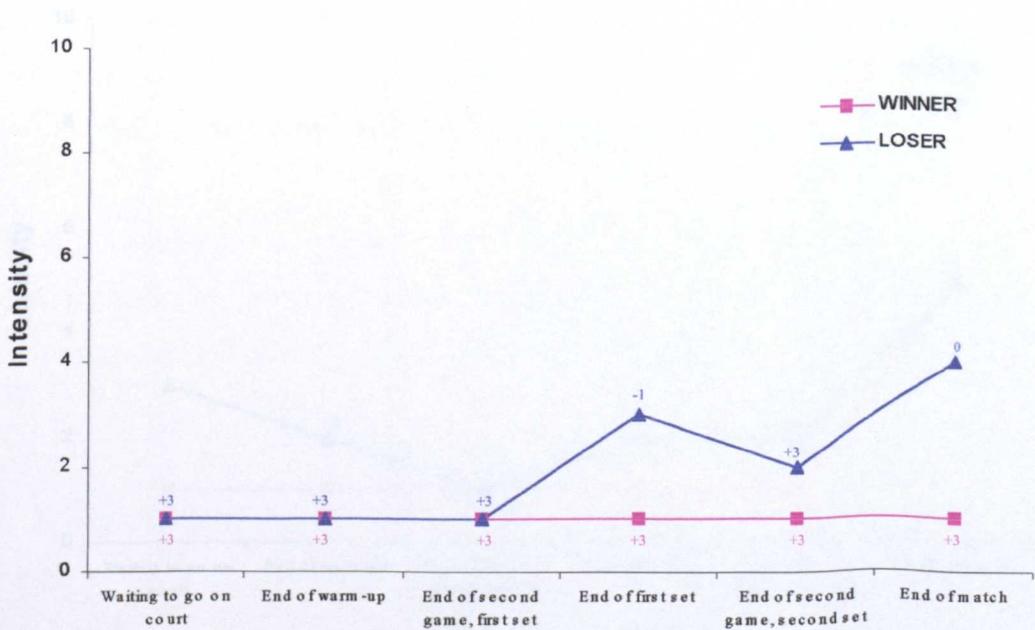


Figure 4.26 Case Study Three: Depression comparisons

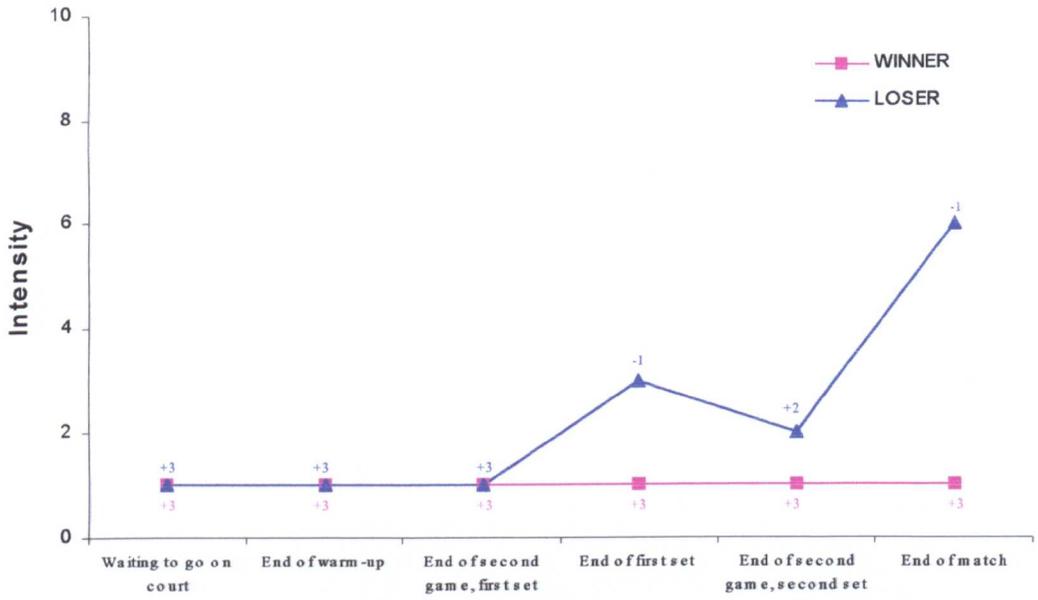


Figure 4.27 Case Study Three: Anger comparisons

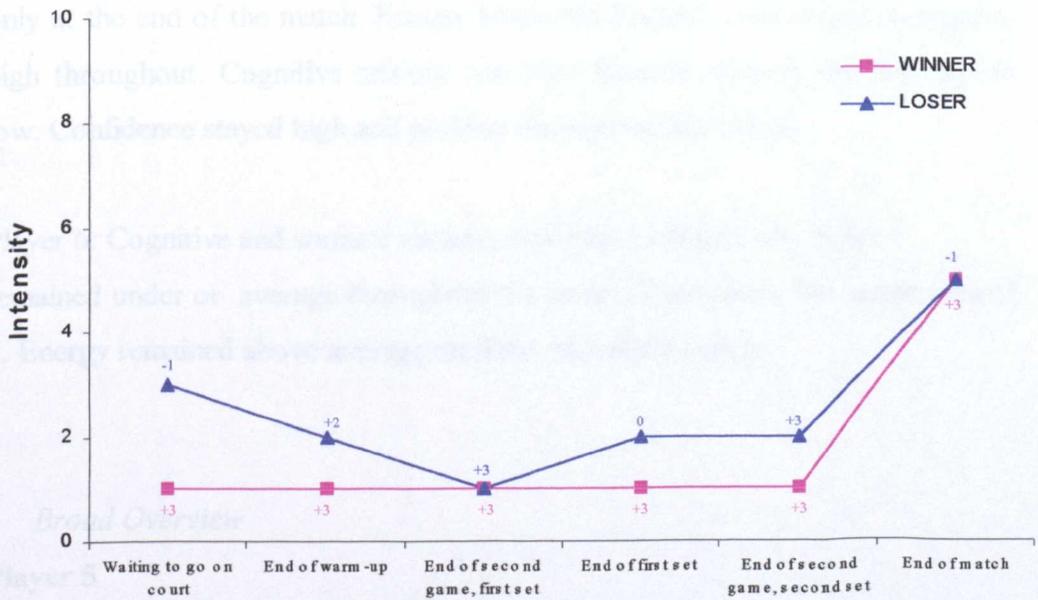


Figure 4.28 Case Study Three: Fatigue comparisons

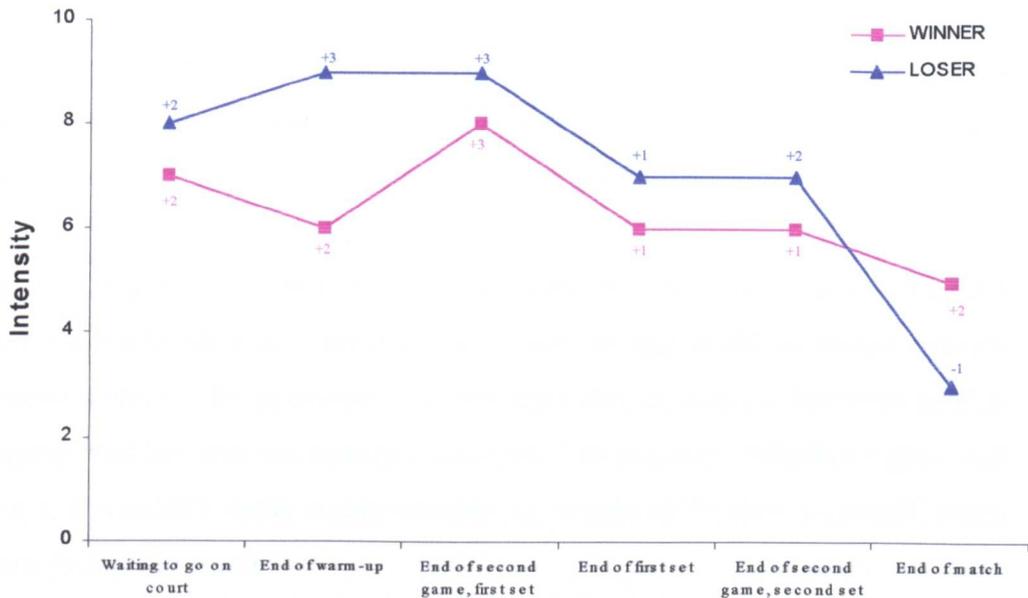


Figure 4.29 Case Study Three: Energy comparisons

- *Comparison of graphical data*

Player 5: Anger, depression remained constant at 1 and +3. Fatigue increased only at the end of the match. Energy levels did fluctuate, but stayed average to high throughout. Cognitive anxiety was low. Somatic anxiety was average to low. Confidence stayed high and positive throughout the match.

Player 6: Cognitive and somatic anxiety, depression, fatigue and anger remained under or average throughout the match. Confidence fluctuated around 5. Energy remained above average until the end of the match.

- *Broad Overview*

### Player 5

#### Pre-match

Player 5 had come into the tournament having spent a week abroad training and practising. His confidence level was high, after what he perceived to be a successful trip: *“Training was going very well out there. Working on fitness and*

*things to do with my game...I felt I had achieved a couple of goals I set myself out there". He viewed the tournament, and this match, as important: "In the eyes of the LTA and the main guys ...that give you funding for trips...wild cards...it is a very big tournament. There's a lot of press there [and] you get a lot of coverage". Despite this importance: "There's a lot a stake at the tournament", he felt well prepared for his first match.*

His only goal for the match was to: *"Just play the way I like to play". He set a game plan with his coach, focusing on his own strengths and wanting to put his opponent under a lot of pressure. He was confident he could achieve his goal of playing well but was not unduly concerned if he did not: "Whether I play well or not, it wouldn't really matter because at the end of the day...I [would] learn more [from] the match".*

Player 5 woke up on the morning of the match with positive thoughts: *"I was looking forward to the game. To playing, to get on there and have a practice". He spoke to a fellow competitor, who helped to increase his confidence: "The guy I spoke to about it at breakfast...he was like, pretty confident...he said, "Oh yeah, you're going to take him apart. You've got a much bigger game." Inside I was thinking that was really what I wanted to do...[Him saying that] really helped". He experienced a degree of somatic anxiety, but perceived this as facilitative: "A tiny bit...I think you do need that sort of stuff. It's no enjoyment out the re if you don't feel like [that]". He highlighted the positive effect his practice had on him: "I think there was more of a relief. More like I had a buzz, because I was seeing the ball so much better...I got no problems whatsoever! If you know you're playing well and you know you can hit the ball. When you actually start to do that as well...you think, I can't wait. This is going to be unbelievable!". He spoke to his coach after practice, which he found beneficial: "We had a chat...and he sort of said, "You look pretty confident. You did it last year. It's a good venue for you"". This, in addition to his practice session, helped to increase his confidence level: "It was like a confidence boost...It just rose it. It was so much better".*

### **During match**

Player 5 stated that he felt very positive during his warm-up: *“Pretty confident because I wasn’t missing the ball. A bit more relaxed”*. So much so, he had no concerns about the match and just started to enjoy himself: *“Just getting relaxed...I wasn’t even worried about [tennis]. Just mucking around!”*. He was aware however, that he thought his opponent wasn’t warming up particularly well. The positive perceptions of the warm-up was reflected in the questionnaire data. Anger, fatigue and depression levels were all rated as 1 for intensity, and +3 for direction. Indeed, his anger and depression levels did not change over the entire duration of the match. His cognitive anxiety intensity was rated as only 1, which was perceived as being beneficial to him (+3 on the directionality scale), while his somatic anxiety was rated as 3, a drop from 5 whilst waiting to go on court. Like cognitive anxiety, somatic anxiety was rated as being positive in direction. Confidence and energy levels dropped by only one point, from 10 to 9 and 7 to 6 respectively. Once again, these levels were perceived as being positive for Player 5.

By the end of the second game, first set very little had changed in terms of graphical data. The only fluctuations were for somatic anxiety and energy. His anxiety level dropped to 3, while his energy levels went up from 6 to 8. All seven factors were perceived as being very positive and therefore beneficial to him. This was backed up by the interview data from the first two games. At 1-0: *“The butterflies would have been gone [now]”*. At 40-15, in the second game: *“Confidence was unbelievable there”*.

Having won the first set, Player 5 questionnaire data showed that he remained positive about himself. Once again, the only fluctuations to occur were for somatic anxiety and energy levels. Somatic anxiety intensity increased slightly from 3 to 5 (and +3 to +2 in direction). This anxiety increase was mentioned in his interview data during the last game of the set: *“I was a tiny bit [tight]. Usually the one thing that goes in my game when I start to get a bit tired, is my feet”*. This was backed up by a decrease in energy levels from 8 to 6, with a corresponding decrease from +3 to +1 in direction.

With his opponent having tied the score at one all in the second set, Player 5 continued with his positive perceptions. Graphically, a slight increase was seen for cognitive anxiety level, rising from 1 to 2 in intensity and +3 to +2 in direction. Confidence, although dropping from 9 to 8 on the intensity scale, was still perceived as positive, at +2 on the directionality scale. Somatic anxiety once again decreased from 5 to 3 in intensity, with a corresponding increase in directionality, from +2 to +3.

### **Post-match**

On completion of the match, Player 5 experienced an increase in fatigue levels, from 1 to 5 and a decrease in energy levels from 6 to 5. Both were still seen as positive in direction. This result is hardly surprising after over an hour and a half on court. Both cognitive and somatic anxiety levels dropped to only 1 for intensity, while confidence increased from 8 to 9.

Player 5 felt relieved and happy to have won the match: *“Relief more than anything. So close to losing my service game before [but] very, very pleased”*. He felt pleased that he had achieved his goal of playing how he wanted to: *“The way I kept myself...I did try and attack the guy”*. He attributed the match outcome to mainly internal factors: *“The pressure I put on him...The backhand went really well. Taking on his second serve”*. He also highlighted the importance his training had had on his play: *“the way training had been going definitely had an effect. It just came into one”*. He did however, acknowledge the role his former coach played in this match: *“My old coach came up to me...after practice and said, “I’ll tell you one thing. I think you’re a guy with a lot of heart.” He just talked me through it and everything. Just saying that. It gets you thinking, I’m going to have it! It did help me”*. He rated his performance as a nine out of ten.

### **Player 6**

#### **Pre-match**

Player 6 had recently returned from a tournament abroad. He sustained an injury whilst playing, but had taken two weeks off from training and felt had

recovered completely. He therefore went into this tournament with a minimal amount of recent training behind him. Although he did not specify that this was a cause for concern, he did feel that his game in general was not as good as it was: *"I hadn't been playing that well before hand...I was just sort of trying to get my game back together really"*.

He qualified for the main draw, and saw this as an opportunity to gain more experience in senior tennis: *"[The tournament] wasn't unusually important. I mean it would be nice to do well...I was just getting used to senior tennis really. Because I hadn't played that many matches against senior player"*.

The only goal he set for the match was to: *"Just get my game back to what it had been a while before"*. This involved technical and tactical factors, such as serve volleying, coming forward and the forehand. It also included a mental aspect: *"I'd been losing because I'd been a bit negative about the [forehand]. Just trying to be positive really. See what I got out of the match"*. He viewed the goal of being positive, as being something that would not be easy: *"It wasn't easy because I wasn't particularly confident in my game. So it was kind of hard to be really positive about the way you're playing"*.

Player 6 was positive on the morning of the match: *"I don't think I was particularly nervous or anything. Just looking forward to [it]"*. He did not perceive that there was any pressure from him to win the match: *"It was a good opportunity for me because I didn't have anything to lose. I knew it was a good chance for me to go out and play against someone who was ranked higher...It helped being the underdog...when you opponent has a little bit more pressure than you...I didn't put pressure on myself"*. Nor did he feel that there were any external pressures for him to perform well: *"I think going into that match, there wasn't that much pressure for me to win...My own coach wasn't putting any pressure on me"*.

On arriving at the tournament site, Player 6 experienced positive emotions: *"Just excited and looking forward to getting on the court"*. He appeared to associate these positive emotions with a positive perception of somatic anxiety:

*“Just sort of the usual nerves...I like that. I mean, it helps me to concentrate on the ball and to get a bit more energy out of yourself”*. He felt that qualifying for the tournament helped his confidence level: *“Definitely helps. I was more used to the court...and a bit more match tight as well”*. Playing his opponent in past matches also helped his confidence level: *“Didn’t think I was going to get killed. I was confident that if I had a chance, I could take the match”*.

Before going onto court, Player 6 spoke to his coach: *“It’s always nice to get someone else’s opinion on things to do. Just added onto my own ideas”*. He exhibited somatic anxiety as he walked out on court, but perceived this as positive: *“A bit of butterflies in my stomach. That was quite important, that”*.

### **During match**

Player 6 focused on his strokes during the warm-up: *“Just trying to get all my strokes...the timing of the ball”*. He stated that he did not think very much during the warm-up: *“I don’t think about anything, to be honest. Just automatic really”*. Because he had played his opponent on two previous occasions, he felt that there was little need to pay attention to what his opponent was doing. He felt relaxed during this time and exhibited no somatic anxiety: *“Feeling quite lively. The butterflies had gone”*.

The questionnaire data reflect this positive state. Energy intensity levels increased from 8 to 9, while fatigue levels decreased from 3 to 2. Both were perceived as being positive in direction. Depression and anger levels were both rated as 1 on intensity and +3 for directionality. Anxiety levels were low, with cognitive intensity at 2 and somatic intensity at 3. Again, these were seen as being beneficial to his performance. Finally, his confidence levels increased from 5 to 6 in intensity and -1 to +1 for direction.

Having played the first two games in the first set, Player 6 remained positive, both on his opponents serve: *“I played a pretty good game there”*, and his own serve: *“Good feeling just to get the first game on the board. To be level with him”*. The graphical data backs this up, with fatigue, decreasing in intensity

from 2 to 1 and +2 to +3 in direction, the only factor to have changed over this time.

Losing the first set, Player 6 showed an increase in intensity for both anger and depression, from 1 to 3. This increase was perceived as being detrimental to him, with directionality dropping sharply from +3 to -1. This was evident in his interview data: *"I'm annoyed...Didn't play a very good game...get a bit of frustration out"*. His energy intensity level dropped from 9 to 7, whilst his fatigue intensity level rose slightly from 1 to 2. Both these changes were interpreted as being less positive in direction than before. No specific mention was made about these levels during the interview. His anxiety levels increased by one point of the Likert scale, but remained below average. Directionality of cognitive anxiety was positive, at +1. Somatic anxiety intensity was now perceived as being neutral. Player 6 attributed the loss of the last game to possible anxiety levels: *"Maybe [it] was because I was a little bit tense"*. Finally, the questionnaire data showed a dip in confidence, from 6 to 4, with a corresponding decrease in directionality (+1 to -1). This might be expected after the loss of the first set.

By the end of the second game of the second set, Player 6 no change in energy and fatigue intensity levels. He did, however, perceive these levels to be more positive in direction, with energy increasing from +1 to +2 and fatigue from 0 to +3. Having held his serve on the second, his levels of depression and anger decreased in intensity from 3 to 2. These decreases were viewed in a very positive light. Depression increased from -1 to +3 in direction, while anger increased from -1 to +2. Holding onto his serve may have aided in this change. Confidence rose from 4 to 5 in intensity. Despite Player 6 talking positively about the effects of holding his serve, whilst playing the game: *"Feeling more confident. Just want to get this game under my belt and got on track"*, having won the game, the directionality only increased from -1 to 0. Thus having little effect. This could be due to the confusion he seemed to associate with winning this game: *"I'm still thinking I've got a chance in the match. But he's returning well and playing well, so it's knocked my confidence. Again, it's one of those things that a hold like that could almost turn a match around. Confidence of*

*breaking there*". The rise in cognitive anxiety from 3 to 4, may have been associated with these thoughts. Such thoughts, however, did not appear to have any effect upon his somatic anxiety intensity levels, which fell from 4 to 3.

### **Post-match**

At the end of the match, Player 6 exhibited an increase in fatigue intensity levels (from 2 to 5) and a decrease in energy intensity levels (from 7 to 4). A finding which is not perhaps surprising having played for an hour and a half. Yet he perceived it to be negative, rating each factor as -1. His depression and anger levels both increased in intensity. Depression rose from 2 to 4 and anger, from 2 to 6. Perceptions became negative, in the case of anger (from +2 to -1) and neutral in the case of depression (from +3 to 0). Quotes taken from the interview backed up this finding: *"I'm a little bit frustrated. But taking good things out of the match, because I played quite well"*. Confidence and somatic anxiety were unchanged at the end of the match, while cognitive anxiety fluctuated by one point to 3 for intensity and +1 for direction.

The overall view of the match was predominately positive for Player 6. He rated his performance as : *"7 or 8 [out of ten]. I was quite pleased with the way I played"*. He felt that he had achieved his goals: *"Yeah, I did everything I can really. I'm going to be disappointed I lost because it's always disappointing to lose but...I came in and played the way I wanted to play and I had a good match. I gave everything I had to give...I thought I handled [being positive] quite well"*. He attributed his performance to both internal and external factors: *"The first thing is that I did have chances and I didn't take them...I gave him the chance to win. Mainly because he came out with good points rather than me...I hadn't come out and made enough first serves in a couple of games...maybe I got a bit tight...wasn't as confident as I normally am"*. He went on to discuss the impact he felt pressure had on his game: *"Chances are that because I was under so much pressure on my serve and volley throughout the second set that eventually he was going to break me. But then again, I had held four times before, so I should have held again"*. He felt his injury had a bearing on the outcome of the match. Not because it hindered his movement around the court, but because of the lack of training: *"I hadn't been playing as*

*much ...and when you're playing a lot, you're getting a lot of big points and coming through them. I was just coming back from injury and not playing so well".*

- *Review of key moments*

**Table 4.7 Key moments case study three**

<b>PLAYER 5 vs PLAYER 6</b>	
<b>PLAYER</b>	<b>SCORE</b>
<b>FIRST SET</b>	
Player 5: Key game	3-2
Player 5: Momentum with opponent	3-3/0-15
Player 5: Momentum level	4-3
Player 6: Key point	4-3/40-A
Player 6: Key point	4-3/40-40
Player 5: Key point	4-3/A-40
Player 6: Key game	4-4
Player 6: Key point	4-4/A-40
Player 6: Key game	5-4
Player 5: Key game	5-4
Player 6: Key point	5-4/30-30
Player 6: Key game	6-4
<b>SECOND SET</b>	
Player 6: Fear of opponents momentum	0-0
Player 6: Momentum with opponent	1-0/40-30
Player 6: Key game	1-0/40-A
Player 6: Key game	2-1
Player 5: Momentum with self	3-3/40-15
Player 6: Key game	4-3/30-0
Player 5: Key point	4-4/40-40
Player 6: Key point	4-4/40-A
Player 5: Momentum up and down	5-4
Player 5: Key game	5-4
Player 6: Key game	5-4

**First Set:****Game 3-2****Player 5 serving**

Having lost the previous game to love, Player 5 felt the need to win this game: *"Let's try and get this game over with"*. His desire to complete the game quickly, may have caused the loss of the first two points. Player 5 attributed this loss to his mental state. At 0-15: *"That's overconfidence. I felt I could do anything [because things were going so well with my serve before]"*. At 0-30: *"That was being too sensible! I let a backhand, which should have knifed it back down there, and I played it too sensibly"*. He felt that he came down too much after the first point and was trying to be too safe. His confidence leveled off at 0-30. As the points went on, Player 5 sensed that it was a key game in the match. At 40-A, he focused on his serve to try and stay with each point: *"Thinking point by point. Get the first serve in"*. Having won the game, he reflected on his own game and his opponents: *"I think I pretty much won it. Got back up. I was the one who nearly lost it and I was the one who won it back, I think. And that's not taking anything away from him. He took chances, where I didn't"*. The confidence level of Player 5 was affected by his opponents good play: *"He's brought me down to earth a bit more I think, that game...He's catching"*.

The confidence from winning the last game, rolled into this game for Player 6, and his main aim in this game was to put him under pressure: *"I'm starting to think about getting on his serve. Putting him under a bit of pressure"*. Winning the first two points, gave him confidence in his play: *"Got a chance. I've never been at 0-30 before, so I know that I can get it again"*. As the game swung back and forth from deuce to advantage, Player 6 remained positive in his outlook: *"I mean I was quite happy. I played a good point to get him back to deuce there and eventually he's put in a double fault. Maybe going for a bit too much. I'm just hanging in there at the minute. Trying to get what I can out of the game"*. Even though Player 6 lost the game, he continued to remain positive: *"He just came out with some good serves...There wasn't much I could have done about that...Certainly feeling more confident...I was finding little things that he was not comfortable with. [Keen] to keep the pressure on him more than anything"*.

**Game 4-3****Player 5 serving**

Coming off the back of a loss in the last game, Player 5 perceived the momentum to be with his opponent and not with him: *"The momentum, it's not working at the moment. [The momentum] is probably more so with him"*. He put this down to his level of play: *"[Because] of the way I'm playing. The last game, I've let him dominate"*. After holding his serve, Player 5 then felt that the momentum had shifted to some degree, back to him: *"Averaged out again, I think"*. He went on to discuss why this was: *"You're supposed to win your serve anyway. So whether the momentum is with you or not, you can still win your serve. So you can still be all level, all square"*.

Player 6 had very little to say about this particular game. He did not perceive that momentum was either with him or his opponent. He did, however, concede that his opponent played well: *"He was consistent. He played a good game"*.

**Game 4-4****Player 6 serving**

Losing the last game 40-15, Player 6 felt the pressure was on him in this game to hold serve: *"This is a big game. Because if you lose that game, then you've got to break to stay in the set"*. Despite the importance of the game, he was trying to remain calm: *"You don't worry about it too much. You don't think about the score that much. Or try not to, anyway. Try and play every point as you can"*. Player 6 regarded 40-40 as a big point. He described his feelings when he lost the point to go break point down: *"I'd been volleying well and that was a volley I should have made, really. It's a big point. Just a bit disappointed I didn't make that"*. The second advantage point for his opponent, was also seen by Player 6 as important. His thoughts became negative and some anger filtered through at this stage, but he had a coping technique to help counteract his negativity: *"Sometimes you've got to get your anger out. But it's fairly easy to switch back on straight away. You sort of get into a routine. It's not good all the time to get frustrated or unhappy or whatever. Sometimes you have to get it out and get on with the next point. I can't change what I've just done. I try and correct it with the next point"*. He felt that the game had been tight and

expressed relief having held onto it: *“A bit of relief. Once you come through a tough game like that, at quite an important point in the match. You’ve come through it reasonably well, it’s a bit of a relief”*.

Player 5 had two break points during this game. He felt that it was his reflections on these points, that caused him to ultimately lose the game: *“It almost seems like things have stayed in my head from like the first point [A-40]. Not even thinking about it. I’m making the break point, instead of hitting it. [It’s still at the back of my mind]. It’s like subconscious”*. The second break point for Player 5 was seen as key: *“It almost seems like it just stays in my head without thinking about it”*. Although he lost the game, his confidence was not affected: *“It was fine. When you’re confident it doesn’t really matter. I’m getting more chances. What ever happens, it’s going to go right sooner or later”*.

#### **Game 5-4**

##### **Player 5 serving**

Player 5 perceived this game to be of importance. He felt that he had to create chances after the last game: *“I’ve got to make a chance. I’ve got to start making the chance”*. He won the game and felt confident in his ability to stay in the set: *“Getting ahead in the set. A couple more chances to break. He’s got to hold twice, I’ve only got to hold once to go to 6-6 and the tie-break. Just see if he’s got it in him. From my view [the pressure is on him]”*.

Player 6 also perceived this game as important. More important than the previous game: *“Towards the end of the set, when it’s tight, it’s much more important to hold on...So you’re a little bit more tense. It’s something at the back of my mind”*. Game point down was seen as a key point for Player 6. Despite losing the point and the game, he tried to remain positive; *“He came out with some good shots. A little bit frustrated, maybe. But I’m not letting it affect me in any way”*.

**Game 6-4****Player 6 serving**

Player 6 started to feel the pressure. Knowing that he had to hold serve to stay in the first set, he viewed this as a key game. At 30-30, a perceived key point in the match, he felt his nerves started to interfere with his play: *"I should be winning the game but just trying to be tight on every point...You get a little bit tense in the serve...Just tiny little things like that could you make you miss the odd first serve or drop a volley short"*. He went on to miss the next two first serves and lost the game and the first set. He analysed the loss of his service game *"I'm annoyed. I don't think I collapsed under pressure...I think he did play a good game there and I didn't play such a good game. Maybe that was because I was a little bit tense"*.

Player 5 sensed that his opponent was getting tight with his serves: *"I think he didn't make enough first serves...Everything changes when you make first serves"*. Player 5 remained positive throughout the game and felt that he disguised his nerves well: *"I was the one that was...positive on that game...You notice it in the game. Like, I was a tiny bit [nervous] but I managed to disguise it"*.

**Second Set****Game 1-0****Player 5 serving**

Player 6 indicated the consequences of losing the set on his serve and its effects on the next set: *"It's always nice to start off ahead. But it's even worse if you are going out and serving, having lost the first set, and you get broke in the first game"*. He was aware of how important it was play well in this game: *"Trying to get a good start now. Try and turn things round straight away. Don't want to start him off on a roll. Don't want him to run away with the match now"*. He did not feel that he had to break his opponent in this game, however: *"Not really important to break him. I didn't want to give him an easy game. But if I ever did get a chance, it would be great to break him in the first game"*. Unfortunately, for Player 6, he lost the game: *"I'd just lost three games in a row...I'm not particularly happy. But then again, the second set has just started. I'm level on*

serve, so". Although his confidence level had dropped: *"The more things start to slip away, you get a little bit less confident"*, he managed to take positives from his play so far: *"It's helped that I've had four good service games in the first set...I know that I'm serving well and if I play a reasonable game I'm pretty much going to hold"*.

Player 5 felt the need to calm down after winning the first set: *"I was thinking, right got the set. You're up here at the moment. Let's get back down. Get the blood pressure right!"*. He used relaxation methods to achieve this: *"Just taking a few seconds. Just to close your eyes and stuff. Breathing. Trying to keep nice and relaxed"*. His response after winning the game, was very positive in nature: *"Over the moon! Got a good game there. Hung on. Still haven't been broken yet in this match. I was probably thinking, I can break him every time now! Easy!"*.

### **Game 1-1**

#### **Player 6 serving**

Although Player 6 had lost the last game, he was confident he could hold his serve in this game. His thoughts were focused on the quality of his first serve: *"He's starting to return well. So I'm a little bit, not worried, but unsure when the balls come back"*. He did not feel the need to change his game plan in any way: *"It's [game plan] something you sometimes change. Normally I would, probably. I would change a few things if I was losing, but it just depends. I mean, basically it's the fact that he's playing too good, rather than I'm doing things wrong"*. At 30-40, he was aware that his opponent might increase his level of play. He attempted to use this thought in a positive direction to increase his level of play: *"Once he starts to get on a roll...[it was] in the back of my mind. I'm thinking about that, but I'm telling myself to be even solidier now and concentrate even harder on getting this game"*. He used imagery to help get his first serves in: *"You sort of play it in your mind"*. On the advantage points he would use self-talk, though it was not entirely positive in its wording: *"Every time I'm just saying, don't be sloppy here. Give yourself the best chance of getting back into the set. Don't throw your chances away to getting back level"*. Having held, after three advantage points, Player 6 talked about his level of

confidence: *"I'm still thinking I've got a chance in the match...But he's returning well and playing well, so it's knocked my confidence down a little bit"*. He stated the importance of holding this game: *"It's one of those things that a hold like that could almost turn a match round"*.

Although Player 5 did not perceive this to be a key game in the match, he was very disappointed in losing it: *"Gutted about that. Another game wasted...Like, [I] had a chance there. Breaking him at the end of the first set...could have had two games without his holding serve. So it was a big opportunity for me"*. He was confident that he would be given another opportunity to break, later on in the set: *"I was thinking like, going to get another chance. I'm going to take one of them, at least"*.

### **Game 2-1**

#### **Player 5 serving**

As with the last game, Player 6 felt that this was a key game in the match. After losing the game, his thoughts focused round two main issues. The first was how well his opponent was playing: *"He's playing well. It's frustrating. You know you can't do anything, but every time you just have to keep telling yourself, well I couldn't have done anything here. It's nothing I've done wrong"*. The second was that he was aware that it may take just one point to turn the match around: *"In a match you usually get a chance, just one chance in an entire match. And if you can take that chance, you can just turn a match round. That's all it takes"*. He did concede that it was getting to him: *"I'm maybe a bit frustrated as I haven't had a chance to break in seven service game"* but he still had confidence in himself: *"[But] I know I can break him...If I can just get lucky on another break point in another game"*. The confidence he had on his own serve, further increased his optimism in turning the match around: *"As long as I've been holding my serve, than I could switch the match round"*.

In winning the first two points in this game, Player 5 had an increase in his confidence: *"Pleased with that! I was thinking, let's try and get three [aces] in a row!"*. The two points he dropped in the game, he felt was down to his overconfidence and relaxed manner.

**Game 4-3****Player 5 serving**

Player 6 was pleased to have held on to his own serve in the last game. His thoughts once again turned to breaking his opponent: *"I'm thinking, okay he's serving very well...[but] I know that there's a chance that he's going to play a bad game. And I'm not playing that badly"*. When he lost the game, he began to think ahead to a possible tie-break: *"If we do keep holding serve, then it's a tie-break, which is 50-50...If I'm not going to break him, then yeah, just hold your serve and get to the tie-break"*.

At 40-15, Player 5 felt that he had control of the set and the momentum: *"I feel like I'm on top of this set. The momentum is with me"*. Winning the game helped keep his confidence level elevated: *"[Confidence] is still up. Confidence for me is how I hit the ball, and I know I'm hitting the ball well"*.

**Game 4-4****Player 6 serving**

Player 6 highlighted this as another key game in the match. He felt that he had been struggling a bit, while his opponent was still playing well. He discussed the issue of pressure: *"I'm feeling a little bit threatened by his returns. The pressure's more on me but I'm going to keep holding and try and hold and turn the pressure back to him"*. This pressure made him aware of the importance of his first serves: *"I'm starting to think that I'm going to have to make my first serves now. He's going to be whacking wheels with my second"*. At 0-30, he felt that the pressure had caused nervousness, which in turn had affected his serves: *"Probably a bit tense on my first serve because I'm trying to be a bit careful...I can't really expect to win on the second serve...There is a little bit of tension because I'm worrying a little bit, where I have to make it [serve]"*. Player 6 played two good first serves to reach 40-30. He put attributed this to an increase in confidence from winning the point at 15-30: *"You just make one good one and the next time you step up on there, you think you can make this... Just relaxing and stuff like that. You tense up a little bit more under a bit of pressure"*. After he won the game, he felt that his opponent had improved his

level of play: *"If anything he's upped it a little bit...He's just playing that little bit better"*.

Player 5, having reached 30-0, appeared to falter. He put the lost point at 30-15 down to overconfidence and lack of concentration: *"0-30, could be 0-40. Just thinking, go for it. The mind wanders when you're ahead. [I] wasn't paying attention"*. He received a bit of a reality check at 30-30, but with his opponents good play, he felt he couldn't do anything more and went on to lose the game.

#### **Game 5-4**

##### **Player 5 serving**

Player 6 perceived this to be a key game in the match: *"[It's] a really big game, I want to try and make him play a lot of balls here. I want him to be under a little bit of pressure"*. At 30-40, he felt that the next point was a key point: *"I'm basically thinking here, now is your chance. This is it. I have to accept if he comes out with a good point, but don't do anything sloppy because this may be my only chance"*. Player 6 lost that point and the next one, but felt that there was nothing he could have done: *"He's played two good points and I haven't been able to get it"*. At 40-40, Player 6 sensed that his opponent was starting to tighten up: *"He's starting to miss the ball now...he's just a bit anxious to get the game under his belt"*. At A-40, Player 6 had break point for the first time. He knew it was a key point: *"I'm telling myself that this is the big point. I'm putting a lot on this point. This could turn the whole match round"*. He tried to focus himself: *"I'm jogging around a little bit. Just trying to loosen up...so I can be focused and determined in my mind but also my body"*, but he lost the point: *"I think I was probably annoyed with that one. I could have done better with it"*. He tried to shake off the loss and focus on the next point: *"I've given myself a little time to get rid of it. Fresh and thinking about the next point. Not worrying about the last point. [Though] it's probably at the back of my mind a little bit"*. When player 6 lost eventually lost the game, he knew he had failed to take his chances: *"I've had my chances there"*. He went into the next game hoping that his opponent would tighten up again if he could hold his next service game.

Player 5 also perceived this as a key game in the match. He went into the game determined to win it: *"I was thinking it's 4-4, I'm all over this guy...I haven't been paying much attention. I've been a couple of times, 0-30, and I haven't put the guy away. Just going into this game thinking, just wanted a break there [last game], I didn't break there. Got to hold to try and break him on the next game. Nothing more than that at the moment"*. As the game went on, he began to tire. His first serve percentage started to drop. He put this down to the pressure of the situation and a decrease in confidence: *"Confidence is wandering a bit. More thinking about the points in the match, the situation. Thinking I might lose this"*. He felt he started to rush things and as a consequence was losing points: *"Just trying to get the point won too quickly"*. During the five advantage points, held by both men, Player 5 felt the game slipping away and then coming back again. Although he knew the importance of the game, his concentration continued to lapse. Finally, at the fifth deuce point, a key point, he realised that he needed to take his time and focus: *"This is where I realise what I'm doing wrong. I had to wait for some balls, which was lucky"*. He went on to win the next two points and the game. He was aware that the momentum shifted back and forth and that his confidence went up and down, throughout that game. In needing only one more game to win the match, he attempted to refocus: *"It's just trying to get into the "start thinking" mode"*. He went on to break serve and win the match.

- *Summary of case study three*

Differences were found for the graphical data for both players. The results from Player 5 (the winner) showed that cognitive anxiety, depression, fatigue and anger were lower than for Player 6 throughout the time phases. Confidence levels for Player 5 were found to be higher in intensity compared to Player 6. However, somatic anxiety intensity levels were either higher or the same as the levels of Player 6 until the end of the match, where they were reduced. Energy levels were perceived to be higher in Player 6 compared to Player 5 until near the end of the match, where they decreased.

Four games during the match went to two or more deuces, with each player serving and holding two service games each. Player 5 indicated that he experienced a decrease of concentration and at times a feeling of over confidence during these four games. Player 6, on the other hand, stated that his thoughts and feelings fluctuated up and down during this time.

Player 6 identified twelve key moments during the match and won only four of them. Player 5 identified five moments he perceived to be key to the match, four of which he won.

The key issues emerging from the data appeared to high confidence levels for Player 5, which at times developed into over confidence. This over confidence along with a tendency to become too relaxed caused unforced errors to occur. A decrease in concentration was also in evidence. This was sometimes attributed to task irrelevant thoughts, such as losing previous points. Player 6 exhibited a greater swing of emotions and thoughts, ranging from high confidence and feeling happy to feeling under pressure and getting annoyed.

## 4.54 Case Study Four: Player 7 vs Player 8

- Score Sheet: 7-5 7-6 (7-5)

<u>Player 8</u>	<u>Player 7</u>	<u>Player 7</u>	<u>Player 8</u>	<u>Player 8</u>	<u>Player 8</u>
0-15	0-15	15-0	0-15	15-0	15-0
15-15	15-15	30-0	0-30	15-15	15-15
30-15	15-30	40-0	15-30	15-30	30-15
30-30	30-30	40-15	15-40	30-30	30-30
40-30	40-30	40-30	30-40	40-30	40-30
			40-40		
1-0	3-3	5-5	A-40	4-3	6-5
↓	↓	↓	40-40	↓	↓
<u>Player 7</u>	<u>Player 8</u>	<u>Player 8</u>	A-40	<u>Player 7</u>	<u>Player 7</u>
15-0	0-15	0-15	40-40	0-15	15-0
15-15	15-15	0-30	40-A	15-15	15-15
15-30	30-15	0-40	40-40	30-15	30-15
15-40	30-30		A-40	30-30	30-30
	30-40	5-6		40-30	30-40
0-2	40-40		2-1	40-40	40-40
	A-40	<u>Player 7</u>	↓	A-40	A-40
<u>Player 8</u>		15-0	<u>Player 7</u>	40-40	
0-15	4-3	30-0	15-0	A-40	6-6
15-15		40-0	30-0		
30-15	<u>Player 7</u>		40-0	4-4	<u>Tie-Break</u>
40-15	15-0	7-5			C 1-0
	15-15		2-2	<u>Player 8</u>	2-0 M
3-0	15-30	<u>Player 8</u>		15-0	3-0 M
	15-40	15-0	<u>Player 8</u>	15-15	C 4-0
<u>Player 7</u>	30-40	15-15	15-0	30-15	C 5-0
15-0	40-40	30-15	15-15	40-15	5-1 M
15-15	A-40	40-15	30-15	40-30	5-2 M
15-30		40-30	40-15	40-40	C 5-3
15-40	4-4	40-40		40-A	C 5-4
30-40		40-A	3-2	40-40	5-5 M
40-40	<u>Player 8</u>			40-A	5-6 M
A-40	15-0	0-1	<u>Player 7</u>	40-40	
	30-0		15-0	A-40	5-7
1-3	40-0	<u>Player 7</u>	30-0		
		0-15	40-0	5-4	
<u>Player 8</u>	5-4	15-15	40-15		
0-15		15-30		<u>Player 7</u>	
0-30		30-30	3-3	15-0	
15-30		30-40		30-0	
15-40				40-0	
30-40		1-1		40-15	
3-2				5-5	

• Graphical Representation

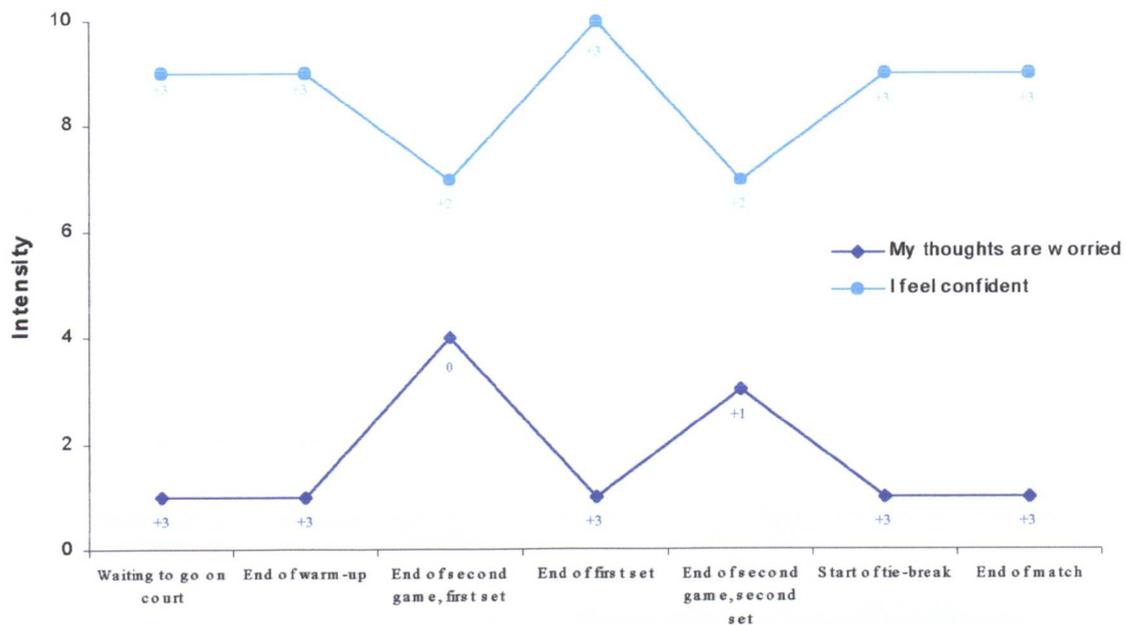


Figure 4.30a Case Study Four: Winner

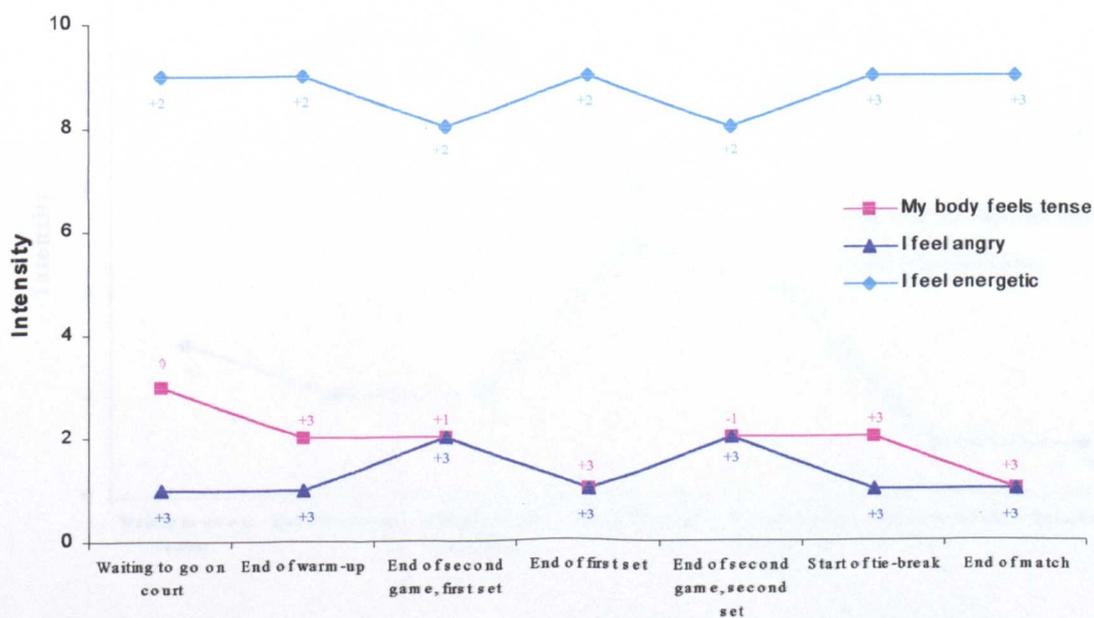


Figure 4.30b Case Study Four: Winner

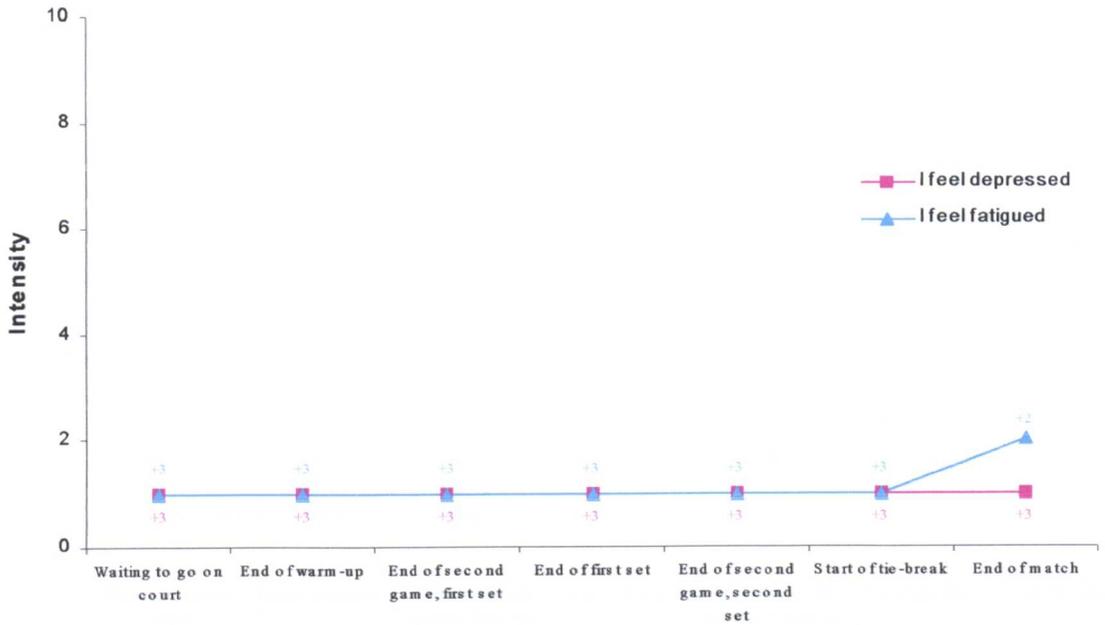


Figure 4.30c Case Study Four: Winner

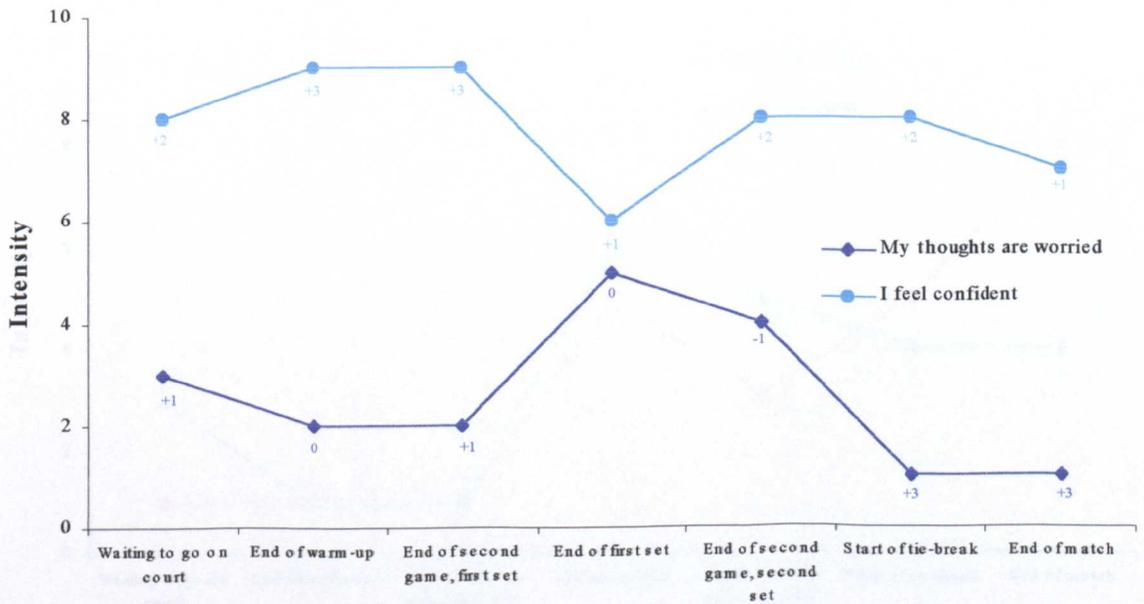


Figure 4.31a Case Study Four: Loser

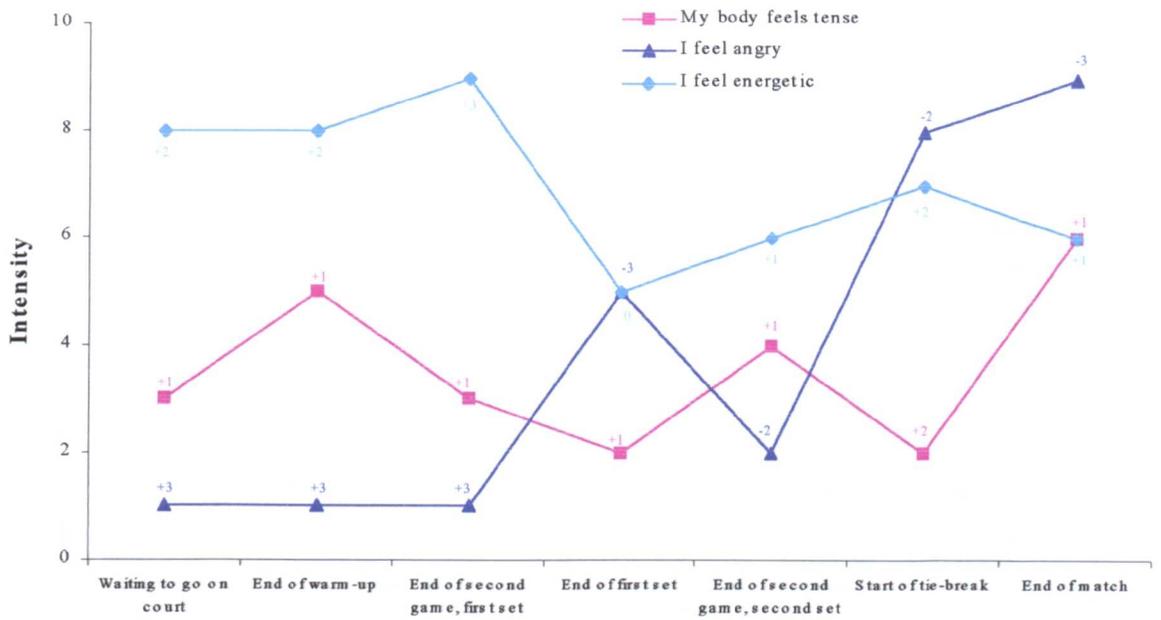


Figure 4.31b Case Study Four: Loser

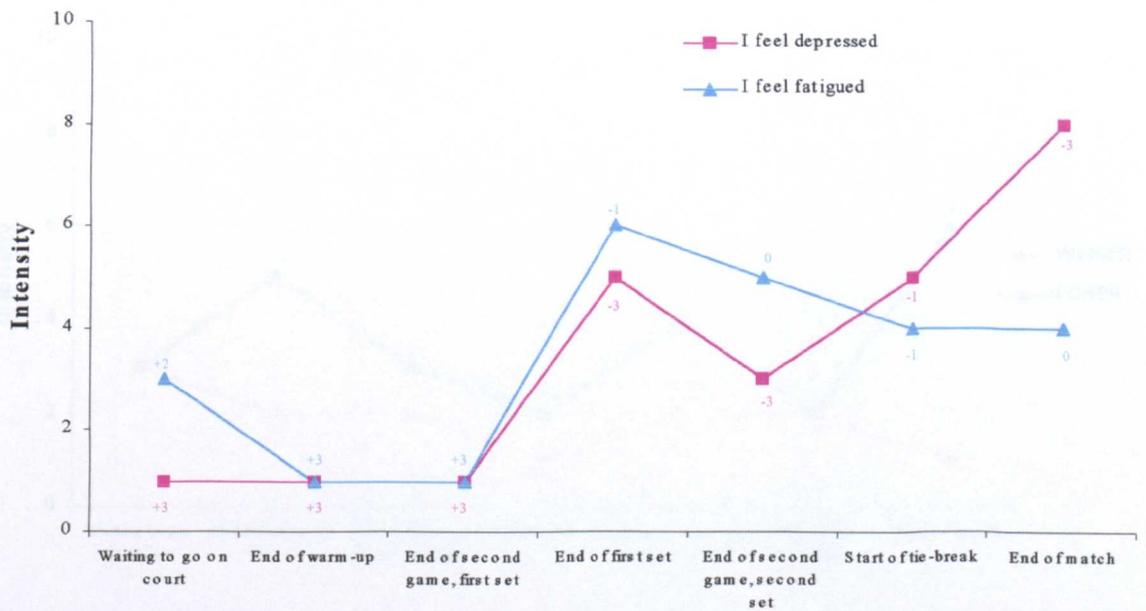


Figure 4.31c Case Study Four: Loser

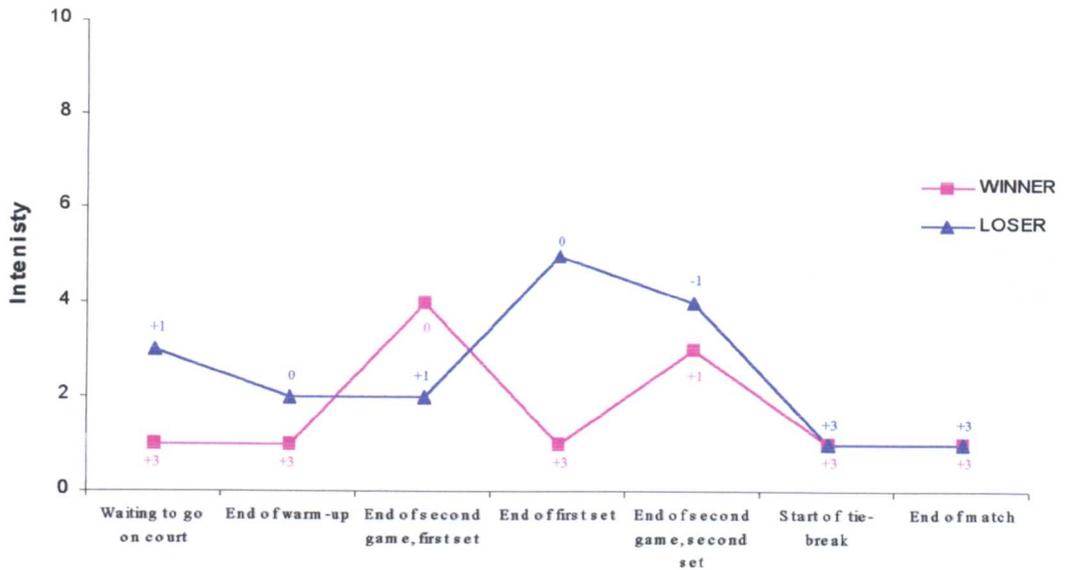


Figure 4.32 Case study Four: Cognitive anxiety comparisons

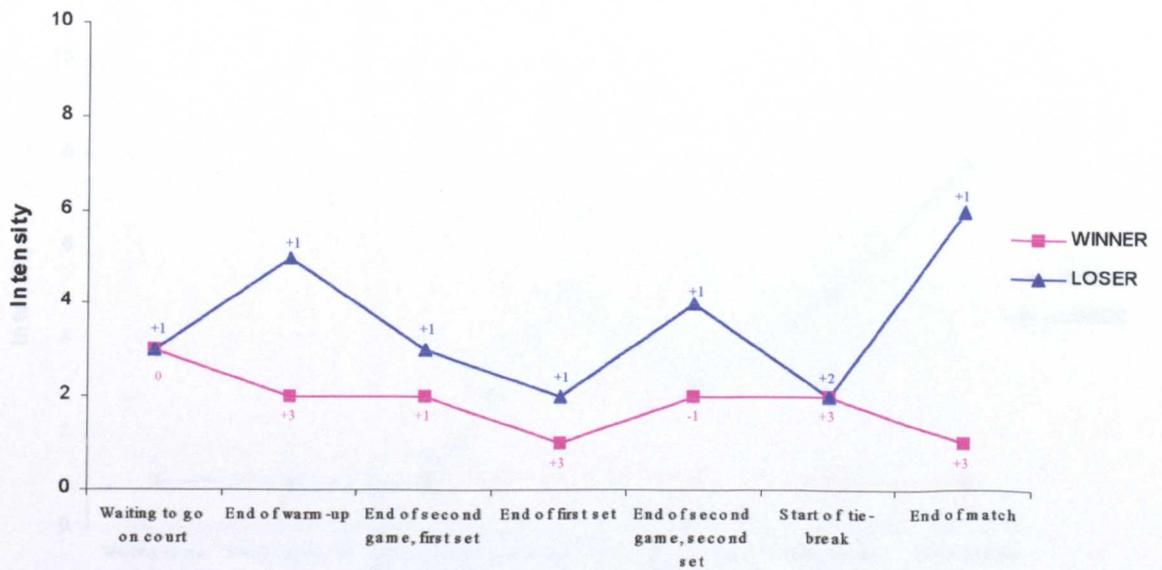


Figure 4.33 Case Study Four: Somatic anxiety comparisons

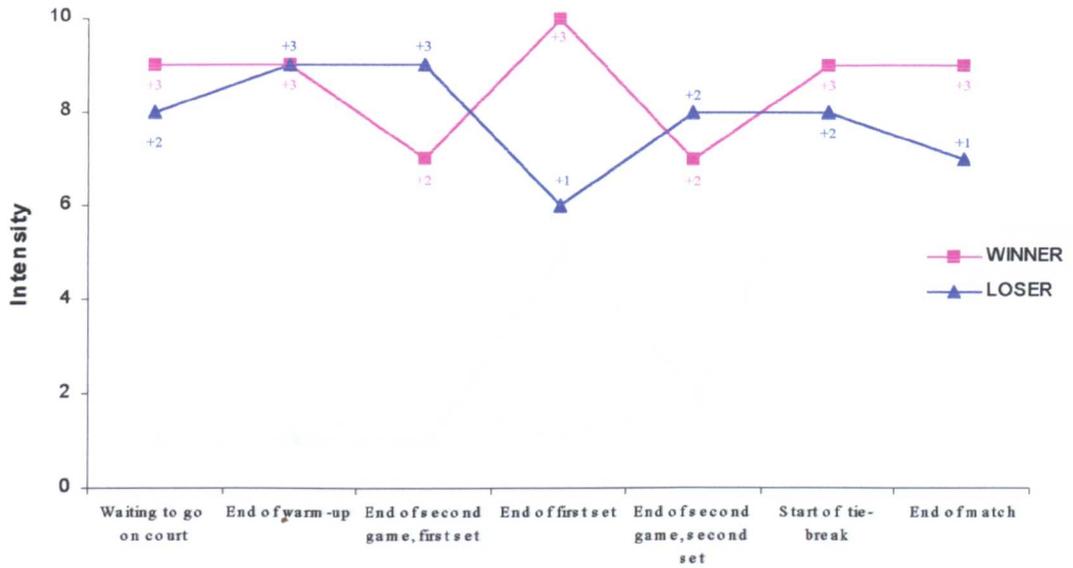


Figure 4.34 Case Study Four: Confidence comparisons

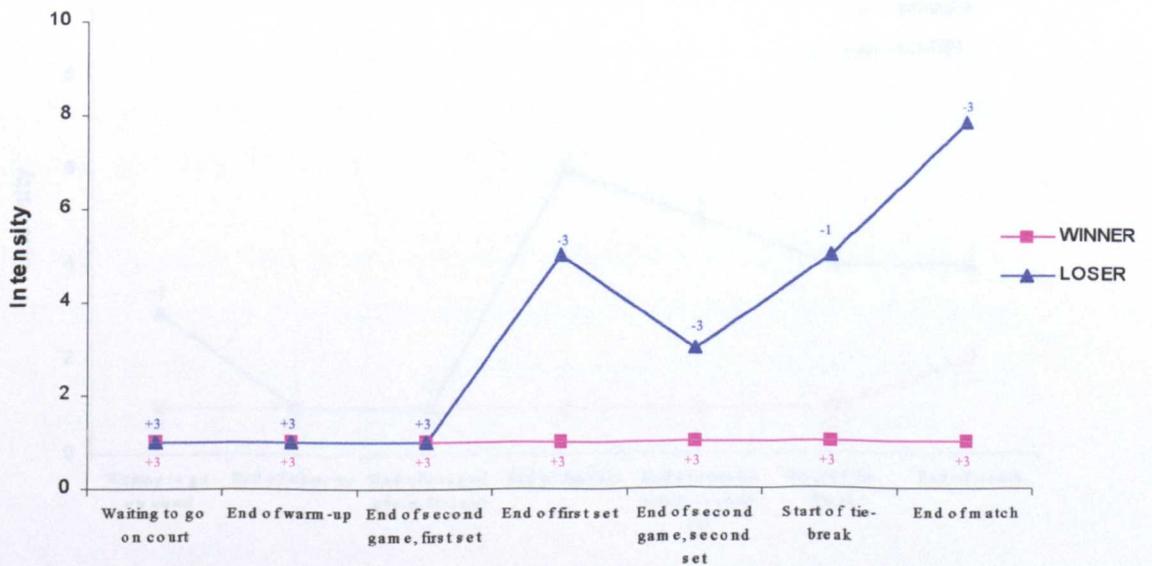


Figure 4.35 Case Study Four: Depression comparisons

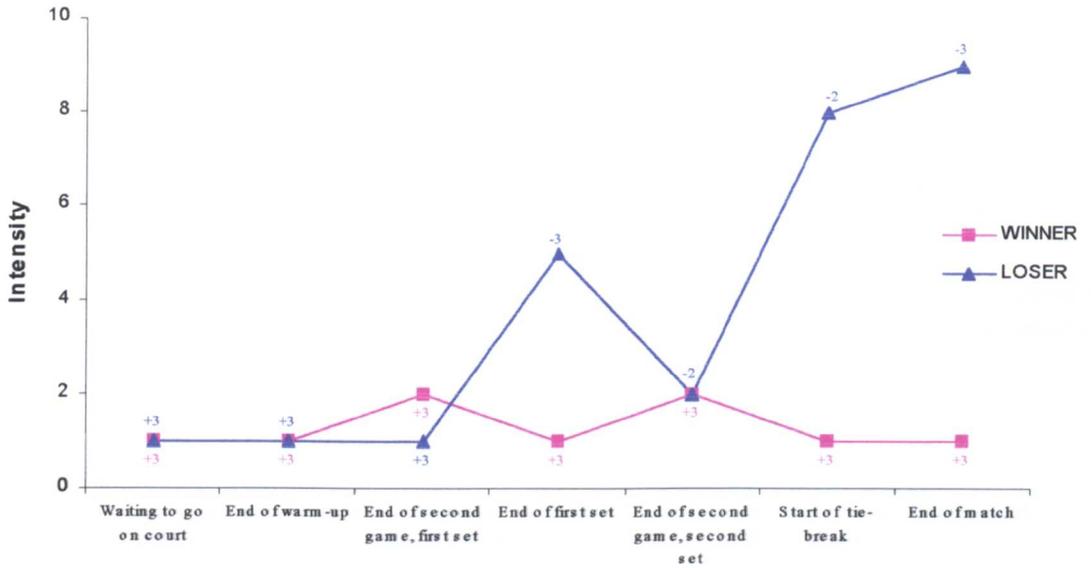


Figure 4.36 Case Study Four: Anger comparisons

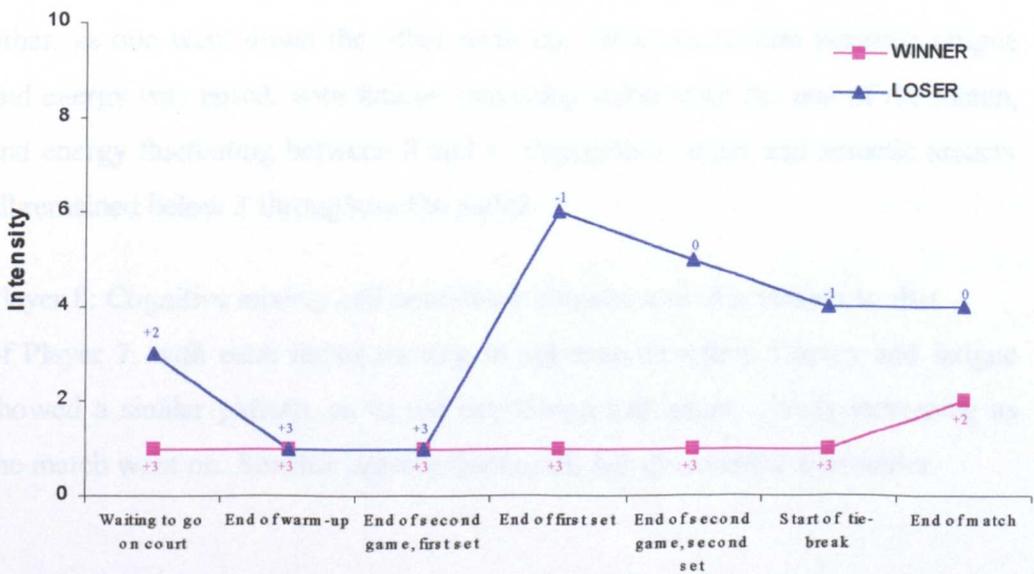
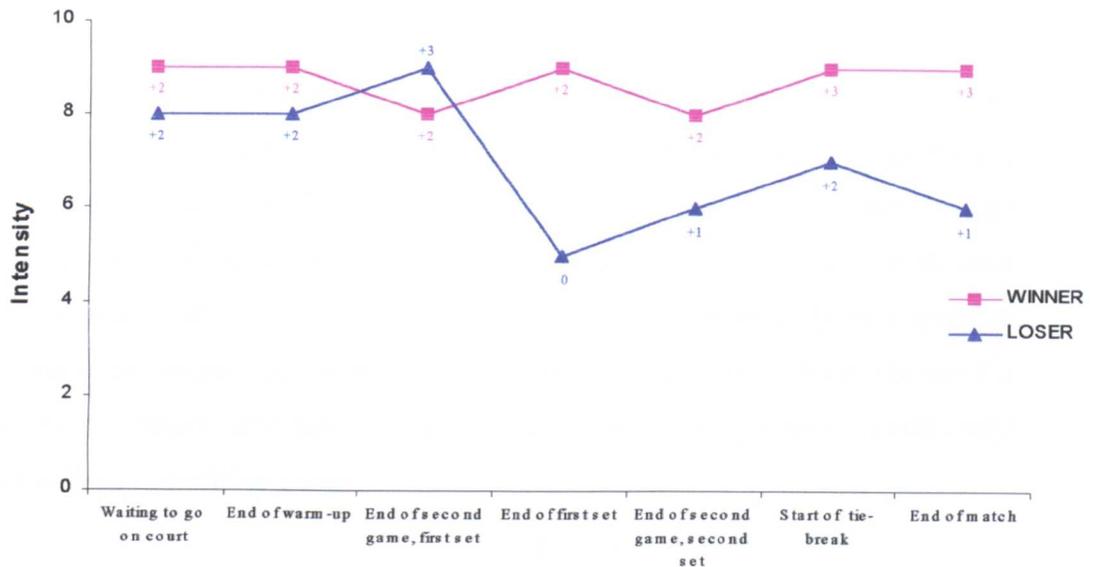


Figure 4.37 Case Study Four: Fatigue comparisons



**Figure 4.38 Case Study Four: Energy comparisons**

- *Comparison of graphical data*

Player 7: Cognitive anxiety and confidence showed opposite patterns of each other, as one went down the other went up. Little connection between fatigue and energy was noted, with fatigue remaining stable until the end of the match, and energy fluctuating between 8 and 9. Depression, anger and somatic anxiety all remained below 3 throughout the match.

Player 8: Cognitive anxiety and confidence showed a similar pattern to that of Player 7, with each factor moving in opposite direction. Energy and fatigue showed a similar pattern, as to did depression and anger, slowly increasing as the match went on. Somatic anxiety fluctuated, but remained at 6 or under.

- *Broad Overview of match*

### Player 7

#### Pre-match

Player 7 spent a successful week training, before coming into this tournament: *"I was practicing and it was pretty good. [I] got a lot of things done. It seemed*

*like a good week. I was feeling pretty confident*". He had also recently beat a top seed and won a tournament, which he felt had helped his confidence. He had no injury or fitness problems at this time.

This second round match was important to Player 7. He had beaten an older player in the first round and was positive in producing another win against the fifth seed: *"I knew I had a good chance. But at the same time I knew he was playing well. I thought if I could put my game on the court like I did [in the first round] then I had a chance of winning"*. He felt some pressure from himself to maintain his winning performance: *"I was slightly concerned about whether I'd be able to perform as I did the week before...I was playing a lot of tennis and I had to keep everything going"*.

He set the goal of going out and playing his normal game and to serve well. Focus on his game plan and not really worry about him. His coach wanted him to set an outcome goal of reaching the semi-finals, however Player 7 did not agree: *"I [said] I'd be happy if I could win a few matches. He was more up for me making the semi-finals. I could understand that. But to be honest...I remember thinking it would be good to win a few matches. But that should have been my aim"*.

Player 7 woke up on the morning of the match feeling positive: *"Excited about playing"*. The anxiety he experienced at this time was perceived as being positive: *"I guess I was a little bit nervous...butterflies in the stomach. Nothing bad. I always know I am before a match. But I don't think that's a bad thing, that's fine. I didn't need to worry because I was quite confident at the time I'd play well"*.

### **During match**

Player 7 felt that the warm-up went well: *"Feeling relaxed. Getting my feet moving. I feel fine. I don't worry or anything"*. He felt no real presence of either cognitive or somatic anxiety: *"No butterflies at this stage...Basically going through the motions...Not really thinking about the match or anything. I'm not thinking of anything particular...I just relax."* This was reproduced in the

questionnaire data. Cognitive anxiety intensity was valued at 1 and somatic anxiety at 2. Both were perceived as being very positive, rated at +3. Confidence was high, at 9 for intensity and +3 for direction: *"It's probably my strongest surface. I don't have an outstanding weakness [on this surface]"*. Energy levels were rated at 9 for intensity and +2 for direction. Correspondingly, fatigue intensity was rated at 1 and was perceived as being very positive (+3 for directionality). Indeed, his fatigue levels did not fluctuate in any way until the end of the match. Anger and depression were both low, at 1 on the intensity scale and high on the directionality scale (+3). As his interview data showed, it was: *"Exactly how I wanted to be"*.

By the end of the second game of the first set, Player 7 found himself two games to love down. His cognitive anxiety intensity level increased from 1 to 4, while his perceptions changed from being very positive to neutral: *"I was a bit more anxious about what he'd just done. Even though I said to myself it probably wasn't really my fault. I just lost my service game and it's not good"*. His confidence level dropped from 9 to 7 and +3 to +2 for directionality, at this time. In conjunction with this, there was a slight rise in anger, from 1 to 2, and a drop in energy, from 9 to 8. Somatic anxiety, although remaining unchanged for intensity, was perceived as being less positive than before (+3 to +1 in direction).

Holding his serve and winning the first set, Player 7 helped to turn the downward shifts in anger, energy and cognitive anxiety back to their intensity levels experienced at the end of the warm-up. All were now perceived to be positive in direction. In particular, cognitive anxiety which increased from 0 to +3. Confidence rose to a maximum of 10 on the intensity scale and +3 on the directionality scale. Somatic anxiety fell down to 1 for intensity and was perceived as being very positive, rated at +3. This positive mental state was reflected in the interview data: *"Starting to take a bit more control of the match...I'm feeling fine now. I've probably settled down completely. I don't feel any nerves or anything. I just feel confident"*.

At 1-1 in the second set, Player 7 experienced a slight increase in somatic anxiety intensity from 1 to 2. Although this was still very low, his perception of this increase was more dramatic, dropping substantially from +3 to -1. The only reference made in the interview that may be related to this is the way in which he played and lost his service game: *"I played very loose [causing] errors and let him back into the match a little bit"*. Dropping his serve may also accounted for other fluctuations, such as the increase in his cognitive anxiety, from 1 to 3 (+3 to +1 in direction). His confidence level dropped from 10 to 7 and anger from 1 to 2. Both were seen as still being beneficial to him. Energy intensity dropped back down to 8 again and remained positive in direction.

Having held his serve and reached the tie-break, Player 7 felt very positive about his play: *"I played a good game. I mean I feel good about the whole of that game. So I'm feeling pretty good at this stage I think"*. This quote was backed up by the graphical data. Somatic anxiety remained at 2 on intensity, yet interestingly increased from -1 to +3 in direction. Confidence and energy both increased to 9 on the intensity scale and viewed as very positive (+3). Both anger and cognitive anxiety intensity dropped to 1, and too were seen as very positive (+3).

### **Post-match**

Player 7 won the tie-break and the match and questionnaire data revealed an positive picture of his mental state. Cognitive and somatic anxiety, along with anger were all rated as 1 on the intensity scale and +3 on the directionality scale. Confidence and energy were high, at 9 on intensity and +3 on directionality. Fatigue intensity only increased to 2. Perhaps surprising considering he had played a long match.

He felt relieved to have won the tie-break, but thought he had put in a good effort: *"Although I didn't play unbelievably well, I played well when I needed to"*. He attributed his win to both internal and external causes: *"From the back of the court I always felt in control...He didn't really attack the net on his serve. I was in control there. At the same time, I needed to serve well and I did really, when I needed to. Except for the first few games in the first set...I guess in the*

*tie-break he gave it away a little bit, but he did play some good points, so". In doing so, he achieved his goals of serving well and playing his own game.*

## **Player 8**

### **Pre-match**

Player 8 perceived this match to be more important than his first round match: *"They get more and more important...[Needed] to show how far [I could go]. You're pretty much in the limelight. It sets up the whole year really".* The importance of the match added pressure, but he perceived it as being positive for him: *"A little bit [of added pressure]. But I always try and just go with it really...The pressure wasn't making me really uptight. It was just a little bit more of a feeling in the stomach, tingling".*

He assessed the match in terms of his opponent: *"I knew it would be tougher than the first round because he's just come off a couple of weeks of good tournaments. I thought it would be very tough".* He dealt with these concerns by using positive self-talk: *"I reminded myself that I'd just played a good match as well...and that I was well within my capabilities of winning the match...Just kept reminding myself that the way I play is going to be effective against him".*

He set both task and ego goals. He wanted to win the second round match and also wanted to focus on his game plan, which was to: *"Serve and volley a bit less, serve more to his forehand, and not to rush".*

He woke up on the morning of the match feeling quite positive: *"Woke up feeling okay, good. Quite relaxed and looking forward to it".* He felt that the confidence he had gained from the first round win, had some roll over effect in this match: *"There was confidence that I had built up, a tiny bit".* His thought also focused on the future: *"Thinking more about the future rather than the present. What if I beat him? What if this could happen? What if that could happen?"* .

Once he arrived at the tournament site, Player 8 spent most of his time trying to relax before his match. One successful coping strategy was to spend time with

friends: *"I had a few friends there...so I was relaxing with them...Just joking about things. It was pretty good. I felt it really got my mind off it for a bit"*.

### **During match**

Once on court, Player 8 felt the warm-up went well; *"Felt very good in the warm-up. Hitting the ball well... The butterflies had pretty much gone...Felt relaxed...like the energy, swing the arms, get the volume, nicely out in front. Keep low"*. By the end of the warm-up he felt nice and loose. Despite these statements, there was a rise in somatic anxiety intensity from 3 to 5, in his questionnaire data. He stated that his positive feelings of relaxation helped his level of confidence. Indeed, his confidence level did rise from 8 to 9 for intensity and +2 to +3 in directionality. His thoughts were positive: *"I was thinking yeah, I'm good enough to do it. Playing was good enough and probably at this time stage if my serve was okay, then it was alright. I was home and dry"*. His cognitive anxiety intensity level confirmed his lack of concerns, dropping from 3 to 2, yet only perceived as having a neutral effect. Energy levels were high, at 8 (+2). Fatigue, anger and depression were all rated as 1 and very positive (+3).

Being two love up in the first set, Player 6 had only positive perceptions of his mental state. Fatigue, anger and depression remained low on intensity, at 1, and high on directionality, at +3. Cognitive anxiety too, remained stable at 2 for intensity. Confidence and energy were rated at 9 on intensity and +3 for direction. Although somatic anxiety intensity decreased from 5 to 3, there was no increase in positive perceptions. This may echo a quote from the interview transcript: *"I felt like I've got a game in hand...But still not totally relaxed"*.

Player 8 lost the first set and the negativity from his interview data was reflected in the graphical data. Anger and depression fluctuated dramatically, from 1 to 5 in intensity and +3 to -3 in direction. Cognitive anxiety increased in intensity from 2 to 5: *"I mucked up that whole set from a good start. I was angry with myself"*. His confidence level also dropped, from 9 to 6, causing a decrease in positive perceptions (+3 to +1). As energy levels dropped from 9 to

5 for intensity and +3 to 0 for direction, so fatigue levels increased from 1 to 6 and +3 to -1 in direction.

By the time Player 8 tied the score at one all in the second set, his levels of anger and depression dropped down to 2 and 3 respectively. Despite these drops, he still perceived them as being detrimental to him, with anger rated as -2 and depression rated as -3 on the directionality scale. He experienced a similar situation with cognitive anxiety, which dropped in intensity from 5 to 4, yet also dropped in direction from 0 to -1. Even though the intensity levels of these factors had dropped, he was clearly still having a negative perception of them. Such perceptions may have been caused by the loss of the first set and the first game in this set: *"Just thinking shouldn't have lost last time...It's still in there. Still computing...Annoyed that I didn't win the serve"*. Somatic anxiety intensity increased from 2 to 4, but no mention of this was found in the interview data. Confidence intensity increased from 6 to 8 and direction from +1 to +2: *"Confidence went up...Feeling much happier"*. A slight shift in fatigue and energy was shown, with energy rising from 5 to 6 and fatigue decreasing from 6 to 5. Both these shifts were perceived positively.

Player 8 showed a dramatic increase in anger intensity, from 2 to 8, at the start of the tie-break. This was perceived as negative, rated at -2 on the directionality scale. Quotes taken from the interview data back this finding up: *"Very, very annoyed...Just really annoyed with myself"*. Depression levels also increased, from 3 to 5, however his interpretation of this increase, though still negative, had risen from -3 to -1. Despite the increases in negative emotional states, both cognitive and somatic anxiety levels dropped from 4, to 1 and 2 respectively. With the interpretation of these drop seen in a positive light, particularly for cognitive anxiety, which rose from -1 to +3. Player 8 maintained his confidence level at 8. Interview data may indicate as to why this was the case: *"[I was] trying to prove that it's not going to affect the match...Same thing happened last year...and I'm not going to do it again"*. Energy and fatigue levels shifted by only one point on the Likert scale, from 6 to 7 for energy and 5 to 4 for fatigue.

**Post-match**

Player 8 lost the match on the tie-break. His levels of depression and anger increased in intensity. Anger was rated as a 9, while depression was rated as 8. Both were viewed as very debilitating (-3): *"I was annoyed, angry and frustrated"*. Confidence dropped from 8 to 7, yet still remained quite positive in direction (+1). This may be due to the positive perceptions he had for some parts of his game: *"I felt like I did a few things right...I felt like I was seeing the ball well, hitting the ball right"*. This may also explain as to why his level of cognitive anxiety was unchanged, at 1 on intensity and +3 for direction. Somatic anxiety did however increase, from 2 to 6. No reference was made to this in the interview data. Finally, whilst fatigue levels remained at 4 for intensity, energy levels dropped from 7 to 6, with a slight drop in direction, from +2 to +1.

Player 8 attributed the loss to both himself: *"I hadn't really done anything to him...I was more worried – second round, I could get to the quarters. Wasn't positive enough...Just wasn't good enough on the day"*, and his opponent: *"He kept me back a bit more. He kept a better length...I couldn't get to the net because of his depth...He was controlling the match from the ground. He was making me get into the position where I felt like I had to make a big shot to get back into the rally"*. He concluded by stating that he didn't fully achieve his goal.

- *Review of key moments*

**Table 4.8 Summary of key moments for case study four**

<b>PLAYER 7 vs PLAYER 8</b>	
<b>PLAYER</b>	<b>SCORE</b>
<b>FIRST SET</b>	
Player 7: Key point	0-1/0-15
Player 8: Momentum with self	0-3
Player 7: Momentum with opponent	0-3
Player 8: Key point	0-3/15-40
Player 7: Momentum with self	1-3
Player 8: Momentum with opponent	3-3
Player 8: Momentum up and down	3-4/15-30
Player 7: Momentum level	5-5
Player 7: Momentum with self	5-5/30-0
Player 8: Momentum with opponent	6-5/15-0
<b>SECOND SET</b>	
Player 8: Momentum with opponent	0-0
Player 7: Key game	1-0
Player 8: Key game	1-0
Player 8: Momentum with opponent	1-0
Player 8: Key game	1-2
Player 7: Key game	3-4/40-40
Player 8: Key game	3-4/40-40
Player 7: Momentum left	3-4/40-40
Player 8: Momentum with self	4-4
Player 8: Key game	4-4/40-40
Player 8: Key point	4-4/40-40
Player 8: Momentum with self	4-5
Player 7: Loss of momentum	4-5
Player 7: Key game	5-6/30-30
Player 8: Key point	5-6/40-40
Player 8: Key point	6-6/0-5
Player 8: Key point	6-6/1-5
Player 8: Key point	6-6/2-5
Player 7: Momentum with opponent	6-6/3-5
Player 8: Key point	6-6/3-5
Player 8: Key point	6-6/4-5
Player 8: Key point	6-6/5-5
Player 8: Momentum up and down	7-5

**First Set:****Game 0-2****Player 7 serving**

Having lost the first game in the match, Player 7 perceived the first point in his service game to be a key point: *"The first point ...is quite important...it gave me a bit of a cushion"*. Despite winning this point, he went on to lose the game, blaming the loss on his serve: *"15-30 [he won] two winners off the second serves, so I'm trying to get first serves in"*. The loss of his service game increased his cognitive anxiety level: *"I was worried there about what happened. Sort of snowball effect"*. Externally attributing the blame for the loss did not appear to reduce his cognitive anxiety: *"Even though I'd probably say to myself it probably wasn't my fault, I just lost my first service game and it's not good"*. No reference was made by Player 7 at the end of the game, with regards to momentum shifts.

Player 8 picked up on his opponent cognitive anxiety: *"I thought he was a bit nervous"*. However Player 8, in spite of winning the game, also exhibited cognitive anxiety, in relation to his opponents serve: *"I know he's going to serve a bit better than that"*. He also aired concerns with regards to his own serve: *"I've got to sort myself out with my serve...the serve is such a crucial factor"*. This concern affected his level of confidence: *"Still very tight serving, [I] wasn't confident at all"*.

**Game 0-3****Player 8 serving**

After breaking his opponent in the last game, the cognition's of Player 8, during this game, seemed to revolve once again around his serve: *"My first serve, I didn't feel that there was anything to worry about at all. [Second serves] still at the back of my mind...I was under pressure to get my first serves in"*. His 3-0 lead, although taking him by surprise, increased his confidence levels: *"[I] didn't think this was going to happen this early on...Confidence was there...but I hadn't won anything yet, I needed to do a lot more"*. This tempering of confidence seemed to stem from his concerns over his serving ability: *"Let's get four [games] just incase I start missing a couple of first serves. So maybe*

*get broken. Do just get two [breaks] under my belt". After three consecutive games, Player 8 felt that he had gained the momentum and explained why this was: "I just felt I had the better start. I'd got away with the first game and then I started doing things right...he didn't know how to deal with it".*

Player 7 was being negatively affected by his opponents serving: *"I was trying to hit winners to try and get on top of the ball...When the guy's hitting an ace, I was probably thinking, oh what can I do? I was getting really down on myself...he's playing a good game".* At the change of ends, he was trying to use positive self-talk: *"It's still one break. It's just a case of me holding serve and getting lucky on a break. Just make sure you hold your next service game and see what happens".* Player 7 conceded that his opponent had gained momentum: *"Yeah. At 3-0 down [he] definitely [had momentum]"*.

### **Game 1-3**

#### **Player 7 serving**

Player 7 was aware of the importance of winning this game, having lost the previous game: *"If I lose this service game, then I'm a double break down and it is pretty serious".* Yet he did not class it as a key game. He was aware of the need to get his first serves in: *"He's getting on top of the second serve quite well...[I was] telling myself to take the pace off a little bit and get the first serve in. Major concern of this game was to get the first serves in".* Having held his serve for the first time in the match, Player 7 exhibited positive reactions: *"It's a relief...a good feeling. I'm bouncing back a bit now. It gives you a bit of confidence".* He also perceived a momentum shift in the match: *"The momentum came back to my side of things a little bit".* He justified the importance of breaking his opponent in terms of a further momentum shift: *"I think it [breaking] was very important. Me breaking back here swings the momentum back the other way".* Player 7 duly went on to win the next game.

At 15-40, Player 8 felt that he had already won the game: *"I felt I had already broken him. 4-1 up, the set's pretty much [mine]"*. However, in focusing ahead, he began to let the game slip. He believed that losing the point at 15-40 was the key: *"When I had the opportunity at 15-40, that changed the match".*

At 30-40: *"I felt like I'd already done it [broken]. I was just relaxed...didn't really move"*. At 40-40: *"I should have come in and made the shot there. Guttered I didn't take my chances"*. At 40-A: *"I should have broken there for sure. I didn't do enough...I wasn't moving at all"*. He felt that he allowed his standard of play to drop, which in turn increased his opponents standard: *"I'd been playing well up until then. I just slacked off a tiny bit...my concentration went for sure. He got a bit of confidence...hit a good serve"*.

### **Game 3-3**

#### **Player 7 serving**

Having lost his serve on the previous game, Player 8 identified the need to place pressure on his opponents serve: *"Using this game to try and put pressure back on, try and break here. If I break here the damage has been lost"*. At 30-30, he began to focus on what he felt should have been a 15-40 score: *"Could have been 15-40. So thinking about that point, very disappointed"*. This task irrelevant thought seemed to cause him to lose focus of the match at hand: *"Just not thinking at the moment. Just going into a daze, I think. Didn't concentrate on my game plan...Just not hitting the ball"*. This, he hypothesised, allowed his opponent back into the game to tie the score at 3-3: *"Giving him a bit of confidence – I missed the second serve. He's gone out and pulled an ace out"*. Although Player 8 felt that no-one had the upper hand in the match, he conceded that his opponent had gained some momentum, albeit on a temporary basis: *"He's just got a bit of momentum, that's all. Just ride the wave and see if he can keep it up. I didn't think he could"*.

Player 7 felt that he had relaxed into the match more and that his standard of play increased after breaking his opponents serve in the previous game: *"[I'd] settled down and relaxed a bit...I think I tend to start a match slowly. It's starting to come together a bit better now"*. In winning his service game and tying the score at 3-3, Player 7 reviewed his opponent: *"He's probably shaken up a little bit. I know it's getting to him. He's frustrated with himself. It's good to see that I'm affecting him a little bit"*. Although he did not perceive he had gained momentum, Player 7 did feel that his confidence level had increased: *"It's just back on level terms. Confidence is fine now"*.

#### **Game 4-4**

##### **Player 7 serving**

During this game, at 15-30, Player 8 acknowledged that the momentum was going up and down. He conceded that it was the lost point at 15-40, which lost him the game: *“Break point to go 5-3. Thinking about the score rather than the job at hand”*.

Player 7, on the other hand, succeeded in blocking out the score at 15-40: *“Not really trying to focus on, Oh my God, I’m 15-40 down. Just try and get the next point. It’s not easy, but you’ve got to do it, otherwise there’s a bit of doubt in your mind”*. Player 7 identified his opponents decrease in standard of play: *“He’s still hitting the odd winner, but he’s making a few errors. He’s not making as much of an impact as he was in the start of the match”*. He did not however, identify any ensuing momentum shifts.

#### **Game 5-5**

##### **Player 7 serving**

Having lost the previous game, yet holding his serve in this game, Player 7 felt that momentum was present in both himself and his opponent: *“I think it’s [momentum] pretty even”*. He was aware of added pressure to hold his serve, but did not feel it was a key game: *“A little more pressure to hold. I’m aware that if I don’t hold it then obviously that’s a set”*.

Player 8 viewed very few opinions on this game, indicating that he too did not perceive this game to be key one: *““[I] missed a few opportunities [at the] start of the game. Not really any major faults”*.

#### **Game 6-5**

##### **Player 8 serving**

Despite losing the last game, at 30-0 in this game, Player 7 felt that momentum had shifted back to himself: *“Right now I’d say [the momentum] was [with me]. 0-30 and 5-5, I guess he’s thinking I’ve got to get this point. Whereas I’m thinking not bad”*. He felt he had the position, yet did not become complacent: *“I’ve got nothing to worry about...[but] I knew he’s got a big serve, so he can*

*get a few cheap points*". In winning the game to love, Player 7 was happy with the outcome: *"I played a good game. So I'd be really happy sitting down now. That I was going to be 6-5 and serving. It gave me a little bit of a boost"*.

Player 8, on the other hand, became negative at 0-40: *"Trying for too much, or worried about how well he's hitting off the ground. Just gutted, thinking I've got to play three good points here to get back in the game"*. After losing the game, Player 8 experienced a great deal of negativity and once again focused on task irrelevant thoughts from the past: *"I played a terrible game. Gutted. All over him at the start [of the match]. Thinking about that...Not thinking about the way forward, just thinking about the past"*. He blamed the loss of his service game on his serve, and although he tried to combat the serve problems, he failed: *"Tried to hit it harder...but it didn't seem to work at all"*. No reference was made to any shifts in momentum at the end of the game.

## **Game 7-5**

### **Player 7 serving**

Having lost the game to love, it took only one point, at 15-0 in this game, for Player 8 to perceive a shift of momentum to his opponent. Losing the next point, to reach 30-0, Player 8 indicated that any pressure he had experienced up until then had been replaced with negative emotions, which had a detrimental impact on his game: *"I think most of it [pressure] had gone by now. Just annoyed with myself. I was not doing the right thing. I was slow hitting. Not moving my feet"*. At 40-0, task irrelevant thoughts again entered his mind: *"I felt that it [set] had gone. I'd mucked up the whole set from a good start. Not really thinking that positively"*.

Player 7 focused on the task at hand, namely holding onto his serve: *"I wasn't really thinking about him. [I was] concentrating on the first set. Taking one point at a time"*. He felt confident in his game now: *"It's not a worry or anything like that about missing first serves at the moment. I feel really confident"*. He attributed his increased standard of play to his opponent: *"His game has dropped slightly. He's sort of run out of steam. And as a result I've gone up a bit. Starting to take a bit more control of the match"*. Having won the

first set, Player 7 had completely relaxed into the match: *"I'm feeling fine now. I've probably settled down completely. I don't feel any nerves of anything. I just feel confident"*. Once again, despite the feelings of confidence, Player 7 did not indicate any possession of momentum.

## **Second Set:**

### **Game 1-0**

#### **Player 8 serving**

After losing the first set, Player 8, perceived the first game of the second set to be a key game: *"It was important to get this game under my belt"*. He felt that his opponent was on a winning streak, and this was at the back of his mind. He acknowledged that at 40-15, the score was down to rushing his play: *"Rushing it. Trying to finish the game too early. Just wanted to get the game out of the way"*. Thoughts from his previous service game appeared to interfere with his concentration: *"[I was] annoyed that I didn't win the serve last time. Thinking that it's easy. I've just won at 40-15"*. At the change of ends, Player 8 negativity from the previous set began to increase: *"[I'm] not my happiest! It's all gone pear-shaped for the moment. [Felt] frustrated and angry"*. He did, however, appear to try and turn his negative thoughts around: *"I'm behind now...First time I've done this. Let's see if I can play now. Being up front at the start and not being able to play, now I'm behind. I'm trying to keep myself in it. Trying to keep my mind going"*. Player 8 felt that along with a decrease in confidence, that the momentum remained with his opponent.

Player 7, with his high levels of confidence, did not seem to sense any anxiety at being 15-40 down *"I think I'd be too affected by it. Little things aren't getting to me as much now I've got the first set and my confidence is higher"*. Having broken back and won the game, Player 7 discussed how his opponent must be feeling: *"He's given me two double faults there to win the game. He feels bad about himself now. From 5-4 up, he's lost four consecutive games"*. His concern now to focus on his own games: *"Just to concentrate on my own service games now"*.

**Game 1-2****Player 8 serving**

Player 8, in reflecting about the match, perceived this game to be one of the key times in the match. He had broken serve in the last game and felt that this would have affected his opponent: *"Now I'm thinking that he's just got broken, he's going to be nervous"*. He felt that the pressure was now on his opponent and this had resulted in an increase in his won confidence. At 15-40 however, things began to change: *"He was dominating...I like to dominate the game...I was going for pretty much silly shots to get round it. [He was] changing [my] game plan. His game plan was working"*. He began to pull back: *"I started thinking a bit better"*. But at 40-A, he felt that the game was swinging back and forth: *"I'm feeling like I can't rally with the guy. It was just not working...Getting advantages increased [my] confidence, it went back to deuce and brought my confidence back down again"*. In winning the game, Player 8 confidence level increased: *"Confidence is right there. Just holding that game, definitely"*.

Unlike Player 8, Player 7 did not perceive this game to be important to the match outcome. He did however indicate that his thoughts were distracted from the present game, back to the previous game: *"[At 30-0] it's an opportunity. But at the same time [I'm] thinking, well if I'd held onto my last service game, I could be 3-0. So at lot of frustration still"*. In trading deuces and advantages, Player 7 described the changes in his thoughts: *"If I had the chance and missed it, it's more frustration than like if he hits a good winner. Then again, it can be quite frustrating because I get opportunities, [and] he's still coming up with good shots"*. The frustration of losing the game seemed to be exacerbated by the fact he lost the game before: *"Now probably thinking I wish I'd hung onto my service game"*.

**Game 4-4****Player 7 serving**

After Player 8 had held serve in the last game, both players felt that this game was important. Player 7 indicated that losing the point after 40-30, affected his perceptions of momentum: *"At deuce, I played a very good point, but I lost that point and the momentum has left me"*. He went on to explain how his

confidence levels were affected when he won or lost points during the two deuces and advantages: *"If you play a good point [and] the next point, [confidence] follows on. It can stay with you. You don't want to play good point, bad point, good point, because then confidence is there and then it goes. It's good to back it up with another good point, like that! [A-40], which gives me more confidence"*. In reaching deuce for the second time, the importance of the game became apparent: *"Thinking, come on now, you've got to really think about it. You've got to hold this game, otherwise you're going to be in trouble"*. He appeared to view this importance in a positive direction: *"[Got myself] pumped up. It gives you a bit of a burn"*. Player 7 was pleased to have held his serve: *"It gives you a bit more confidence. It could of [slipped away]"*.

Player 8 also talked of shifts back and forwards in play during the deuces and advantages. The feelings of annoyance experienced during this period, both helped and hindered his play. At 40-A: *"I was annoyed with that, so I tried to get over the next one, but I didn't"*. Pulling back to deuce: *"Being annoyed in that particular point [40-A], helped [me] to go out and play a slightly better shot and get the point"*. His appraisal of the game was positive. Despite losing, he felt he had gained the momentum: *"I had chances there, so I feel like I've got quite a bit of momentum. Flying a bit...Felt I was back into this"*.

## **Game 4-5**

### **Player 8 serving**

Player 8 stated that although he had lost the last game, he felt the momentum gained from it, rolled into this game. He also highlighted it as a key game: *"Quite and important game...I remember thinking it was getting near the end of the set, so this is when it's important to start trying"*. The importance of the game resulted in an increase in pressure for him: *"Yeah, [it added a bit of pressure]. Really I wanted to hold to break [in the next game]"*. Player 8 felt that 40-40 was a key point and as such, tried to use his aggression to his advantage: *"Thinking, take your time. Important point. Be aggressive. Use your aggression"*. He felt that his aggression helped him to win the game: *"It was aggression to give myself a chance to get the point...More aggression here, you*

*can see it*". Having won the game, Player 8 perceived the momentum to be with him: *"Pleased with that game. Very pleased. On top again. I was on a high"*.

Although Player 7 did not feel this game had an important bearing upon the outcome of the match, he did concede that at the end of the game, he had lost the momentum. He also felt the loss of the game had an influence on his feelings: *"I remember I was very disappointed with that, because that was a missed opportunity"*. He went on to reflect on a similar missed opportunity from the last set: *"In the first set, I did exactly the same thing and hit it in the net"*. Despite the frustration of losing the game, he managed to remain positive about the situation: *"Little bit frustrated now because that would have been to serve for the match. But still, you know, not feeling too bad. Happier that [I'm] going to serve, rather than he's going out to serve for the match"*.

### **Game 6-6**

#### **Player 7 serving**

Having lost the last game, Player 7 felt that this game was one of the key games in the match. Although he did not perceive to be under any additional pressure to hold his serve, he was making unforced errors. He won the first point: *"I played a good point"*, double-faulted on the next point: *"Not a good point. Bit disappointed with myself because that was just a cheap point"*, lost the next point but went on to win the following point, to take him to 30-30. He attributed his unforced errors to lack of concentration: *"I should be focused at this stage, as this is such a big game. But just stupid errors. Concentration is going up and down a little bit"*. Having managed to hold his serve, he felt positive about the upcoming tie-break: *"I'm feeling pretty good at this stage I think. [Just] see how the tie-break goes"*.

Player 8 began the game using self-talk to help him play well: *"Be aggressive. Just be aggressive. Take your time"*. His confidence was positively affected when his opponent was making unforced errors: *"Got me more confidence. Got a chance here"*. However, his positive frame of mind was shattered when his opponent pulled a point back to level at 40-40: *"Very, very annoyed"*. He went on to explain the importance of that point. The same situation occurred in a

match during last years tournament: *“Last year, same thing happened. Exactly the same situation. Break point in the second set. I said to myself, I’m never going to do it again, and I’ve just done it”*. This, in addition to his opponent playing an ace to gain the advantage, had a negative effect upon his mental state: *“I was just really annoyed. And then he goes and serves an ace at deuce, which is more annoying. Just really annoyed with myself”*.

### **Game 7-6 (7-5)**

Player 8 was determined not to let the negative mind set, elicited from last game, affect his current play. Indeed, he tried to use it in a positive way: *“Still very angry, but more trying to prove that it’s not going to affect the match...I got an absolute roasting last year and I’m not going to do it again”*. Having reached 5-0, Player 8 felt that he became too complacent: *“I’m thinking 5-0, you’ve already done the job...Felt too relaxed”*. He described how this had a detrimental effect on the tie-break, as his opponent pulled back to 5-4: *“Not really concentrating on what I’m doing. [My mind’s was] just on the third set really. Tie-break’s running away from me here. Feeling the pressure”*. At 6-5, the pressure increased for Player 8 and he seemed distracted by the past: *“I serving to stay in the match. I was 5-0. I was thinking back to that”*. In reflecting back on the tie-break, Player 8 felt that all the points, from 5-0 to 5-5, were key. He went on to say the he felt momentum was shifting back and forth throughout the whole of the second set.

Player 7 felt the first few points went very quickly, and surmised the need to compose himself. At 0-5 down, he started to become more negative: *“Not a good feeling at this stage...Feeling that this set is going to slip away”*. He tried to remain positive about the situation: *“Just got to try and get these two points on my serve. Trying to get [myself] back up again and keep positive”*. Although he was still feeling the pressure, at 2-5, he felt he had an opportunity: *“I’ve got a real chance now at 5-2 to win one of these point”*. Having won three points in a row, Player 7 still perceived his opponent to have the momentum: *“I still think the momentum is with him, at 5-3 and he’s serving”*. At 5-5, he felt that the set was now within reach. He stayed focused for the last two points in the match: *“I mean I just tried to stay in the tie-break. Just a point at a time”*.

- *Summary of case study four*

Results from the graphical data showed some differences between the players. Player 8 (the loser) exhibited higher levels for depression, fatigue, anger and somatic anxiety on more occasions than Player 7. Cognitive anxiety was lower for Player 7 on all but one time phase, while energy was higher for the same number of time phases. Confidence levels tended to be high for both players throughout the match, however on two occasions Player 8 had higher levels than Player 7.

Only two games during the match went to two or more deuces. Both of these games were on the serve of Player 8 and both times the serve was held. The concentration levels of Player 8 went up and down throughout the match yet did not appear to have any influence on either of his long service games. During these two games, Player 7 experienced task irrelevant thoughts, focusing on previous lost points and games.

Player 8 identified thirteen key moments during the match but won only four of them. In contrast, Player 7 identified only three such moments and won all of them.

The key issues emerging from the data appeared to be a fluctuation of concentration for Player 8, with a great deal of cognition's taken up with task irrelevant thoughts on past performances. Player 7 maintained his concentration levels throughout the match, letting it slip only momentarily during the tie-break. Some task irrelevant thoughts did enter his mind, but these did not appear to be detrimental to his performance.

#### 4.55 Case Study Discussion

A disparity was found between the winners and losers with regards to the number of key moments, either points or games, identified during the matches. The winners highlighted ten key moments while the losers identified thirty nine such moments. For the ten key moments identified by the winners, the players won eight of these points and/or games. In contrast, only fifteen of the thirty nine key points and/or games identified by the losers were won.

Of all the key moments highlighted by both the winners and losers, results showed that only on four occasions did both players in a match highlight the same key moment.

Miller and Weinberg (1991) argue that for momentum to have any effect over performance, it first has to be perceived as a momentum starter. These key moments may be antecedents of momentum starters. Past research has postulated that this perception is subjective in nature (Taylor & Demick, 1994; Vallerand et al., 1988). It appears that the losers cognitively appraise more situations, or key moments, to be of importance in the match compared to the winners. Vallerand et al. (1988) argue that this appraisal is influenced by personal factors, such as perceived control, anxiety and confidence. Results from the losers consistently show a higher frequency of anxiety and lower frequency of confidence throughout the match compared to the winners. The losers also discuss a loss of control and/or the opponent dictating the game more regularly than the winners. Perceived control and differing degrees of anxiety and confidence may have influenced the frequency of key moments identified by the players.

Vallerand et al. (1988) postulate that there is a link between perceived control and skill level. The more skilled an athlete is, the more likely they will be perceived to be in control of a situation. Results from this study appear to support this tenet. The winners perceived themselves to have more control over the match than the losers did. If this control is maintained for a period of time, a player may not be aware of key moments and positive momentum being present. However, if a player perceives a lack of control over their game, this, in

addition to the negative emotional response felt, may exacerbate perceptions of key moments and either a loss of momentum or negative momentum. Taking this argument further, it may be that momentum starters and momentum itself is more likely to be perceived when a change has occurred, for example having just gained or lost perceived control.

Results show that all but one of the ten key points and/or games identified by both players in a match were at the latter stages of a set, for example at 4-4 or 5-6. This finding appears to support previous studies which have demonstrated that the criticality of the situation may have a bearing on whether momentum is perceived to be present or not (Burke et al., 1999; Richardson et al., 1988; Vallerand et al., 1988). It is suggested that as the situation becomes more critical/ is appraised to be more critical, *i.e.* near the end of a set, there is a stronger likelihood of both players identifying a key moment. Although this key moment cannot be defined as momentum per se, it may play a role in the cognitive appraisal determining whether or not momentum is present.

The players identified a total of thirty occasions when they perceived to have either gained or lost momentum. Differences were found between the winners and losers with regards to these perceptions. The winners perceived themselves to have gained and/or lost momentum on twenty two occasions. In contrast, the losers identified only eight occasions where momentum was perceived to have been gained or lost. Possession of momentum was perceived on three occasions and loss of momentum on five.

A study by Burke et al. (1999) found that the team who perceived that they had momentum scored more points. Results from the present study partially support this finding. The winners identified almost four times as many times when they perceived themselves to have momentum compared to the losers. However, they also identified almost twice as many times when they felt they lost momentum compared to the losers. These losses of momentum occurred, in the main, relatively early on in a set, suggesting that a loss of momentum at such a time may have little effect on the players.

Only on one occasion did both players identify a moment when one had lost momentum while the other gained momentum. This further supports the notion that momentum is subjective in nature.

There does appear to be a discrepancy between the frequency of key moments and perceived momentum. However, this may have been due to the nature of the interview process. Players were asked at the start of the interview to identify when they felt key points or games occurred, as the video of the match was played. All players appeared to adhere to this request. However, players tended not to identify moments of momentum unless prompted by the interviewer. These prompts, on reflection, were not carried out in a systematic way. It may have been more beneficial to have probed the players on momentum each time they identified a key point or game. This may have led to a more conclusive finding of key moments acting as antecedents for momentum.

Personal variables, such as concentration, associated task irrelevant thoughts and emotional response were highlighted by the players as having an influence on their game. These variables were also identified by past research as having a bearing on momentum (Taylor & Demick, 1994; Vallerand et al., 1988). Although not directly linked by the players to momentum, they may have had a contributing role, either as an antecedent and/or consequence to key moments and perceived momentum.

#### **4.6 Conceptual Summary**

Three separate analytical procedures were carried out on both the quantitative and qualitative data. Each procedure, namely statistical analysis, content analysis and case studies highlighted different issues with regards to the phenomenon of psychological momentum.

Statistical analysis revealed that winning the first point in a game, particularly when serving, resulted in more games being won, compared to when the first point was lost. It was hypothesised that this would increase the players' confidence level and in turn help to increase their performance and potential for positive momentum to occur.

Content analysis was found to partially support this hypothesis. Results indicated that confidence was linked to positive momentum, though not for every first point won in a game. Therefore, broader issues, such as the types of experiences players had, was predicted to help define the existence and patterns of momentum being present during a performance. Findings showed that there were distinct differences, in terms of these experiences for the winners and losers. Results also indicated that although differences were found for the players' definitions of momentum, common themes did emerge.

The case study analysis expanded upon the findings of both the statistical and content analyses. Individual players' stories unfolded in an intra and interpersonal sense to give a deeper understanding of the subjective nature of momentum. The broad overview of each match allowed an insight into the players' general state of mind and allowed a comparison to be made between opponents. A separate analysis narrowed the focus down to each player perceived key moments within the match. Although each match told a unique story, consistencies were found. Losers identified more key moments within the match than the winners. Graphical data demonstrated that on many occasions, as one player's psychological and/or physical status would move in one direction, the opposite was found for their opponent.

Overall findings suggest that through the use of an interaction of complementary methodologies and analyses, a deeper understanding of momentum is possible. It may be that fluctuations of experiences are indeed important, but only when a player consciously perceives them to have a bearing over their game. In other words, these experiences, which appear to be in constant flux throughout a tennis match, may need to be cognitively appraised by an individual and assigned as having either a positive, negative or neutral effect. When a neutral state is in operation, no momentum may be perceived to be present. However, when the appraisal is positive or negative, a corresponding positive or negative momentum state may be perceived as being present.

If specific scores in a match, such as the first point in a game, induced momentum, then each and every player would highlight momentum as being present, and this is clearly not the case. The criticality of the situation, for example 40-A, may have some bearing on the presence of momentum, but it may also involve the mental and playing states of the players. If a player is confident and has been winning previous points and games, this may reduce the criticality of the situation and make it less likely that either negative momentum will be perceived and/or that their opponent has gained the momentum. If, on the other hand, a player is lacking in confidence and has been playing badly, momentum may be seen either to shift positively to their opponent and/or negatively to themselves. Therefore it may be the cognitive appraisal of the situation- the score, the mental states and playing states of both players (situational and personal variables), that induce a positive or negative momentum state to be perceived.

The results suggest that cognitive appraisal is the key mechanism through which positive and negative experiences may be conceptually framed. Such a theory may explain why differences were found for the number of key moments identified by the winners and losers and why winning the first point in a game may not be enough to signify momentum being present.

#### **4.7 Conclusions**

This study examined the existence and perceived presence of psychological momentum of elite male and female tennis players during competitive matches. The findings from the study indicate that momentum is perceived to exist during performance. It emphasises the role that cognitive appraisal plays in the acknowledgement and subsequent influence of key moments and how these may combine to create a more holistic sense of momentum.

The use of an eclectic approach to the data collection and analyses has been an advancement in momentum research. It has combined traditional archival data collection with more recent qualitative approaches. Using such an approach has highlighted the complex nature of momentum and helped to provide greater detail of its underlying mechanisms.

**CHAPTER FIVE: A LONGITUDINAL STUDY OF AN  
ELITE TENNIS PLAYER**

## 5.1 Introduction

The last study explored the notion of examining an individuals' competitive experience from a holistic perspective when studying psychological momentum. As both studies focused primarily on one competitive situation, it was proposed that a more wide ranging and inclusive analysis of experiences during and between performances may provide another way of understanding momentum shifts and effects.

Examining momentum in such detail was seen as a natural progression and which moved the research beyond a nomothetic approach to a more in-depth idiographic investigation. As noted by Dunn (1994), nomothetic procedures have been the dominant approach in sport psychology. However, more recently researchers have begun to use an idiographic approach to help open up new lines of investigation (Gould & Krane, 1992; Vanden Auweele, De Cuyper, Van Mele & Rzewnicki, 1993). A justification for the use of idiographic methods was summarised by Silva (1984): *'when psychological measures are averaged across individuals, a mean or average personality is often reported [which] may not represent any athlete in the sample'*. Allport (1962) went further and argued that nomothetic research examined *'the generalised mind'*, which he claimed does not exist.

It was the purpose of this study to use a longitudinal idiographic approach to examine extensively an elite tennis player, both on and off court, to monitor shifts in momentum. A predominantly qualitative methodology was utilised, combining behavioural observations, interviews and a reflective diary kept by the researcher. Questionnaires were used to help quantify momentum shifts during matches.

This shift in data collection was combined with a change in data write-up. A narrative-based case study approach was taken to capture the story behind momentum fluctuations. In addition to the athlete's voice, narrative also includes the voice of the author. This deviates from the traditional case study protocol, where the text is author evacuated (Van Maanen, 1988; Sparkes, 1995). It was hoped that by including the author's thoughts and feelings, a more rounded and

complete story of an athlete's experiences could be told. Dramatic recall was used to draw the reader into the story and encourage them to recreate moments in their mind. It encompassed factors such as strong metaphors, unusual phrasing and holding back on interpretation. Reflective and reflexive thinking was also included, the former relating to the researcher's thinking about their own practice. Reflexivity is associated with how the researcher influences the research. More specifically, how the researcher's previous knowledge of a phenomenon, influences further conceptualisations of it. Hammersley and Atkinson (1983) have emphasised the importance of such thinking, pointing toward the researchers' inability to escape from the social world and to work in a vacuum.

#### *Rationale for study*

The purpose of the present study was to examine momentum in one individual over a period of four weeks. The use of a narrative case study approach was seen to move beyond past qualitative research and embrace a new style of writing. This alternative form of enquiry was seen as being an appropriate vessel to obtain a more complete examination of momentum.

## **5.2 Methodology**

### **5.21 Subjects**

The subject was one 19 year old female British tennis player. She was defined as elite by her ranking within the Lawn Tennis Association and her competitive experience on both national and international tennis circuits.

### **5.22 Questionnaire**

A questionnaire was used to measure the player's perception of her mental and physical states during matches. The questionnaire consisted of 7 items, namely cognitive anxiety, somatic anxiety, self-confidence, depression, anger, fatigue and energy. Intensity levels of each factor were measured using a Likert scale from 1 (not at all) to 10 (very much so). In addition to intensity, a directionality measurement was also included. Based on the work of Jones and Swain (1992), this scale measured the degree the player felt their intensity levels were either facilitative or debilitating to their performance. The scale ranged from -3 (very unhelpful) to +3 (very helpful), with 0 signifying a neutral effect. See secondary appendix 4.

### **5.23 Scoring of matches**

All matches were watched live and scored on a point to point system at the time of play. The score was kept in line with the server at the time *i.e.* if the server lost the first point in the game, but eventually went on to win the match, the score would be Winner: 0-15. This allowed continuity to be maintained throughout the matches.

### **5.24 Procedure**

Contact was made with a leading tennis coach outlining the research project and a female player was chosen by the coach to participate in the study. The procedure for the study was explained in full to the player and a consent form was signed (secondary appendix 7). For confidentiality purposes the names of the player and coach were changed to Caroline and James respectively.

The study was conducted over a four week period during the British grass-court season and included five matches played during three tournaments. Data were collected using a variety of methods. Firstly, the researcher kept a day by day tennis diary. This diary included all observations by the researcher with regards to the player and coach. These included issues such as the timing and content of practice and matches and behavioural and verbal reactions. The diary also included verbatim quotes from the player and coach, many of which were paraphrased. These quotes and paraphrases were obtained through informal discussions, either initiated by the researcher or by the player or coach themselves. Finally, notes were kept on the researcher's thoughts and feelings both about the research process itself and the interactions and behaviours of the player and coach. The note taking was often done in a discreet manner, either during or after specific time periods.

More formal semi-structured interviews were held with the player after matches. Reviews of four of the five matches were recorded on a Dictaphone and transcribed verbatim. The player also completed a questionnaire for all five matches to validate both the interview data and tennis diary. Each questionnaire examined several time periods, namely waiting to go on court, end of warm-up, end of second game first set, end of first set, end of second game second set, end of match and where appropriate, end of second game third set.

A semi-structured interview was held with the coach the day after his player's final match of the season. This allowed the coach to provide an overall summary of his thoughts and feelings about the season.

A post season interview was also held with the player. This examined reflective opinions about the season and was based on the findings from the tennis diary, and interviews and graphical data from the matches.

### **5.25 Data Analysis**

- *Graphical representation*

Data from the questionnaire was used to produce a graphical representation of the matches. Both the intensity and directionality of the seven factors were shown. Results are discussed in parallel with the player's interview data and tennis diary.

### **5.26 Case Study Analysis**

A case study was developed which incorporated the graphical data. A weekly summary of activities was developed to orientate the reader to the grass court season schedule (table 5.1). Where possible, specific quotes and paraphrases were used to enrich the write-up. Specific reference was made to not only the matches themselves, but also the social issues surrounding the player and coach. The use of dramatic recall and reflective and reflexive thinking was used to increase the depth of the write up. Results are discussed in terms of both on and off court activities and are related to momentum models where appropriate.

Table 5.1 Timetable of events

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
WEEK ONE						Edgbaston	Edgbaston R1 Qualifying
WEEK TWO	Edgbaston	Queens Club Chiswick	Raynes Park	Day Off	Eastbourne	Eastbourne	Raynes Park
WEEK THREE	Raynes Park Roehampton	Roehampton Wimbledon	Wimbledon	Eastbourne R1 U21's	Eastbourne Semis U21's	Eastbourne Final U21's	Wimbledon
WEEK FOUR	Wimbledon	Wimbledon R1					

## 5.3 Results

### 5.31 Tennis Diary

#### Week One

*Wednesday 2<sup>nd</sup> June*

I met up with James the coach to discuss the results of one of his players from the previous study, Caroline. I broached the subject of following Caroline throughout the season and explained what would be involved. He thought it was an excellent idea and was very keen to participate in the study. He said he'd talk to her, but he didn't think she would have any objections to participating. Although I was pleased at his reaction, part of me was concerned that he agreed on behalf of Caroline. She was unaware of our 'deal' and I couldn't help wondering whether she would co-operate fully, if at all, with my research.

He began to talk about Caroline in more detail. Having had a successful junior career, she was new to the senior circuit. Despite this, he was confident that she would rise in both the British and World rankings. Technically, he felt she was very talented, however, she let herself down mentally. She needed to mature.

She was a perfectionist. Her confidence was easily dented and she needed constant reassurance. He described her as very outcome oriented, only happy when winning. She rarely took responsibility for her own performances if she lost, blaming external factors. She was very influenced by other peoples' opinions, whether they be other coaches, players or significant others.

His plan was to get her to focus on more performance goals. He believed that she needed clearly defined goals to follow. However, he felt that she didn't always accept them.

He felt that she really needed to get a wild card into Wimbledon this year, as it would boost her confidence and help improve her attitude to her tennis. Gaining entry into Wimbledon would have a positive effect on him too. He said he would be over the moon if she got in.

With regards to my study, he felt that she would be flattered that I had chosen her to participate. However, he asked me not to reveal very much about the nature of my research. He seemed concerned about my influence/advice over her. I reassured him that I wouldn't interfere with any coaching or other issues.

He seemed very keen for me to proceed with this study. He felt it would benefit her greatly. It would force her to reflect on her matches and practice, something that he felt she didn't do at present. I could sense that he viewed me as a possible sounding board to bounce ideas off and to confirm his own opinions about her. I needed to be careful about confidentiality issues. I had no problem with him talking to me about Caroline, but I acutely aware of the importance of keeping Caroline's discussions to myself.

#### *Saturday 5<sup>th</sup> June*

I met up with Caroline at Edgbaston Priory Club in Birmingham. James hadn't spoken about the study in any detail, so I explained what I wanted to do. She seemed very receptive to it.

I wanted to get an idea of how things were going at the moment with her tennis. We talked about the previous tournament at Surbiton. She played and lost in the first round to the top seed. Despite the loss, she was happy with her performance and felt it was a good match. She said that James was happy with how she played as well. I wondered if it was James' appraisal of the match that influenced her perceptions of it, bearing in mind she was described as a perfectionist and only happy when she was winning.

She felt that training had gone really well. She'd put in a lot of hours and her backhand and serve had improved. Her confidence, she felt, had gone up with this improvement in play. Her confidence had also increased off the back of her last match in Surbiton. She stated that confidence plays a big part in her game, yet is something that she has problems with. Her goals for the season were to 'play well'. Were they James' words or her own? Surely it would be too quick or permanent to change from ego to a task orientation?

She shared her concerns about the following few weeks. Her biggest fear was of playing badly. There was pressure on her to impress the head of women's tennis and others within the LTA, with a Wimbledon wild card at stake. Although she felt that she would focus on each individual tournament, she felt that Wimbledon would still be at the back of her mind. Overall though, she felt that her play had improved and she was positive about the forthcoming season.

Would the issues of confidence and cognitive anxiety have an effect upon Caroline's mood swings throughout the next few weeks? If so, could they contribute to a global sense of momentum?

### *Sunday 6<sup>th</sup> June*

Arrived at the club about 9:30am. Caroline was due to play her first round match of qualifying this afternoon. This was a very important match to her. She needed to play well in order to be in with a chance of getting a wild card for Wimbledon. Her opponent was the second seed. A good player, she reached a world ranking of 29, a few years ago and had reached the third round of this tournament last year.

I sat at court-side and watched the session. Caroline seemed very relaxed. She was laughing and chatting whilst hitting with her partner. James said he was surprised how relaxed and chatty she was.

Today turned out to be a long day. It rained almost the whole time. All the players, coaches, family and various others from their entourages, hung around the players' lounge for most of the day. Caroline came over and sat with me for a while about 11am, whilst she was waiting for her match to be called. She said she felt she had loosened off and felt fine. She set the goal of staying with her opponent and to tell herself to concentrate/focus. She felt her confidence was quite high and didn't have any real worries. She talked about feeling better this year than she did last year. I suggested that it could be due to having 'been there, done that' and she agreed. She said she felt part of the tournament and 'entitled' to be there.

After she went off to get changed, I sat away from the bar and tables, in the corner of the room. I figured from that position I could still see what was going on, yet didn't stick out like a sore thumb.

At 1pm an announcement was made that play would start at 1:15pm. At last! I wondered how Caroline was feeling after such a long time delay. Having sat about for three hours, I knew I was beginning to feel slightly lethargic.

She played her match on Centre Court. It's a nice court, but seemed very empty, with only a few spectators dotted around the seats. James and myself sat together at the far end of the court. He spoke to me during the match, until the head of women's tennis came and sat beside us. I noticed he would talk under his breath, as if talking to Caroline. Every now and again, when Caroline was at our end of the court, he and the head of women's tennis would talk to her. Positive things, like, "*Come on, keep going*". James became very involved as the match went on.

Caroline lost the match, going out 6-1 7-5 and James was very frustrated with the result. He felt that there were too many errors in the warm-up and she wasn't addressing them. He couldn't understand why she played so badly in the first set, missing so many returns. The first set went very quickly and I noticed that Caroline used very little verbal self-talk during the first set.

The second set was better. She served first, won and immediately broke. James was still not happy with her play though. He said her footwork was very sloppy. Her concentration was low and he felt that there was a lot of anxiety in her shots. She started to use more verbalised self-talk focusing on technical and positive statements. At 5-6, her self-talk became very negative. She went on to lose that game and the match.

James didn't think the match was good enough to merit a wild card for Wimbledon. He appeared confused as to how to handle the situation. He told me that he didn't know what to say to her. He wanted to have a go at her, but wasn't sure if it would be the right thing to do at this stage. I felt under pressure when he discussed this with me. I felt that he was looking to me for answers. I didn't

know her well enough to pass judgement. I decided that I would take the approach of 'just being there' for him to sound off. It appeared that he had nobody that he could talk to about Caroline, and that for me to listen and empathise with him, may be beneficial for him. I questioned my position. Was I there as a researcher, a confidant, a sounding board? Could I combine them and keep everyone happy?

While Caroline had a shower, I thought about how I was going to conduct the interview. I wanted to talk to her about how she felt about the match, but knew it was going to be difficult. Not just from an emotional point of view, but from a logistical point of view. The players' lounge was busy. When she appeared, she went and sat with her mum for a while. She looked really down and reflective about the match. James came over and sat with me. I didn't feel very comfortable with this. I didn't want Caroline to think that we were talking about her in front of her.

James felt that she would bounce back tomorrow. We discussed the possibility that she may have been too relaxed going into the match. Too happy and chatty and not focused enough? I wondered, privately, whether Caroline could have been slightly over confident from last week's match.

When James had gone, Caroline came over and sat with me. She said she felt fine going onto court. Though she did say that she felt sleepy and not very energetic because of all the waiting around. She felt that she was thinking about all the right things for the match. The warm-up didn't feel good but she tried to be realistic and told herself that she had very little grass-court play. Could she could be using this as an excuse. After all, her opponent had the same, if not less, grass-court practice.

She knew that she was making errors during the match. The games felt like they were going too fast. She felt awful, very negative and frustrated with herself. At 0-2 down, she became confused. She highlighted all the technical problems she was experiencing – bad footwork, more spin needed on the ball, higher over the net. Her nerves increased and she didn't feel loose or relaxed and began to worry

about her play. From 0-3 to 0-5, she felt that she had no control over the match. She felt that it was easy for her opponent and this served to increase her frustration. She tried to use self-talk to get on top of things. She felt relieved to have won a game. When she lost the first set, she wanted to draw a line under it and forget it.

Serving first in the second set helped to increase her confidence. She relaxed a bit and felt that she still had a good chance of beating her opponent. By 3-1 she felt the match had totally changed. Her confidence was high, and her play had improved. At the same time, she was aware that her opponent was starting to make unforced errors. These errors caused her opponent to get angry with herself and this helped Caroline even more. But at 5-5, she perceived her performance to be dropping, while her opponent had raised her game again.

Having lost the match, Caroline "*felt really pissed off and annoyed*". She couldn't think of any reason as to why she played like she did. She felt that she had partly achieved her goal of staying with her opponent. And although she couldn't control the first set, she felt that she stayed with her more in the second set.

When she came off court and had a shower, the match kept coming into her head. She kept trying to block it out. She was very confused as to why she lost. She didn't want to speak to James. (She probably didn't want to speak to me either). When he did see her, he said very little to her.

I felt uncomfortable asking her any more questions about the match. It was the first time I had experienced her losing a match and could see that she was really down about it. Her mood seemed to fluctuate, from being positive at some stages in the match to being negative at the end of the match. These moods appeared to be associated with shifts in confidence (fig 5.1).

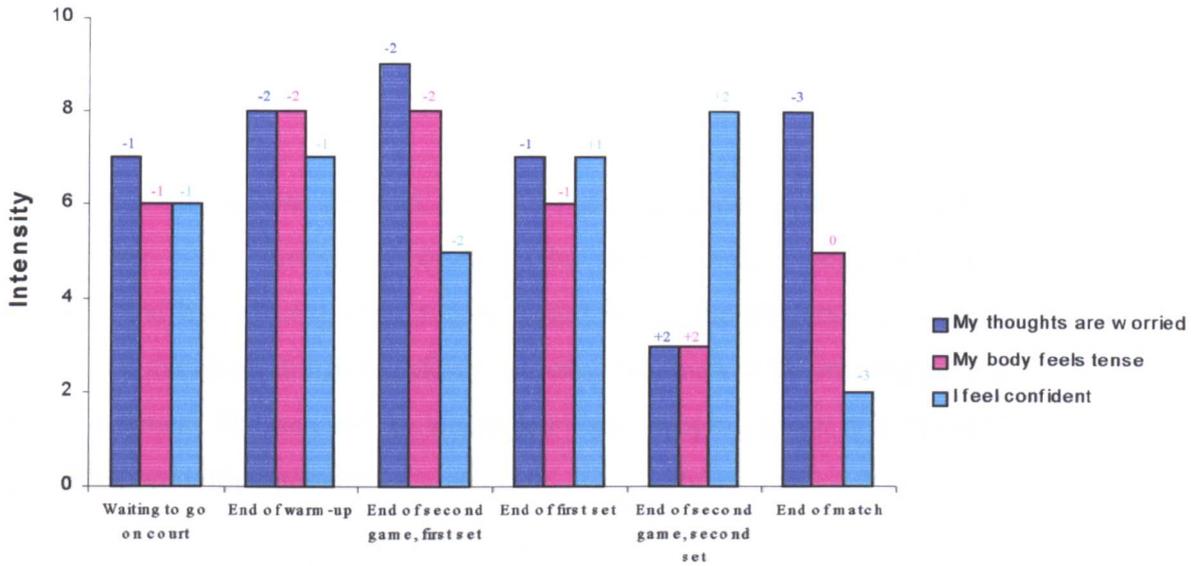


Figure 5.1a Birmingham match

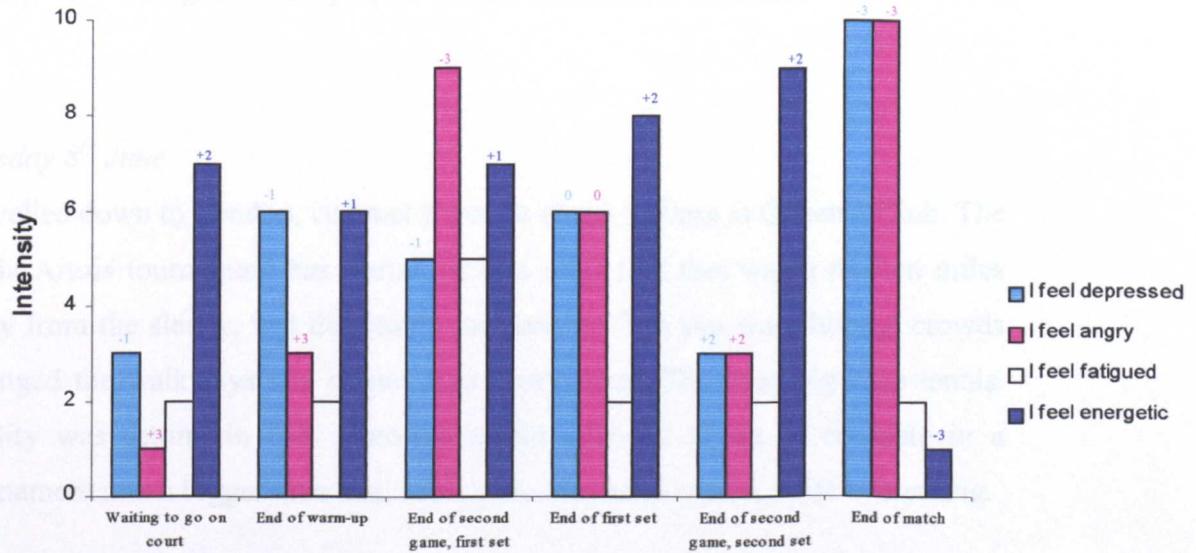


Figure 5.1b Birmingham match

**Week Two***Monday 7<sup>th</sup> June*

Arrived at Edgbaston Priory about 11am and met Caroline at the WTA office to find out when her doubles match was due on court. No decision was being taken until 3pm because of the weather.

We had a chat about how she was feeling. Thoughts about yesterday's match came into her head during the evening, but she blocked them out quite successfully and had a good night's sleep. I left her in the players' lounge and arranged to contact her later in the afternoon, once we knew what was happening about the doubles. She seemed to spend her time hanging about the players' lounge, chatting to other players.

Just after 3pm Caroline phoned and we wandered over to the WTA office. Due to the rain, the tournament organisers had decided to cancel all the doubles matches. By this time, Caroline was getting really fed up of waiting around. She talked of just wanting to get away from Birmingham. She was fed up of all the rain and getting very little grass-court play. She seemed tired and frustrated.

*Tuesday 8<sup>th</sup> June*

Travelled down to London, and met Caroline about 1:30pm at Queen's Club. The Stella Artois tournament has started. It was clear that this was a million miles away from the sleepy, wet Edgbaston tournament. The sun was shining, crowds thronged the walkways and money was everywhere. This was big time tennis. Reality was setting in fast. Caroline would soon be trying to compete in a tournament much bigger than this. More pressure, more media, more everything.

Over lunch, Caroline told me about her journey down to London.. She felt pissed off during the drive down, thinking back to her match, the weather and her lack of grass-court practice. Her frustrations weren't helped by getting lost on the way to London and her telephone going dead. However, she seemed more cheerful over lunch and appeared to have got over last night's disasters. A self-directed shift from a negative to positive state?

We met James and went to the LTA headquarters and booked a court at Chiswick. The pre-qualifying tournament for Wimbledon was in progress. Wimbledon was upper-most in all our minds. Today was the day that the wild cards were to be announced. No wild card for Caroline meant having to play qualifying at Roehampton next week.

James and Caroline talked about the possibility of getting a card. James told her that he thought she had a 50/50 chance. Both were clearly anxious about the situation. Privately, James told me that he would be gutted if she didn't get one. This was a big deal to both of them.

Caroline hit with another coach's player. I sat on court and watched the practice without taking any notes. She complained that her legs felt heavy and she couldn't concentrate because of the wild card hanging over her. James was trying to get her to focus on bending her knees much more. While she was hitting at the other side of the court to where I was sitting, James talked about her desire, or lack of it, to succeed in tennis. He felt that she wasn't hungry for success. The biggest tournament of the year is only two weeks away and she's not giving 100% on every ball. But he was convinced that if I asked her, she would say she was committed and giving 100% in practice.

She hit with another player until about 4pm. Still no word about a wild card. By the end of the session, Caroline was complaining that her legs felt tired and heavy. In the end they decided to call it a day and planned a hard session for tomorrow before taking a day off. Still no word about a wild card. The committee had announced all but two cards. Caroline had to wait another day to find out if she would get one of the remaining two.

Caroline drove me back to Barons Court. We chatted again and she told me that she's only happy when she's winning. She was pleased to have played on grass, but was still frustrated that she wasn't bending her knees enough. Her anxiety and uncertainty over her wild card seemed to have affected the quality of her practice today. Was there a sense of negative momentum affecting her practice?

The issue of the wild card is beginning to affect me. I'm tired and need to be in a more positive frame of mind. I keep thinking about the wild card. What if she doesn't get one? How will she cope with playing qualies? For all our sakes, I wish the committee would make up their mind soon.

*Wednesday 9<sup>th</sup> June*

Arrived at Raynes Park. Caroline and James had been practising for an hour. I sensed she wasn't happy with things as soon as I walked on court. She talked to me for about 10 minutes while James was busy doing other things. She told me she met up with James last night to talk about the match at Birmingham. He went over the match with her, and this annoyed her. She felt he was digging up the past and she didn't want to hear about it.

Although she was happy to be on the grass and that her shots were going okay, she was angry about everything else. Her legs felt heavy, worse than yesterday. She complained that she couldn't go for a run today. Her shoulders, neck and back were all sore and stiff. She was struggling to get '*quality rest*'.

Wimbledon was at the back of her mind all the time now. The pressure seems to be really building. '*Everyone*' keeps asking whether she's got a wild card and it's "*driving me crazy*". She's angry with them for asking. She's also worried about Eastbourne. Like Wimbledon, she's unsure as to whether her world ranking is high enough to gain direct entry through a wild card. All this anger and frustration seems to be affecting her practice.

They went back on the court for another hit. It was the first time since I started shadowing them that James hit with her. He seemed to be positive on good points, giving encouraging feedback to her.

We took a break from practice about 12:30pm. Caroline talked briefly about how it went. The intensity between points, she felt, was very good, but bordering on too intense and detrimental to her performance. It was clear from watching the

session that she was still wasn't happy with herself. She used negative self-talk every time she missed a shot. Calling herself a "*fat arse*" and "*stupid*".

After a gentle jog together, James said that tennis talk was banned over lunchtime. Caroline said that it was only her tennis that she didn't want to talk about, not tennis in general. I decided to focus on observations and comments from James in the afternoon, and not ask Caroline any direct questions about her tennis. She clearly wanted to switch off for a while.

Back on court and James and Caroline worked on her volleys and in particular, her serves. James pointed out that during her match at Edgbaston, Caroline wasn't standing in the right position. It took some persuading, but with some good communication between them, she began to take his advice. They spent a while on the serve and then moved onto playing points Caroline complained of being sore and tired, so James decided to call it a day.

Tomorrow is a day off from training. James is going back home to spend some time with his family. Caroline was off home to her parents' house and planned to have a relaxing day there tomorrow. Her mood changed drastically when she got off court. All the tenseness and negativity evaporated and was replaced with smiles and an up-beat attitude. A shift in emphasis from training to time off could be a catalyst for a change in Caroline's mood. The break from tennis appears to have come at the right time.

#### *Thursday 10<sup>th</sup> June*

Spend the day typing up notes and catching up with life. I seem to have had no time off since I started on this 'tennis journey'. Every waking moment is tennis related. Watching, talking, note taking, reflecting, planning. The pressure of the Wimbledon wild card is really starting to affect me. I kept looking up teletext to see if the last two cards had been announced, answer – no! It hits home how hard all this must be for James and Caroline.

*Friday 11<sup>th</sup> June*

I met Caroline at Eastbourne. It was raining, so we adjourned to a coffee shop with several other players. The conversation revolved around Wimbledon wild cards for much of the time. Caroline asked the others what they thought her chances were in getting one, not only for the singles but for the mixed doubles as well. Although they appeared encouraging, I sensed that they either didn't think she would get one, or that she shouldn't get one. I don't think Caroline was aware of this, she appeared to be too preoccupied with her own thoughts on the matter.

One of the other girls' mobiles went off. It was the head of women's tennis. The final wild card was announced and it was to be given to her. Caroline sat quietly. Now she would have to qualify for The Championships. She would need to go to Roehampton and fight it out over three rounds to gain precious entry into Wimbledon.

We walked back to the club about 4:30pm. It became dark and overcast and the rain began to fall again, so we were all resigned to hanging out in the players' lounge. Caroline joined in the banter that was going on, but she had periods when she went quiet. She's one place out to get into Eastbourne qualifying. The uncertainty over the Wimbledon wild card seemed to be replaced with doubts over entry into Eastbourne. After an hour of waiting for the rain to go off, Caroline gave up and decided to leave the club. It had been a long and frustrating day for her. She'd failed to gain direct entry to Wimbledon and was still unsure about Eastbourne. The weather, it seemed, reflected her mood. Her up-beat attitude from her day off was replaced by a more somber and negative mood.

We arranged to meet at the practice courts the next day, with the view to having a chat afterwards about how things were going. I had planned to talk to her today, but under the circumstances, it was impossible to find a quiet place in the players' lounge.

*Saturday 12<sup>th</sup> June*

Met Caroline at the courts and watched her practice. She hit for half an hour with another British player on half a court, Jana Novotna was practising on the other half. James wasn't down again but this didn't seem to bother her. In speaking to her afterwards, she thought that the session had gone okay. When I asked her if she had set any goals for the session, the answer was no. There was nothing she wanted to achieve for the hit, other than go through the motions. This seemed in contrast to the other British girl, who appeared to have a very specific agenda.

After the practice session I left her to her own devices and sat in the players' lounge until she came in an hour later. We had a chat about the last few days. She said she was really pissed off. She thought she had a 60% chance of getting a Wimbledon wild card, so when she heard she didn't get in, she was "*really pissed off*". She felt that the head of women's tennis hadn't acknowledged all the hard work she had put in over the last year. He had given her no credit. She felt angry that the other British girl gained the wild card yesterday and not her. The girl has been given a card every year since she was sixteen years old, '*It just wasn't fair*'. This was despite the fact that the other player had a higher ranking than Caroline and a better playing year. Something Caroline didn't seem to consider in her rage of anger.

She told me that she simply doesn't care any more. She never has any luck getting into tournaments. Yet she said that she wants to prove them all wrong. Not getting the wild card has, she said, made her more determined. She failed to see the contradiction in her statements. In one breath she tells me that she doesn't care and then she goes on to say she more determined than ever. Does she feel she's owed the wild card? Is she blaming everyone else but herself for her failure to gain the wild card – the head of women's tennis, the Wimbledon committee, other players? I had to try and refrain from being judgmental.

Her plan now was to approach Wimbledon qualifying like any other tournament. I tried to probe further about what this would involve, but she shut off. I attempted to ask a couple more questions, but they were answered with short yes/no replies. It was time to stop the interview. I was getting no-where. She was

annoyed about everything that had gone on in the last twenty-four hours and clearly didn't want to talk about it in any detail. I felt uncomfortable in pushing her for answers.

I found today very frustrating. I think it has made a difference that James hasn't been around for the last two days. Being around Caroline all the time, especially with the news about wild cards, has been difficult. She can be really moody and despite all my good intentions to the contrary, it's starting to get to me. I need to shake off my negativity and gain a neutral perspective again.

### *Sunday 13<sup>th</sup> June*

Arrived back in London and arranged to meet James and Caroline at Raynes Park. James arrived first and we talked about the past few days. James discussed what had happened during the practice session on Wednesday. Caroline was really unhappy and down on herself. The pressure of the Wimbledon wild card had really got to her. He explained that when she gets into 'one of her moods' she switches off. Nothing he can say or do can help her.

She told him not to tell me about her 'bad' session in the morning, but he felt it was important for me to know. It confirms my suspicions that something wasn't right when I arrived at practice on that day. Having spent two days with her on my own, I could see what James meant about her moods and how difficult it was to communicate to her during them. The only way I found to lift her out of them, was to talk about other things, away from tennis.

Caroline arrived and despite the fact that she had only recently woken up, she didn't warm-up before she went on court. Once on court, she worked on her forehands and backhands. Knee bend still seemed a problem for her, and she used a great deal of negative self-talk, calling herself a "*lazy arse*" and generally chastising herself.

She served and received for a while and then played two tie-breaks with James. The second one was better than the first, with James putting this down to better focus. She appeared happy enough with her play.

Having had a break for an hour to get some food, they went back onto court and played a full set. At the change of ends, Caroline sat away from our bags while James would come over and stand by me. Because of Caroline's behaviour, sitting away from us, I took no notes but made mental notes in my head. She was still using negative self-talk on poor shots, but after a good shot she would look focused and determined. His appraisal during the set was that she wasn't working hard enough. Her mood seemed to fluctuate constantly, depending upon whether she perceived herself to be playing a good shot or not. Could this also contribute to momentum shifts?

### **Week Three**

*Monday 14th June*

Arrived at Raynes Park and had lunch with Caroline and James. After lunch we drove over to Roehampton for Caroline to have a bit of a hit and to sign in for Wimbledon qualifying. James offered me a lift before Caroline could offer, so I suspected he wanted to have a chat about something. We ended up talking about my research. He was keen to know how things were going with Caroline. I kept fairly vague about the findings so far, so as not to break any confidentiality. He talked about her moods and how hard it is to coach her. Her confidence goes up and down all the time and because of this he views her as mentally fragile. He wasn't impressed with the way she had been training, and in his opinion needed a "*kick up the backside*". But at the same time he felt that if he came down on her hard, it would "*kill her*". He told me she hates to take advice, which seems a bit strange considering both he and Caroline have both said that she likes to get peoples' opinions about tennis related things. Maybe it's just advice from James that she doesn't like, like the their talk about the match at Birmingham.

We arrived at the courts and met up with Caroline. Her mood changed. She seemed to take on the role of a professional, something that appeared to be

lacking during training. She walked with an air of importance and appeared to be very focused. She left James and went to sign in and organise a court to practise on. I couldn't help but sense that she wanted to block him out. That this was her stage and she didn't need him.

After wandering around and watching some matches, James came over to tell me that one of the players in the main draw of Wimbledon had pulled out. This meant that a wild card was now free. Caroline was in with a chance of receiving it, but there was competition from some higher ranked foreign players. The Wimbledon committee would have to call a meeting and a decision would be made by 4pm. He thought the possibility of getting the card would mess her up again. Just as she's getting prepared to play qualifying, a stressful enough event, it's all up in the air again.

At 4:15pm Caroline found me. She'd got it. The change in Caroline was instant. It was like someone had flicked a switch on. She was beaming from ear to ear, which was hardly surprising, but more significantly her attitude changed. She suddenly became this confident player, in control of herself and the situation. She told me that she was going to practise at Aorangi Park tomorrow - the practice courts at Wimbledon. Then she was going to go down to Eastbourne on Thursday and play in the Under 21's at Devonshire Park.

The wait for the wild card had been hard for her, she said. She didn't want to raise her hopes only for them to be dashed again. It was time to prove "*them*" wrong for not giving her a card in the first place. She was determined to play well and show them what she was made of. This was fighting talk. This was another Caroline. This was what I had been waiting for.

### *Tuesday 15<sup>th</sup> June*

Met James at Roehampton at midday. We chatted about the Wimbledon draw. With Caroline getting a wild card, it could mean that she could play a top seed on a show court. He apparently explained this to her yesterday and her response was that she was fine about playing Novotna on Centre Court. James didn't share her

view. He thought she would be “*freaked out*” by the experience. With her past two matches on grass this year ending in losses, it wasn’t hard to understand where he was coming from.

Caroline met up with us a bit later, still bearing her grin from yesterday. Just before we headed off to Aorangi, the Wimbledon draw was announced. Caroline would play a player ranked in the world top 80. James thought the draw wasn’t too bad.

Drove with James again. He seems keen to talk while Caroline isn’t around. He told me that he had been holding back on telling me stuff about Caroline. He didn’t explain why and I didn’t ask. I suspect he’s been standing back to allow me to form my own opinions of her and has now come forward to compare them to his own, possibly for reassurance. He opened up again and expanded on their relationship. He felt they were both very different people and as such, could have “*very tense times on court*”. Although they have a lot of time to talk, he finds it hard to speak to her as she’s rarely in the “*right mood*”. He sensed that I was in the same position.

We got to Aorangi Park. The sun was shining and several players were on the practice courts. We spent an hour with Caroline and James hitting with each other on a court next to Steffi Graf. Caroline seemed hungry to play well. She looked focused whilst playing and was hitting the ball well. Gone were the negative rebukes she normally gives herself after a poor shot. Instead she kept quiet and got on with the job.

Graf finished practising early and Caroline and James were left on their own. Breaks started to creep in again. Caroline would sort her hair, take more time picking up the balls, the negative self talk came back. How fragile a positive state of mind appears to be for Caroline.

We had a break in the players’ lounge to sort out their approach to the next week. Caroline’s aim was to “*chill and relax*”. James explained that he would take care of issues such as Wimbledon tickets for her family and the media. She needs to

concentrate on tennis and nothing else. The work was done now, he said, and she should feel confident.

*Wednesday 16<sup>th</sup> June*

Caroline practised with another player and her coach in the morning at Aorangi Park. Neither James or I were there. When we arrived at 3pm, Caroline told us the practice went well but she was pissed off that her hitting partner was getting a lot of coaching which interrupted the session.

The afternoon session went well. She took more control of things and dictated what she wanted to practise and when. She worked hard and seemed relaxed and happy. She told me that she felt good and was ready for the week ahead.

*Thursday 17<sup>th</sup> June*

We all arrived at Eastbourne this morning for the U21's tournament. Caroline got stuck in traffic and was late for practice. We went on court for about 20 minutes and Caroline and James had a gentle hit.

Caroline felt good after practice and wasn't bothered about being late. Her opponent for her first round match was ranked lower than her and she felt confident she could achieve her goal to win. Her confidence, she felt, stemmed from good practice: *"I had a good practice last week for a few days. It's probably why I felt more confident"*. She aimed to use the tournament as a warm-up for Wimbledon.

Her match was played in front of a good size crowd. Caroline won the match 6-3 6-4 and she seemed focused throughout. A very different player to the one who lost in Birmingham the other week. I had a chance to speak to James after the match and his opinion was that it went very well. She was relaxed and played well. It was lovely to see her playing so well and being happy. I felt the win boosted me as well as her.

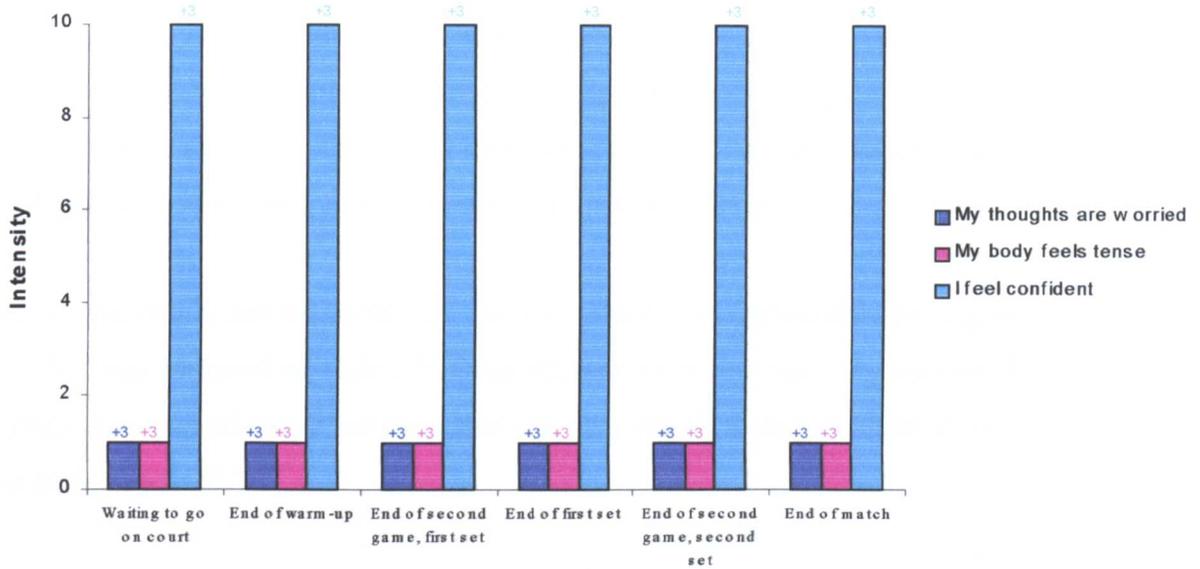


Figure 5.2a Eastbourne match R1

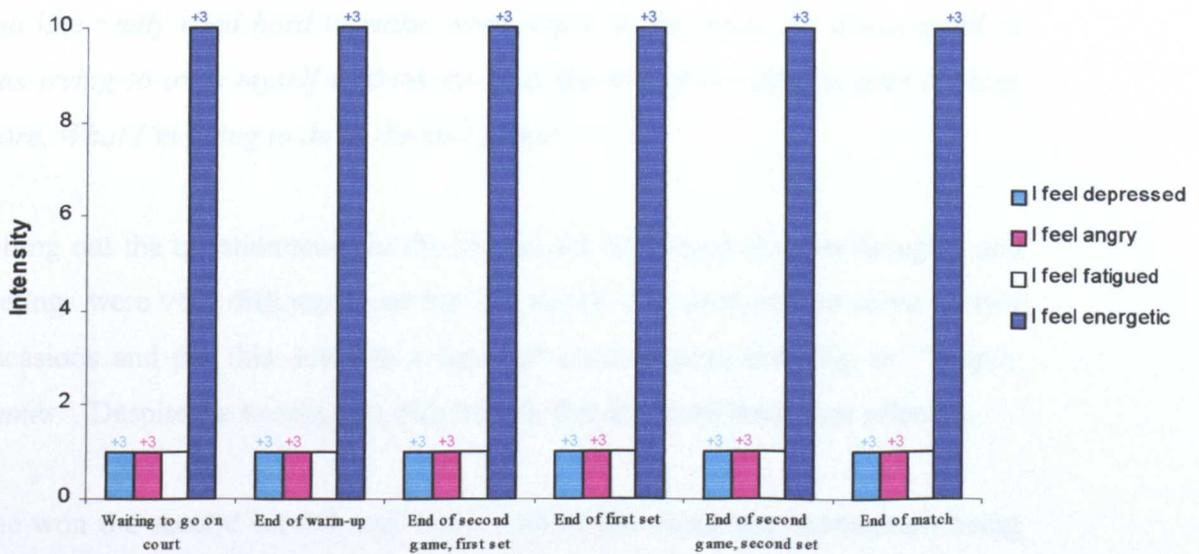


Figure 5.2b Eastbourne match R1

I telephoned Caroline to arrange a time to meet up. She arrived late and didn't seem to want to spend a lot of time talking about the match. This annoyed me slightly, but on reflection, it may have been because there wasn't a lot to tell me. Her questionnaire data showed a static response throughout all the time periods for all seven factors measured (figure 5.2). Confidence and energy was rated at 10 for intensity and +3 in direction. Cognitive and somatic anxiety, anger, fatigue and depression were rated as 1 on intensity and +3 in direction.

She felt physically and mentally ready for the match on completion of the warm-up: *"Nothing bothered me today. Nothing affected me in any way. So I was ready to play. Just wanted to get out there and play the match. It was an ideal state. I was totally focused"*.

She held her serve during the first set and remained confident throughout: *"I felt confident I could win the match every single stage in the match"*. This confidence was further boosted by the fact that her opponent was serving well and she managed to break her twice, both to love. She felt she focused well at key times. Breaking at 5-3 to win the first set: *"That was good. I was focused and like really tried hard to make every return in the game. So it was good...I was trying to train myself to think towards the end of the change over to think more. What I'm going to do in the next game"*.

Filling out the questionnaire for the second set, she noted that her thoughts and feelings were very different from her last match. She dropped her serve on two occasions and put this down to a lapse of concentration resulting in *"sloppy games"*. Despite the breaks, she didn't think that her confidence was affected.

She won the second set 6-4 and when I asked her about any momentum being present during the match, she told me that it was always in her favour. She was pleased with the way she played and put to win down to three factors: *"[I] had good preparation, so that would help. I was feeling good about myself, so. Mentally feeling good. So that was why I played well"*.

We chatted about the changes for her over the last couple of days. She told me that having the wild card, she now felt “*part of it*”, which has given her confidence. Her mood during the interview varied. When I was asking her questions directly relating to the match, she seemed a bit stand-offish and answered with generally short replies. If I lightened things up a bit, either by using humour or talking about issues away from the match, her mood improved and her answers were longer. This is proving to be a difficult game to play with her. I need the information and get frustrated with her and myself when she’s not being cooperative, yet I have to be oversensitive to her moods. Sometimes it’s like walking on egg shells. I suspect that things are only going to get harder as Wimbledon draws closer.

### *Friday 18<sup>th</sup> June*

On my own today with Caroline, as James has meetings in London. I watched her practice session with another British player. Her shots seemed to be going well, but her partner seemed to be dictating things.

I met up with her before the match for a quick chat and to arrange to meet up afterwards. She said she was as confident as she was yesterday and wanted to go out and play well. No mention was made of winning.

The match went well and she beat her opponent 6-0 6-3. From my point of view, she seemed very focused and determined in the first set, but her concentration faltered in the second set. She foot-faulted a few times, which is unusual for her, and her first serve percentage dropped. But overall, she played a good solid game.

I had to telephone Caroline later in the afternoon, as she hadn’t turned up to meet me. She had forgotten about all about it and was very apologetic, so we arranged to meet up tomorrow after her finals match. Although she did sound sincere about forgetting the meeting, I couldn’t help wondering if she just didn’t want to talk to me.

*Saturday 19<sup>th</sup> June*

James was down today for the final. He and Caroline hit for an hour in the morning on one of the main courts. There was quite a crowd milling around with it being finals day.

The final was played on Number One Court against a player ranked higher than her. The crowd was pretty small, but included her parents. She lost the match in three sets, 6-2 4-6 0-6. She seemed very focused during the first set and played well. They traded the first seven games of the second set, with each breaking the others' serve. Nerves were beginning to show. The sixth game in particular went to six deuces before Caroline finally broke her opponent. Caroline was broken in the next game and her opponent went on to take the set. The third set went very quickly.

I saw James after the match, while Caroline went to get changed. He seemed pleased with how it went. He thought she had improved mentally over the last week and played some very good points in the match. He felt she should feel pleased with the match, even though she lost it.

Waited for Caroline to telephone, but by 6pm I had no call so I decided to contact her. She had forgotten about the meeting again. She'd booked a massage for 6:30pm and then was driving back to London. She was sorry but we could meet up tomorrow and talk then. What else could I say but yes? I wanted to say something to her to let her know how I felt. Two days in a row I feel like I've been messed around. She says one thing and does another. Maybe I should have been more firm with at the beginning and laid down guidelines about the timing of interviews? But I'm so conscious of not wanting to have any negative effect on her during the grass court season. And at the end of the day, she's the one who's doing me a favour. She's the one who could turn round and say she doesn't want to carry on with the study. She's the one who has complete control over this, and that's what difficult to handle.

I think she must have been feeling a bit guilty about our missed meetings, as she telephoned me a bit later to ask if I wanted a lift back to London. I thanked her

but explained that I had arranged to head back to London tomorrow by train. In hindsight, I should have changed my plans and accepted the lift. It could have been a good time to talk about the matches and drift into non-tennis related chat. Hindsight's a wonderful thing.

*Sunday 20<sup>th</sup> June*

Back in London and back at Aorangi Park. Wimbledon has taken on a different atmosphere since we were here earlier in the week. Security has been tightened and there is a sense of importance and foreboding excitement all around the grounds. All the practice courts were busy and the walkways and players' lounge was full of players and their entourages.

I met up with Caroline at the entrance to Aorangi and quickly moved her over to a quiet spot by Number One Court. We sat down and I explained I would try and keep it brief so as she could get her mind focused on the next few days.

We started with the semi-final match which she won 6-0 6-3. Her questionnaire data was repeat of her first round match, all very positive. Her summary of the match was very brief. She expected herself to play well and went into the match with high confidence and this remained right up until the end: *"I mean throughout the whole of the first set there's nothing really in the games I can comment on...I was feeling confident"*. She was able to comment on the two games she lost on her serve in the second set. She put it down to a dip in concentration: *"If you don't remind yourself to concentrate and pick out things to work on...like your serve, how you're going to play the point, then your concentration goes. That's why I need to tell myself to concentrate more and to be able to focus for a longer period"*. When I probed deeper about this lack of concentration, she told me that her thoughts wander off from what's going on in the court (fig 5.3).

She attributed her win to good preparation: *"Good preparation means that you're going to play well"*. She didn't feel that her last match had an influence on this one: *"I never think about the match before. It's past"*.

I summed up the match from my perspective saying that I thought she played really well. She was keen to hear these positive words. She lit up and became more animated in her body language, more chatty.

We moved on to talk about the final. Caroline saw the match as a good opportunity. Her opponent was ranked higher than she was, so she felt she had nothing to lose. Despite the fact she had told me that she had shut the door on the last match and didn't think about it, she attributed her high confidence levels to the way she had been playing. She didn't perceive the match as being anything big, merely a warm-up for Wimbledon. This, she felt, took the pressure off her (fig 5.4).

She took the first set 6-2. She felt her opponent was making some errors, which helped increase her confidence. The only game where Caroline dropped her serve was put down to a lapse of concentration. But she felt that on the whole she maintained her concentration well throughout the set, including at the change overs.

At 3-4 in the second set she felt that her opponent had raised her game: *"making it tougher for me to play"*. Losing the set, she felt, had little effect on her: *"It doesn't affect me...It's like we're all levels now. You can't think about the past because ...it's not good for what's going to happen in the third set"*. Her questionnaire data told a slightly different story. Her confidence dipped slightly, as did her energy intensity level. Her anger and depression rose sharply, with fatigue increasing three fold.

Caroline felt the third set went quickly. At 0-2 down, her questionnaire data shows an increase in cognitive and somatic anxiety. Fatigue set in a bit more while her energy levels decreased slightly. Her confidence remained the same and at 0-5 down she still felt that she could turn the match around: *"I'm not as confident as, say I was in the first set. It's going to be a lot more hard work but I still believe I can do it"*.

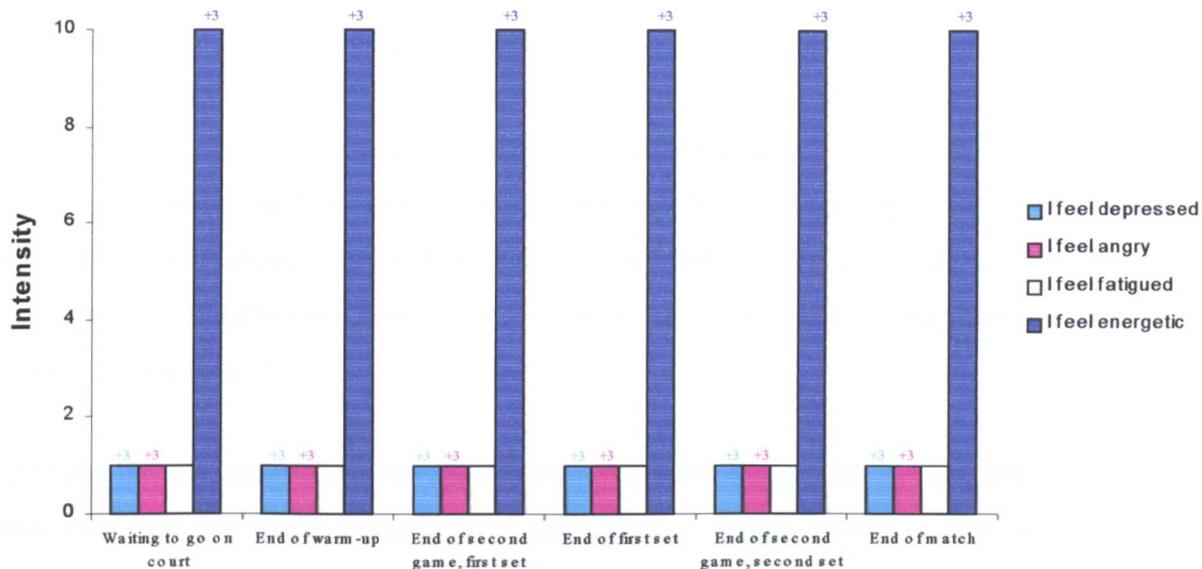


Figure 5.3a Eastbourne match semis

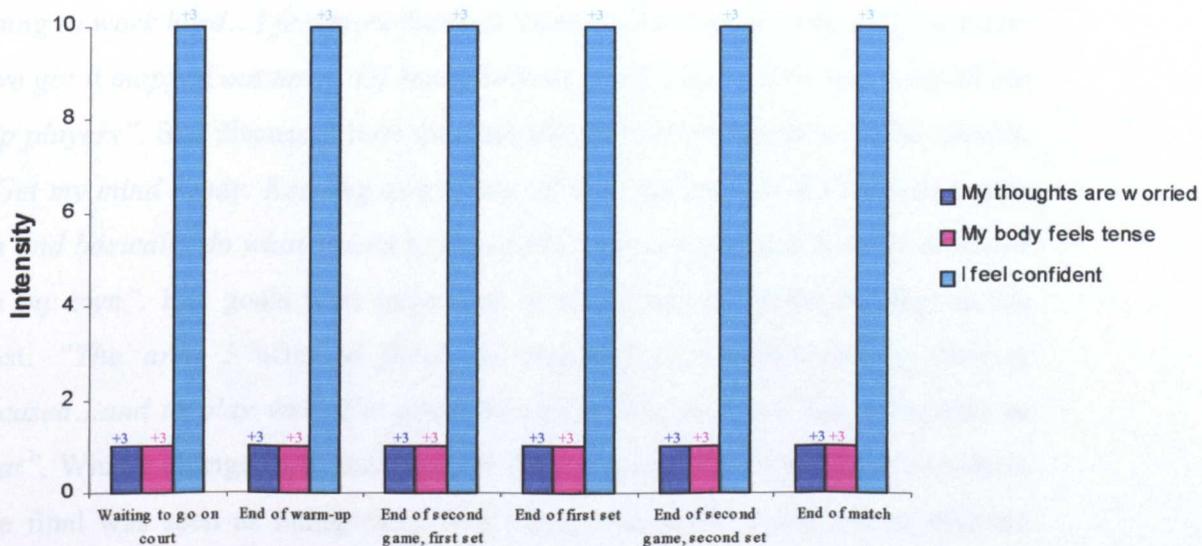


Figure 5.3b Eastbourne match semis

Having lost the match, she was very philosophical about it: *"I would have liked to have won it. But you can't get too disappointed because I've got Wimbledon tomorrow or Tuesday. So if I start getting too pissed off about a warm-up tournament...I've got to get things into perspective"*. She highlighted the wind as a factor that annoyed her in the match and made things tougher for her. Interestingly, the wind was present throughout all her matches at Eastbourne yet never seemed to bother her - when she was winning. She was unhappy with her serve, but couldn't think of any other reasons for the loss. In spite of the loss, she enjoyed the presentation on Centre Court: *"It was quite nice. Yeah, it was good. I liked it...all the press"*.

We ended the conversation on her thoughts on Wimbledon. She was keen to talk about how she felt she'd changed over the last few weeks: *"There's been a change in my mind now. I don't give a shit about what people think so much. Whereas when I was younger it was, oh I must play well to impress so-and-so...[It changed] very recently...like in [the last] two weeks. [The wild card] pissed me off. I knew they should have given me one. I'm good enough to be in it. So I think that played a big part in it...It's not like I can take my foot off the pedal now, like let's relax and enjoy the whole Wimbledon experience. No, I'm going to work hard...I feel more focused. I know what I want to do with...my life! I've got it mapped out now...[I] really believe that I can be there and with all the top players"*. She discussed how this had affected her preparation for her match: *"Get my mind ready. Keeping away from all the hype and all the crap that goes on and basically do what I need to do...[which is] to relax and have some space on my own"*. Her goals were more task-oriented than has been the case in the past: *"The area I want to focus on mentally is staying with it. Staying focused...and to play well. I'm good enough to beat her. I'm fully confident in that"*. What a change from the Caroline from a couple of weeks ago. The loss in the final was seen as being okay. Her mood was positive and her confidence high.

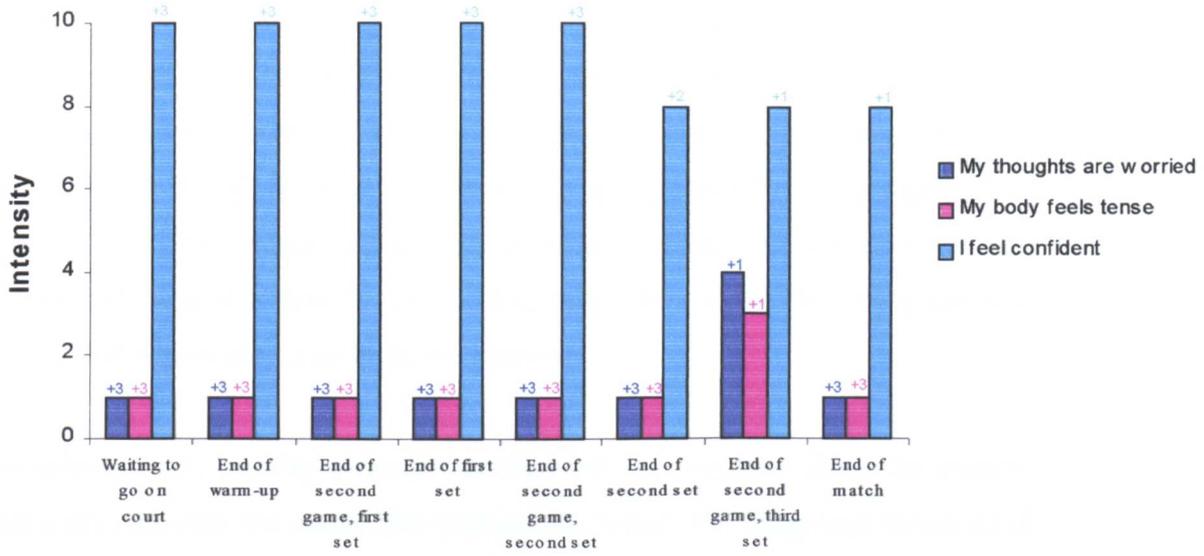


Figure 5.4a Eastbourne match final

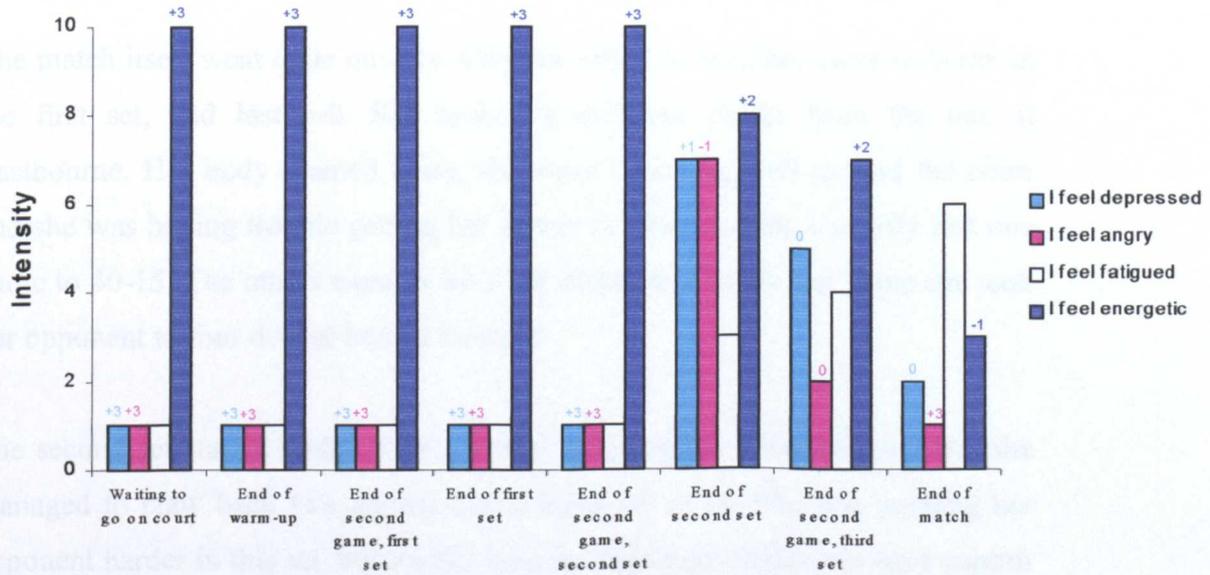


Figure 5.4b Eastbourne match final

**Week Four***Tuesday 22<sup>nd</sup> June*

So the day had arrived. All the sessions on the practice courts were over. It was time for Caroline to put her fighting talk into action. I arrived at the All England Club about 10:30am. I found Caroline's court and took a seat at the far end, opposite the umpire's chair. Several of the British coaches, including a nervous James, and other staff from the LTA ended up sitting around me. Her parents and brothers sat by the umpire's chair. By the time Caroline was due on court, the crowds had swelled and not even standing space was available. The scene was set. All that was needed now were the players.

Ten minutes late, security ushered Caroline and her opponent along the packed walkways and onto the court. She looked very tense. Her head was down, as if trying to block out the crowd. When they clapped and cheered, nothing seemed to register with her. Once into the warm-up, she seemed to be hitting the ball okay, but she looked like a small child that had been pushed out onto court when she really didn't want to play.

The match itself went quite quickly. Caroline failed to hold her serve or break in the first set, and lost 6-0. She looked a different player from the one at Eastbourne. Her body seemed tense, she wasn't moving well around the court and she was having trouble getting her serves in. Despite this, she only lost one game to 40-15. The others went to 40-30 or deuce, and in the last game she took her opponent to four deuces before losing it.

The second set started badly, with Caroline dropping her serve to love. But she managed to claw back two games, one a break of serve. She was pushing her opponent harder in this set, but by this time her opponent seemed to have control of the match. Her body language was positive and she was walking about the court with confidence. In contrast, Caroline wore a dejected look. Even winning points and the support and encouragement she received from the crowd did nothing to pull her out of her despair. She clearly didn't want to be there.

She lost the set 6-2. A sympathetic crowd clapped as she left the court within seconds of the umpire announcing the final score. Her head remained down. James left just as quickly, while the other coaches and staff filed out with little being said. What could be said? She went out and played the biggest match of her career to date and failed to do herself justice.

We met up late in the afternoon. Finding a quiet place to talk was difficult. We ended up at Aorangi, sitting on a patch of grass at the far end of the courts. Neither of us wanted to be here. I decided to try and get the interview over as soon as possible. I needed to get her thoughts and emotions while they were fresh in her mind.

She woke up this morning positive and confident. Practice went well and James gave her a few pointers for the match. Waiting to be taken down onto court, she felt she managed to block everything out: *"I was just ready to go on. Everything was prepared. I wasn't thinking about anything...It was very easy [to block everything out]"*. She wanted to win the match; her ego-oriented goals had returned. She was putting pressure on herself to win but didn't see this in a negative light at the time.

Arriving on court she felt tense: *"I was feeling quite nervous...My body felt really stiff"*. Not the way she wanted to feel, but at the time she was caught up in the moment and didn't really notice it. She felt the warm-up went okay. She looked around and found James in the crowd. She didn't bother to find where her parents were sitting, a first since I'd been with her. When I asked her what the atmosphere was like, she said she didn't know. Her questionnaire data seemed to reflect how she felt, with cognitive and somatic anxiety both hovering around 6 on the intensity scale and neutral in direction (fig 5.5).

The first set turned into a nightmare very quickly for her: *"I was not happy at one stage in this match...Obviously I'm losing confidence all the time because I'm losing, I'm getting more pissed off"*. She tried to use coping strategies to handle the situation: *"I'm just telling myself to relax. Just thinking relax. Start playing well"*. She felt her concentration was going up and down. She summed

up her feeling having lost the first set: *“Disappointed. Not feeling that confident out there. Not really wanting to be there. That’s about it”*. Her graphs showed a drop of 9 points for confidence intensity at the end of the second game. By the end of the set her cognitive and somatic anxiety had shot up to 10 and was viewed very negatively, while her intensity levels of depression and anger rose sharply from 1 to 8, again seen as very negative.

She started the second set feeling negative and this negativity grew: *“Not [feeling] great at all...Just getting worse and worse...These whole games [3-0] I’m just feeling like shit. I’m not winning a game. I’m not in the match. I’m embarrassed to be out there. I don’t want to be out there...I’m feeling like shit. I can’t play well. I can’t think straight”*. The data from her graphs indicated that cognitive and somatic anxiety, depression and anger were all rated as 10 on intensity scale and -3 for direction. She acknowledged that as the set went on she did start to play a little bit better, but it was little consolation to her: *“The games are a bit longer. Getting a bit closer. But still, it’s nothing like I can play. Bit embarrassed. Still don’t want to be there”*.

She described how she felt after losing match point: *“Felt shite. Just didn’t want to be there”*. The only thing she could put her performance down to was her nerves: *“It’s my first [senior] Wimbledon...I wasn’t prepared for how I was possibly going to play. Which is how I played today...So it came as a shock to me...I hadn’t pictured myself maybe getting out there and not playing as well as I could...I didn’t know how to deal with it”*.

She had spoken briefly to James, but other than that, she had blocked the whole experience out of her mind. Her positive state leading up to the match had quickly become negative. Negative in mood, negative in cognition’s and potentially negative in momentum.

*Wednesday 23<sup>rd</sup> June*

Today was a day to catch up with James and review the last few weeks. He viewed her lead up to the match yesterday favourably. She was in a good mood

and was very chatty and positive about herself in the morning. She had shared a court with a seeded player for practice and he was surprised at her reactions when her fellow player didn't want to hit with her. She became very annoyed but channeled her emotions into a positive direction and ended up dictating the pace.

He felt that mentally and physically she was ready for the match and couldn't have asked for more from her. But in the match itself, she fell apart. Her opponent played much better and thrived off Caroline's poor play. He attributed her play to her nerves and the pressure on her to do well. She asked him afterwards: "*What was I doing wrong? Wasn't I have supposed to have enjoyed that?*" He'd not had a proper chance to talk to her about the match, but felt that she could have lost by the same score and still enjoyed herself. To just go for her shots and think "*What the hell*". That said, he was gutted about the match and seemed to take it badly.

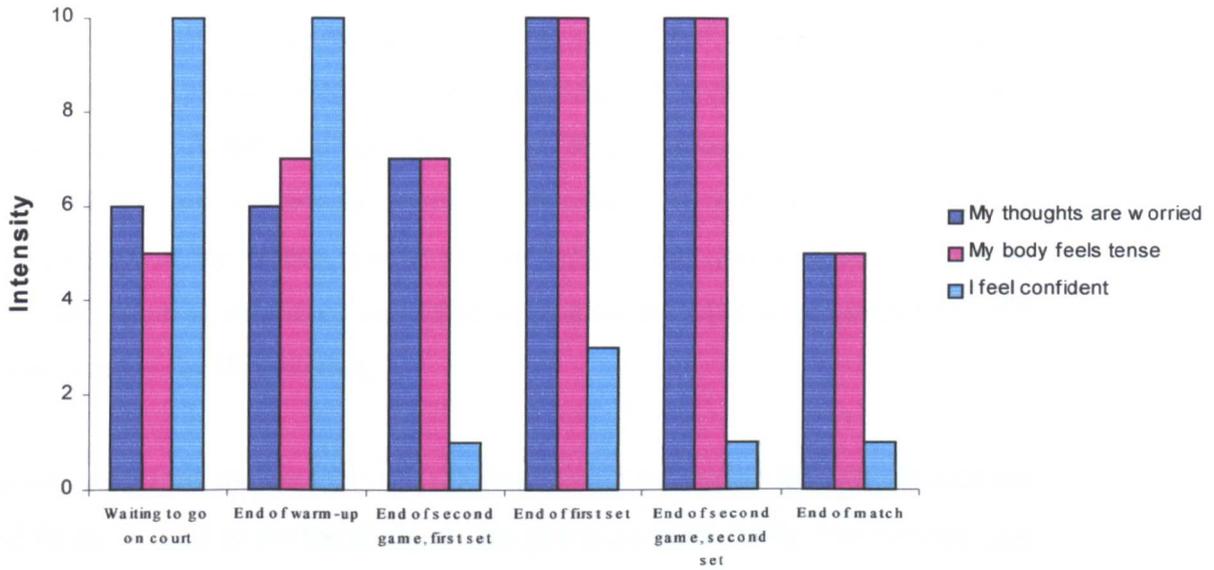


Figure 5.5a Wimbledon match

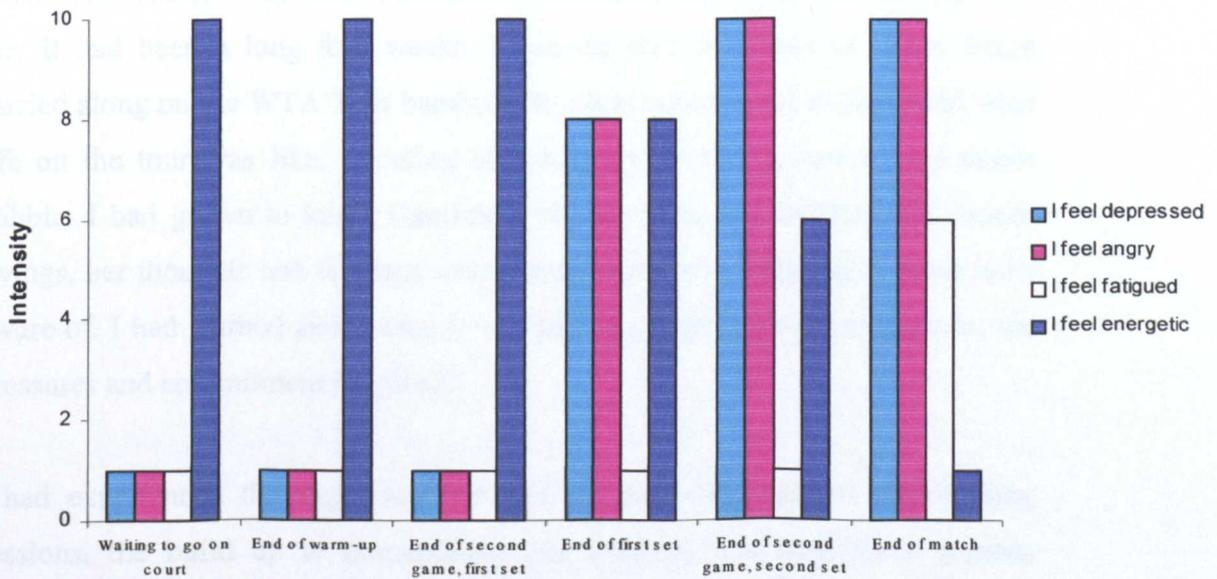


Figure 5.5b Wimbledon match

As far as the grass court season went as a whole, he saw, as I did, a complete change of character in Caroline when she heard she had got the Wimbledon wild card. Up until then training had been patchy. The rain at the start of the season didn't help. She was lacking grass play and in turn confidence. As the weather improved, she played more and was improving her technique and she became more relaxed. Anger and disappointment at not getting a card turned into determination and confidence when the Wimbledon committee announced the late decision in her favour. Yet he still maintained that she was lucky to get the card. Her training improved and after some good matches at Eastbourne he felt she was ready for Wimbledon.

He was surprised she spoke to me after her match yesterday. He told me that she had found it hard to do the study as she saw it as extra work. Yet he was very definite about the long term positive benefits it would bring her. He wanted to her draw on the experience in the future to make her more reflective about herself. He also believed that external issues play a major role in a player's training sessions and on-court performance.

I left Wimbledon today with a mixture of thoughts and emotions washing over me. It had been a long four weeks. I had traveled hundreds of miles, being carried along on the WTA Tour bandwagon. I had experienced at first hand what life on the tour was like, spending almost every waking moment in a tennis bubble. I had grown to know Caroline well, her likes and dislikes, her moods swings, her thoughts and feelings, even things that she herself didn't seem to be aware of. I had learned about what it was like to coach a player on the tour, the pressures and commitment involved.

I had experienced the highs and lows of the tour. The day to day training sessions, the build up to competition, and matches and post-match periods themselves. I had experienced a generosity and commitment from both Caroline and James, to allow me to carry out my research. Thoughts about the findings buzzed around my head, but I was tired. It was time to leave the tour behind and go back into the real world.

### 5.32 Follow up Interview

I met up with Caroline a couple of months later to get her overall thoughts and feelings about the grass court season and whether they had changed in any way from the summer. I also had some questions specifically on momentum, which were borne out of the interview data.

At her request, we met after one of her matches at a tournament. We discussed in brief several areas, starting with the waiting to hear about the Wimbledon wild card. She confirmed that she was nervous at this time which affected her practice sessions: *“Tense really, on edge...Just made my temper shorter...[But] you can't stop that, so you just have to get on with it”*.

She was more reflective now about not receiving a wild card: *“I was a little bit disappointed. But at the end of the day, you need to get your results in order to deserve that. It obviously wasn't right to give it to me, so fair enough really. At least I know...The decision was made”*. I reminded her that at the time she felt: *‘Pissed off and didn't care any more.’* She put this response down to emotion: *“I guess it was just emotion. But now I can say, well you know, you need to get your ranking up to deserve a wild card”*.

The Eastbourne wild card didn't have such a negative effect on her at the time: *“Totally different [to Wimbledon] You know, Wimbledon is the biggest tournament in the world”*, but she did want to get in: *“I wanted to play Eastbourne. It was good practice. All the big names were going to play...Good to be around the top players”*. When she heard the news that she hadn't got in, she used this in a positive way: *“It gives you a goal and makes you work harder. It's the same with anything. If you don't achieve it, you work harder to achieve it. It fired me on”*.

Once she knew that she had received a wild card to Wimbledon she described how it felt to be practicing at Aorangi Park: *“It was great. It was great to be with the best in the world and to think you're in the draw. It was a great feeling. I was on a high”*.

This feeling of being on a high carried through to the Under 21's tournament she played at Eastbourne. She won her first two matches but lost in the final. At the time she stated that she knew she was going to win the first two rounds, but made no comment about the final. I probed her on that now: *"The first two girls I played I don't have much respect for. I didn't expect them to beat me...They were lower ranked, they didn't hit as hard as I do. They shouldn't beat me...[In the final] she was a good player. So I didn't really know...I could have played her in the main draw at Wimbledon, so [the match] had more importance...I think I was probably a little bit more tense, just because the outcome was more uncertain"*.

We moved onto the Wimbledon match. She described the day, starting from when she woke up: *"I was excited. I was positive. In the changing rooms before I played my match, just talking to a couple of the other British girls... It was walking down from the changing rooms that actually scared me shitless...Then I walked out and saw how many people there were and felt more nervous....There was like loads of people on my court and I thought , why are you all around my court, go away. Go away and watch some other twat!...[I] just tensed up and couldn't play the way I wanted to. But I think it was because I thought everything was going to go fine and I was confident. I didn't really think about what happens if I get out and I can't move my feet and play the way I want to play. What's Plan B? Basically I didn't have a Plan B. All I had was Plan A and if Plan A didn't work out, then I'm in shit"*.

*"I think [feeling bad] started to kick in at 2-0. I started to feel really shit. You're playing awful. You've got to do something otherwise she'll just walk all over you. And then obviously as the games and points go by, you just want to get away...[I just remember] the way I felt...My brain couldn't work. Couldn't stop it. Nothing made any sense. I don't know, it was weird. I couldn't control my mind...I wanted to get off the court. I didn't like it. There's no question, I hated it...[Afterwards] I didn't want to speak to anyone. Just go...[but] I had interviews. I didn't enjoy that bit"*.

She didn't talk to James about the possibility of something going wrong and this was clearly an issue for her: *"I mean now, thinking about it, I think someone*

*could have said, what happens if? Cause if I was a coach, I'd probably say, you know from now with experience, you might get out there and you might not get a ball in court. What are you going to do? How are you going to feel? What's going to go through your mind? Are you going to rush? Are you going to panic? What are you going to do? So now, if I'm going to play Wimbledon [again] at least I'll know".*

Despite the traumatic nature of the match, she felt she dealt with it well: *"I just switched off and just like moved on. Cause you can't do anything. You're just going to waste time...waste your life...I mean obviously it affected my confidence...[but] I had time off after that. I wasn't picking up a racket...I had nothing really to remind me of it".*

She reflected over the season as a whole: *"The majority [of my matches were] pretty poor".* She attributed her performances to internal and external causes: *"The respect [I have for] my opponents. Whereas in Eastbourne I played well and I did respect my opponents. The other matches, you know, I thought, shit these people are higher ranked. They're good players. It's probably self belief."* And: *"There was too much going on around me. Too much to deal with. Too much to sort out. I mean James helped me out as much as he could but, I don't know, just too chaotic for my liking. I don't like that chaos around me...If I'm around people who are miserable or negative, it has an effect on me...I think [James] was tense as well...I think I'm probably quite impressionable".*

She went on to describe how she would do things differently: *"Just make time for myself. Just do it. Even just force myself to sit down and relax, chill out...I wouldn't have stayed with the family I lived with [in London]. I would have got away and just had a place on my own".*

We moved the interview onto issues related to psychological momentum. She felt that she was aware during matches when momentum shifts were occurring. As for what comes first, positive momentum or improved performance: *"I think it can be both with me. [But] probably play some better points and then the momentum comes".* She defined control of momentum as being both internal and

external: *“How your opponent starts playing. How they deal with it. And how you deal with it mentally. To do with how confident you are”*. Yet she felt that when she had momentum, it didn't matter what her opponent does on the other side of the net: *“I'm in control of the match”*.

## **5.4 Discussion**

### **5.41 Reflective summary**

Having collected the data and written up the narrative case study, I am left with a sense of needing to reflect upon this process. I found the experience both exciting and challenging. Exciting, because I was gaining entry into an exclusive 'club' and able to see at first hand the day to day life of a player on the professional tour. No amount of reading or video-tape footage prepares you for what life is really like – the traveling, the training, the tension. The challenge, was to gain as much information as possible, with minimum distraction for the player and coach. Somehow absorb material, yet appear invisible. On reflection, I sometimes wonder if I may have been too sensitive with this issue. Could I have gained more or better data if I had been more forceful in my approach to arranging and carrying out interviews? This is still an issue that I reflect upon today.

A factor which surprised me whilst working on the tour was how absorbed I became with the tennis way of life. I had been accepted into the tennis community quite quickly and felt comfortable in such surroundings. However, on reflection, it was more than just acceptance. I became involved, both emotionally and mentally. I could see shifts in mood and behaviour both in Caroline and James, and was aware that I too was experiencing these shifts. The waiting for the wild card for Wimbledon, the failure of Caroline to turn up to carry out an interview. These moments produced emotional changes in me that affected how I behaved. My preconceived notion of remaining impartial and as detached as possible failed to materialise. This challenged me to review my actions on a daily basis. To what degree were my emotions affecting me in the data collection process? Should I try to detach myself more from my surroundings or should I accept my involvement as inevitable?

This reflection was carried through into the writing up process. I found that putting the four weeks on the tour down on paper allowed me to make more sense of what I had experienced. Patterns and themes emerged from the interviews and observations: Caroline was only happy when she was winning. Her momentum shifted in relation to her performance outcome. James appeared

to somehow dodge these perceived momentum issues, leaving her alone when she was moody and praising her when she was happy. The enormity of off court issues on performance and perceived momentum shifts. My existence in all this.

Writing up the case study was therapeutic. It allowed me time to revisit issues that had to be put to one side during the tour. I found that as I wrote, I experienced strong emotional reactions to the words. I was essentially reliving those four weeks all over again. The highs and the lows were accompanied by vivid images. So involved with the write-up, I would find my behaviour changing. For example, when Caroline was given the Wimbledon wild card, my mood was happy, a smile spread across my face and my speed of typing increased. In contrast, when I wrote up the interview after her Wimbledon defeat, my shoulders became heavy and I struggled to find the words to capture the moment.

In addition to the therapeutic nature of the write-up, I was at times aware of my vulnerability. I felt it was important to be as honest as possible, even when this involved highlighting things I thought I had done wrong as a researcher. Admitting mistakes is not always easy. Leaving yourself open to potentially further, as yet undiscovered errors, is sometimes harder. Yet despite this apprehension, I feel that such a process is a necessary.

#### **5.42 Summary of pre season state**

The player started the grass court season feeling positive about her level of play, despite losing her first match at Surbiton. Training had gone well and because of this she felt her confidence had increased. This finding supports Bandura's theory of self-efficacy (1977) which states that past performances have a meditating role in affecting an individual's level of confidence. Jones et al. (1990) also argue that appraisals of past performances and effectiveness of training can affect the levels of confidence of an athlete and induce a situational antecedent for performance.

Her goals were to play well and stay focused during her matches however no mention was made with regards to goals for training. Past research has postulated that task goals are more beneficial than ego goals due to the controllability athletes have over them (Duda, 1992; Burton, 1989). She indicated that there was some cognitive anxiety present at this time, when she talked about her fear of playing badly and the pressure of playing well to merit a Wimbledon wild card. Despite these concerns, she perceived herself to be ready for the upcoming season. This partially supports Jones et al. (1990) and Hanton and Jones's (1995) work, which suggests that perceived readiness can predict cognitive anxiety and self-confidence.

#### **5.43 Review of matches**

Over a four week period, she played a total of five matches in three tournaments. Differences were found between the matches depending upon the performance outcome. The two matches which she won, the first round and semi-finals at the Under 21's event at Eastbourne, showed almost identical patterns of mental and physical states. Results from the questionnaire showed static levels for intensity and direction throughout all the time periods for all seven factors. Confidence and energy were rated as 10 for intensity and +3 in direction while cognitive and somatic anxiety, depression, anger and fatigue were rated as 1 for intensity and +3 in direction.

The interview data confirmed these findings. The pre-match states were positive, with the player citing high levels of confidence and feelings of being relaxed and ready to play. Potential factors that could negatively affect her, such as getting stuck in traffic and arriving late for practice, had no effect. During the matches themselves, she talked of feeling confident and focused the vast majority of the time. She attributed her wins to good preparation, through practice for the first match and past performances and practice, feeling positive and confidence gained from receiving a Wimbledon wild card for the second match.

The player perceived she had positive momentum during both these matches and attributed this to internal factors of control and having a better ranking than her opponents.

Differences were however found for the types of goals set for the two matches won. The goal for the first match was to win, while the goal for the second match was to play well. However, although she did not cite a goal as being to win the second match, she had previously stated that winning was always her first priority.

The player lost three matches, one at the beginning of the four week period and two consecutive matches near the end. The first match lost was at Birmingham. There was a change from during the morning to when she stepped out onto court, with Caroline being positive and energetic to feeling sleepy and not very energetic. This may have attributed to both the coach's and player's perception that the warm-up did not go very well. The errors caused a negative emotional response and increased levels of cognitive anxiety, particularly during the first set. There was a loss of perceived control over the match when she wasn't playing well and her opponent was. This control was perceived to be regained at times when her opponent's level of play dropped.

Her goal of staying with her opponent was partly achieved, however a negative emotional response was in place. Although confused as to why she lose, she partly externally attributed the loss to a lack of grass court practice.

The second lost match followed a different pre-match pattern. The final in Eastbourne was approached with a positive state of mind. She perceived herself to be feeling positive and confident from two previous round wins. This positive state appeared to be carried over from the previous two matches, which she won, and remained with her until the beginning of the second set. She felt her opponent was making errors and this increased helped to increase her confidence. However, as her opponent began to increase her level of play during the second set, the player began to feel less confident and more depressed and angry. Her concentration decreased and she eventually went on to lose the match.

She attributed her loss to external factors, namely the higher ranking of her opponent and the windy weather. Interestingly, the weather remained unchanged throughout all of her matches at Eastbourne, yet was never cited as a factor after her two wins.

The player lost her final match at Wimbledon, where she won only two games. Her pre-match state was similar, if not better, than when she won her two matches at Eastbourne. She described herself as positive, excited and confident about beating her opponent, who was ranked higher than her. Both she and her coach perceived this to be the ideal state to be in. Despite believing she could beat her opponent, her goal was to stay with her and remain focused.

Her pre-match state changed dramatically as she walked down and onto the court. The crowd had a debilitating effect on her and her cognitive and somatic anxiety was high. By the end of the first set her confidence dropped dramatically whilst her intensity levels increased for cognitive and somatic anxiety, depression and anger. She felt her opponent had little effect over this state. She attributed her poor play to an inability to think clearly due to high levels of anxiety and pressure. Interestingly, she partly attributed the match outcome to her positive pre-match status, as well as feeling very nervous with it being her first senior Wimbledon. This was the first time she internally attributed after a loss. However, she stated that her coach was also to blame for not pointing out what could go wrong.

#### **5.44 Review of season**

It is hypothesised that off-court issues may have affected the differences in pre-match status. When examining match outcome throughout the four week period, a pattern emerged relating to the player's mental and physical state. In the period leading up to the Birmingham loss, she was restricted to indoor courts for practice due to the rain. The weather and lack of grass court practice appeared to affect her mood state, with reference being made to the long time delays for the start of her match and the resultant negative emotional state.

The weather improved over the next few days and she managed to hit on the grass for several days. Although such practice might be expected to facilitate a positive state, this was not found to be the case. She complained of feeling stiff and tired, and suffering from a lack of focus. The tiredness may be attributed to general lack of practice brought about by the recent weather. The lack of focus was seen to occur from the delay of news about the Wimbledon wild card. This was at the back of the player's mind all the time and was further exacerbated when people kept asking her if she had heard of anything. This caused a negative emotional response, exhibiting itself in anger and frustration.

Further rain and the news that she had not got a wild card for Wimbledon or Eastbourne had a further negative effect on her. She externally attributed the lack of cards to the committee and having no luck. At no time did she question herself and playing standard.

A major turning point came, for both her mental state and performance, when it was announced that she had been given a wild card for Wimbledon. The lack of practice on that day, due to rain, had no effect on her. Her confidence increased and she became more determined and focused. Her positive state increased when, as the weather improved, she gained practice time on the grass along side the top players in the world.

This new positive attitude and regained drive to work hard in training appeared to feed into the first two round successes at Eastbourne. This was in addition to her having no respect for these opponents due to their lower ranking. However, any positive effect from the wins did not continue into the final where she lost.

Despite the loss of the final, there appeared to be a build up of positive thoughts and feelings, gained from both practice and match situations. This led to what both the player and coach termed as an 'ideal state.' This ideal state lasted until the pressure and anxiety of the situation, induced by external factors such as the crowd, took over and altered the player's mental and physical state.

### 5.45 Momentum models

Results from both the matches and the season as a whole appear to adapt well to previous research models of momentum (Vallerand et al., 1988; Taylor & Demick, 1994). The results also highlight positive and negative experiences that have been postulated earlier in the thesis as potential antecedents to momentum.

The present study partially supports previous research which states that momentum is associated with progressing toward a goal (Adler, 1981; Vallerand et al., 1988; Taylor & Demick, 1994). The player set a mixture of both task and ego goals for all the matches she played. Although she did not set any goals for training, she did set goals for her personal life, such as relaxing.

The player was seen to cognitively appraise each situation, both on and off court, with varying degrees of positive and negative responses. Training, matches and times off the court were influenced by both internal and external factors, such as the weather, the Wimbledon wild card and physical wellbeing. These factors appeared to have an influence of the player's psychological states. For example, whilst waiting for the Wimbledon wild card, the player experienced a decrease in motivation, concentration, confidence and control. This was in addition to a negative emotional response. The psychological state impacted upon her behavior causing an increase in unforced errors and a perception of feeling physically tired and stiff. These different antecedents, thought to influence psychological changes, are consistent with past research, which state that momentum is subjective (Vallerand et al., 1988; Taylor and Demick, 1994). Despite these differences, consistency was found with regards to the player's own definition of momentum, which encompassed factors such as self-control and confidence.

Her behavioural and psychological responses were self-assessed and given specific causes. Her responses for successful outcomes were overwhelmingly attributed to internal causes, such as feeling confident and being the better player. Unsuccessful outcomes tended to be attributed to external factors, for example the weather or a higher ranked opponent.

This continuous cognitive appraisal lead to a fluctuation of positive and negative experiences throughout the four week period, each experience affecting the mental and physical states, which in turn affected behavior. It is hypothesised that a series of small momentum shifts occurred throughout this time frame, with matches, training and off-court activities having varying degrees of influence. More prominent momentum changes were hypothesised, such as her renewed enthusiasm on hearing she had a Wimbledon wild card, or the breakdown in mental and physical states during the first round match at Wimbledon.

Adler and Adler (1978) and Vallerand et al. (1988) argue that personal variables such as anxiety levels and skill level influence perceptions of momentum. The findings in this study, for example the Wimbledon match, supported the tenet that when an athlete is over anxious, momentum will not be perceived to be present and performance will not increase.

The issue of skill level raises an interesting point. The player in this study was defined as elite, due to her British ranking and competitive experience. However, in international terms, such a categorisation may be misleading. The opponents she competed against during the three matches she lost were ranked significantly higher than her, suggesting that there were skill level differences. According to Vallerand et al. (1988), if a player fails to exhibit the skills required to perform at a certain level, momentum will not be perceived as being present. However, at certain times during these matches, the player did perceive momentum to be present. It may be therefore that fluctuations in playing ability are not due to skill level per se but to psychological states caused by cognitive appraisal of situations, such as the score or an opponents' playing level.

Taking this argument further, Gilovich et al. (1985) and McClutcheon (1997a) amongst others, have argued that winning points, games and sets is due to skill level and not momentum. The findings from the present study clearly do not support this argument above. This suggests that regardless of ability level, momentum shifts are perceived to be present during a match. It may be however, that these perceptions of momentum are augmented when as positive experiences are more evident. More specifically, when a player perceives a positive appraisal

of a situation, an increase of psychological factors, such as confidence and concentration, lead to a positive behavioural response. This increase in performance may lead the player to perceive that positive momentum is in place. As more negative experiences are felt, momentum perceptions may decrease and performance level may drop. The presence or lack of confidence during such experiences may be a key to perceptions of momentum. Iso-Ahola and Blanchard (1996) and Weinberg et al. (1983) both postulate that confidence plays a major role in the presence of momentum. Confidence is also highlighted in all three models of momentum.

## **5.5 Conclusion**

This study examined perceptions of psychological momentum of an elite female tennis player over a four week competitive period. Results showed that momentum fluctuated not only during performances but also between performances. This supported the anecdotal evidence that off court activities have an important role in the development and fluctuations of momentum, which in turn affect performance. The findings, on the whole, adapt well to previous models of momentum and help validate the novel approach to data collection and presentation.

## **CHAPTER SIX: SYNTHESIS OF FINDINGS**

## 6. Synthesis of findings

### 6.1 Review of methods and key findings

The aim of this thesis was to examine psychological momentum in elite athletes through the use of different methodologies. The aims and objectives of each study are reviewed and key findings and methodological issues are discussed.

**Study One** *To examine positive and negative experiences before, during and after successful and unsuccessful performances in elite middle and long distance runners using a qualitative methodology, and consider them in relation to psychological momentum.*

Past research has shown that there are differences in mental states between what athletes term successful and unsuccessful performances (Orlick & Partington, 1988; Gould, et al., 1992). However to date, no study has associated these states with psychological momentum. A qualitative research design was used involving semi-structured interviews and content and frequency analysis. Such a methodology addresses the criticism of past research, which has tended to use archival or observer perspective data (Iso-Ahola & Mobily, 1980; Burke et al., 1997).

Results indicated that there were differences between the number of positive and negative experiences exhibited during successful and unsuccessful performances. For the successful performances more positive than negative experiences were found, the opposite was found for the unsuccessful performances. It was suggested that a general momentum pattern was in existence for each performance. More specifically, the number of positive experiences increased while the number of negative experiences decreased throughout the three time phases for the successful performance, resulting in a predominately positive momentum state. For the unsuccessful performance, although positive experiences increased across the time frame while negative experiences decreased, negative experiences dominated all three time phases, suggesting a predominately negative momentum state.

It was hypothesised that self-confidence may have played a mediating role in perceptions of positive and negative experiences. It was further postulated that the higher and more frequently cited levels of confidence for the successful performance and the lower and less frequently cited levels for the unsuccessful performance might be attributed to pre-race training. This supposition supports both Bandura's (1977) theory of self-efficacy and Jones et al.'s (1990) findings that recent training was an important situational antecedent for performance.

Differences in the frequency of task and ego goals were found for the two performances, with a higher frequency of task goals cited for the successful race and ego goals for the unsuccessful race. Differences were also found in the athletes' perceptions of achieving their goals. More specifically, seven times more athletes felt their goal was achievable in the successful race compared to the unsuccessful race. Research has shown that goals may exert an influence on behavioral and psychological factors (Kingston & Hardy, 1997). It is suggested that goals may also have an influence on perceptions of psychological momentum.

Both cognitive and somatic anxiety was found to be greater in intensity and debilitating in direction for the unsuccessful performance compared to the successful performance. This finding supports the existence of directionality of anxiety (Jones & Swain, 1992; Jones, 1993).

Attributions for both successful and unsuccessful performances were predominately internal in nature. This finding failed to support work by Grove and Prapavessis (1995) which found skilled athletes used more internal attributions after successful performances compared to unsuccessful performances.

Finally, the methodology utilised in this study was deemed an advancement in momentum research. It allowed for a greater insight into the thoughts and feelings of athletes at an elite level. The use of time phases/in-race incidents added to the robustness of the comparative analysis. A contextual feature which

in been lacking in past qualitative research (Scanlan, Stein & Ravizza, 1991; Gould et al., 1992a/b).

**Study Two** *To examine psychological momentum in elite tennis players before, during and after competitive matches using a combination of quantitative and qualitative methodologies.*

This study examined in more detail the relationship between positive and negative experiences in relation to psychological momentum. It also attempted to gain an understanding of perceived momentum from an individual perspective, and by tracking shifts of momentum over time between tennis players.

A combination of statistical, content and frequency analysis, case studies and questionnaire data was used. This combination allowed data to be compared and contrasted to gain a deeper understanding of micro shifts of momentum.

Statistical analysis revealed that winning the first point in a game, particularly when serving, resulted in more games being won, compared to when the first point was lost. It was noted that direct comparisons with past research could not be made due to the different statistical approach taken (Iso-Ahola & Mobily, 1980; Weinberg et al., 1983). However, it was hypothesised that that this finding may have been due to the players' levels of confidence. The inability of statistical analysis to consider psychological factors was highlighted and used as a justification to examine interview data using content and frequency analysis.

Content analysis partially supported the notion of increased confidence being linked to winning the first point in a game. Although not all points won lead to an increase in confidence, confidence was linked to positive momentum. This partially supported work by Weinberg et al. (1983). It was hypothesised that broader issues encompassing players' cognitive appraisal, were required to help define the existence and pattern of momentum. Justification for this hypothesis was found in the differing results between the winners and losers.

The case studies allowed a deeper, more individualised understanding of momentum to unfold. Comparisons were made between the winner and loser of each match, tracking cognitive appraisal and perceived momentum shifts over a specific time period. Although each match told a unique story, consistencies were found, such as losers identifying more key moments than winners. Finally, questionnaire data revealed that as psychological and/or physiological components move in one direction for one player, the opposite was found for their opponent.

The use of an eclectic approach to data collection and analyses allowed for a deeper understanding of momentum. Each method was critiqued and it was concluded that the cognitive appraisal of the individual was seen as the key factor to perceived momentum being present or not.

**Study Three** *To examine psychological momentum longitudinally with an elite tennis player, using both quantitative and qualitative methodologies.*

This study attempted to build on previous findings and focused on the cognitive appraisal of an individual tennis player over a period of four weeks on the professional tennis circuit. Both on court and off court activities were examined in relation to momentum shifts.

A predominantly qualitative methodology was used, encompassing interviews, behavioural observations and a reflective diary. Questionnaires were utilised for each of the five matches played. The findings were written up as a narrative case study and included the voice of the author.

Findings revealed differences in positive and negative experiences for training experiences and for won and lost matches. These differences were hypothesised to be affected by past performances and off court issues and a pattern emerged relating these issues with the player's mental and physical states. Throughout the four week period fluctuations of positive and negative experiences were observed

and it was hypothesised that a series of momentum shifts occurred in parallel with these fluctuations.

Results were seen to adapt well to recent models of momentum (Vallerand et al., 1988; Taylor & Demick, 1994). Goals were set for both on and off court activities, supporting the notion that momentum is associated with progressing toward a goal (Adler, 1981; Vallerand et al., 1988; Taylor & Demick, 1994). Throughout the four week period the player attributed different causes for different situations. These tended to be self-protecting in nature with internal attributions for successful outcomes and external attributions for unsuccessful outcomes. This finding supports earlier work by Grove and Prapavessis (1995) but contrasts with the findings from Study One.

The level of confidence the player perceived appeared to be dependent upon her appraisal of situations and confidence was highlighted as being important to her performance and psychological wellbeing. This findings supports Iso-Ahola and Blanchard's (1996) and Weinberg et al.'s (1983) tenet that confidence plays a major role in the presence of momentum.

The move toward a more interactional, constructivist approach to data collection and analysis allowed a very personal account of momentum to be recorded. Off court issues were brought to the fore and highlighted as important factors in determining an individual's perception of momentum as they approach competitive situations. The focus on one individual also highlighted trait factors, such as trait self-confidence, needs to be considered when identifying momentum shifts.

## 6.2 Discussion

The findings from this thesis appear to offer some support for the phenomenon of psychological momentum. The research examined several variables, namely gender, skill level, antecedents and commentated on how findings relate to existing models of momentum.

The issue of gender differences was considered in Study One. Findings indicated that at the elite level, few differences existed. The only gender differences noted were related to coping strategies. Females were found to use more coping strategies in the time leading up to their race compared to males, while males used more coping strategies than females during the race itself. This finding suggests that perceived changes in cognitive shifts during performances appear to be consistent for both genders. The hypothesis put forward, that momentum shifts may mirror cognitive changes, suggest that there would be no gender differences for momentum. This findings supports a study by Weinberg and Ransom (1985) who found no gender differences in momentum in elite tennis players. It should be noted however, that although Weinberg and Ransom (1985) are in a minority group of researchers who have considered gender in elite athletes, they did use archival data. Therefore it may not be pertinent to compare these findings directly with the current research. Due to the findings from Study One, results from Study Two were not examined specifically for gender differences.

Equivocal findings have emerged for the effects of ability in relation to the existence of momentum, with some studies findings no momentum effects when ability is controlled for while others have found strong momentum effects when ability is equal (Gilovich et al., 1985; Gayton et al., 1995). Results from the thesis indicate that at an elite level, momentum effects may be in evidence, thus supporting the work of Gayton et al. (1995) and others. For example, the statistical analysis from Study Two demonstrated that winning the first point in a game leads to a greater likelihood of winning that game. This is in line with similar work which has found winning the first game in a set leads to a greater likelihood of winning the set (Iso-Ahola & Mobily, 1980; Silva & Hardy, 1985).

Through the use of interviews, Studies Two and Three revealed players' own perceptions of momentum being in evidence during competitive performance.

Although the athletes in the thesis were all defined as elite, ability differences did exist. This was perhaps most prominent in Study Three, where the subject competed against opponents who were ranked significantly higher than herself, as well as opponents who were similar or were slightly lower ranked. The players' perceptions of the existence momentum being present during performances may suggest that regardless of ability level, momentum effects could still present.

Potential antecedents of momentum were examined from different proximal positions. Study One examined possible momentum shifts, by categorising past in-race incidents. Events such as passing others and being boxed in were related to either positive or negative experiences and it was suggested that these might indicate the existence of momentum. Physical and psychological factors, such as feeling tired and exhibiting high confidence, were also linked to the possible existence or disappearance of momentum. Studies Two and Three examined more recent competitive experiences, with players being asked to state more directly when momentum shifts occurred and their corresponding mental and physical states.

Results from all three studies indicated that both personal and situational variables influence perceptions of the competitive experience. Past research, for example Adler and Adler (1978) and Weinberg and Jackson (1989) have stated that pre-conditions, such as past performances, have a bearing on the presence of momentum. This thesis supports the importance athletes' place on past performances, whether in the form of competitive performances or training sessions. Therefore it was hypothesised that perceptions of competitive experience may give rise to potential momentum shifts.

Findings from the thesis strongly support the supposition that perceived momentum is subjective (Vallerand et al., 1988; Taylor & Demick, 1994; Cornelius et al., 1997). Although common themes were identified by players in

Study Two with regards to a definition of momentum, not all players agreed on all themes. For example, five of the eight players felt in control of momentum, and only half of the players identified confidence as being associated with momentum. Further evidence for the subjective nature of momentum was revealed in Study Two, where a discrepancy was found between the winners and losers with regards to the number of key moments identified during matches. More specifically, the losers identified more key moments than the winners. It was hypothesised that the losers cognitively appraised more personal and situational factors as being important to their performance compared to the winners.

The importance of cognitive appraisal was highlighted in all three studies by emphasising the need to examine athletes' perceptions of their own performance and not focus research attention on solely archival or observer-perspective data. The unique approach taken to examine possible momentum existence, by using both quantitative and qualitative methodologies addressed criticisms by Vallerand et al. (1988) and Taylor and Demick (1994) amongst others, who have criticised the lack of the individuals perceptions in past research when considering momentum.

The thesis appears to support many aspects from the three models that have been developed to help explain the mechanisms behind momentum (Adler, 1981; Vallerand et al., 1988; Taylor & Demick, 1994). Vallerand et al. (1988), for example, state that momentum is defined as the perception of progressing towards a goal. Adler (1981) and Taylor and Demick (1994), though not specifically defining momentum in this way, both stress the importance of aiming towards a goal. Results from all three studies demonstrated that athletes set goals for their performances. This suggests that momentum could be present throughout each performance and the findings indicate that this may be the case.

An issue not considered by any of the models is the notion of the type of goal set, more specifically whether the goals were task or ego oriented. The thesis examined this concept with equivocal results. Study One found a difference between goals set for successful and unsuccessful performances. Predominantly

task goals were set for the successful performance, while ego goals were more prevalent during the unsuccessful performance. It was hypothesised that the type of goal set may have influenced their mental state and in turn, perceptions of positive and negative experiences leading to the possible existence momentum. However, Study Two failed to find a difference between goals set for the winners and losers. The issues of goal states may be critical as in setting a task goal, winning may not be the focus, whereas setting an ego goals winning is often the main aim. It may be that achieving or failing either a task or ego goal may result in defining whether or not a performance is perceived as being successful.

From an applied perspective it may be important to consider whether an athlete sets a task and/or ego goal for their performance. Research has shown that goals may exert an influence on behavioural and psychological factors (Kingston & Hardy, 1997). If an athlete is setting ego goals, they may be inadvertently creating a negative state that could induce a lack of positive momentum. By encouraging them to set a combination of task and ego goals, a more positive state may be created which could induce positive momentum.

Personal factors, such as confidence and arousal are highlighted in the models as being important in the initiation or extinction of momentum. The present thesis appears to confirm this line of thought. Study One identified high levels of confidence for the successful race compared to the unsuccessful race. Study Two acknowledged the connection between confidence and players' definitions of momentum. Study Three emphasised the role confidence played in determining not only the presence of momentum, but also the effects confidence had on the players' emotional and behavioural response. It was hypothesised that confidence levels could be affected by the antecedent of past performances (Bandura, 1977; Jones et al., 1990) and affect perceptions of momentum.

Although the models examine arousal levels in relation to momentum, they fail to consider the cognitive aspect of arousal in any depth. Literature has identified state anxiety as multidimensional, encompassing both somatic and cognitive anxiety (Liebert & Morris, 1967; Martens et al., 1990; Swain & Jones, 1993). The findings from the thesis acknowledged that both cognitive and somatic

anxiety appear to have differing impacts upon perceived momentum. For example, in Study Two somatic anxiety was seen as having less of an effect on performance compared to cognitive anxiety. An additional consideration made during the thesis was the concept of directionality. Jones and Swain (1992) were one of the first researchers to examine directionality within sport and demonstrate that it is not always harmful for performance. They concluded that cognitive appraisal will determine whether an individual will perceive cognitive and somatic anxiety as being either facilitative, or beneficial to performance or debilitating and detrimental to performance. Results from each study identify both facilitative and debilitating cognitive and somatic anxiety. These were categorised into positive and negative experiences and discussed in terms of momentum shifts.

Cognitions and emotional affect were examined in the thesis and results revealed that they played an important role in the perception of momentum. Study Three in particular identified the dynamic nature of emotions, both on and off court and how they impact on an individual's performance. Perceptions of momentum were seen to be accompanied by positive emotions and cognitions. Indeed, positive emotions and cognitions appeared also to initiate perceptions of momentum. Once again, the fluctuating nature of cognitive appraisal was highlighted.

A factor, which appeared to be related to perceptions of performance and momentum, was that of attributional response. A factor none of the momentum models have considered. Results from Study One found that regardless of whether a performance was deemed successful or not, athletes attributed the outcome to internal factors. In comparison, Study Two found that winners made predominantly internal attributions while losers made a combination of internal and external attributions. The findings of Study Three indicated that primarily internal attributions were made for a win and external attributions were made for a loss. A factor that may have accounted for these equivocal findings is the measurement of performance outcome, either subjective or objective, as discussed earlier. The findings of Study Three highlight the need to examine momentum from an individual perspective. Both on and off court activities were seen as having an effect upon momentum shifts and performance.

In light of the findings of the thesis a reformulated model of psychological momentum is proposed, which aims to combine new lines of investigation alongside the more established factors from previous models of momentum (figure 6.1). The model categorises momentum into macro and micro periods. This temporal perspective emphasises the dynamic nature of sports competition and the longer term consequences of sporting outcomes.

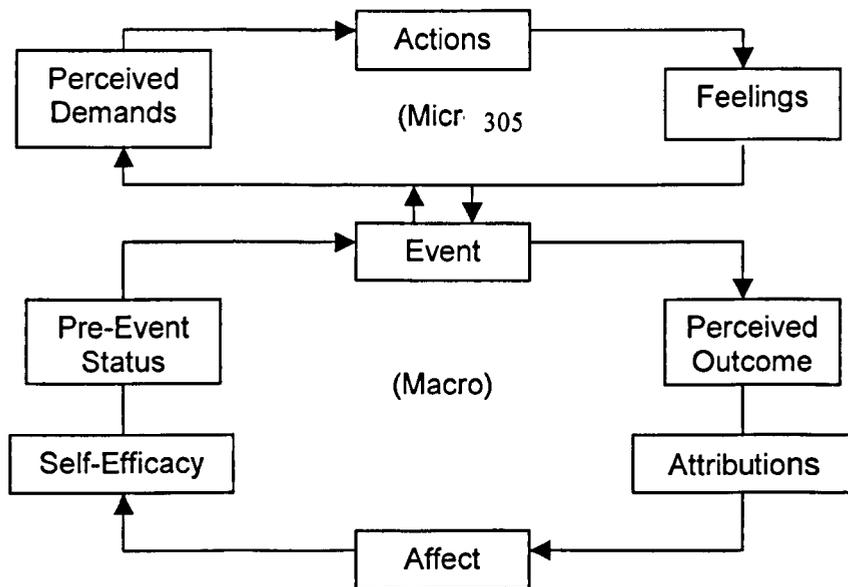


Figure 6.1 Micro and macro model of psychological momentum

The model assumes that cognitive appraisal is continuous, not only during performance but before and after. Therefore a cyclical action is present at all times. The pre-event status of the athlete considers issues such as cognitive and somatic anxiety, perceived readiness and training and injury effects. The self-efficacy and emotional affect of the athlete is required to be considered in relation to the pre-event status. Once into the competitive event, the model moves to a micro focus. Perceived demands on the athlete are identified and actions and affect are examined in light of these demands. Issues such as cognitive and somatic anxiety, and self-confidence are encompassed within this micro focus. When the competitive event is finished, the model returns to a

macro focus and considers the athlete's attributional response in relation to their perceived outcome. Finally, the cycle begins again with affect and self-efficacy impacting upon the athlete's pre-event status for the next performance.

### 6.3 Conclusion

Psychological momentum has become a popular phenomenon within the world of sport. Despite previous research presenting equivocal findings relating to the existence and mechanisms of momentum, this thesis has produced evidence to confirm, that from an athletes' perspective, momentum does indeed exist.

A unique approach to examining momentum was taken when athletes own perceptions of positive and negative experiences were considered. Momentum shifts were further quantified by the use of quantitative and qualitative methodologies, in the form of questionnaire and interview data. Comparisons of different data highlighted the importance of utilising new and different lines of enquiry. The empirical testing of this phenomenon using both research paradigms raised concerns over previous research methods. More specifically, it called into question the ability of these prior findings to fully capture the essence of psychological momentum.

Despite the research carried out into the concept of momentum during the duration of this thesis, questions still remain. The most important of which concerns the definition of momentum. As noted in the review of literature, no one definition of momentum exists. It has been the aim of this thesis to examine momentum in greater detail from the athletes' perspective, however due to the subjective nature of this phenomenon, it has been difficult to provide a concise definition.

The findings suggest that the definition of coming from behind to win, used in the vast majority of research in this area (for example, Iso-Ahola & Mobily, 1981; Adams, 1995), may be too simplistic. Models of momentum (Vallerand et al., 1988; Taylor & Demick, 1994) and the present findings point towards a more complex definition, requiring the cognitive appraisal of the individual to be taken into consideration. More investigation is required into specific performance measurements to ascertain its effects and to lead to a universal definition of this fascinating yet elusive phenomenon.

## 6.4 Recommendations

This thesis has provided an overview and in-depth examination of psychological momentum. In completing this work, additional questions have been raised which future studies in this area should address.

### *Recommendations arising from Study One:*

Anecdotal reports from athletes identified the potential for momentum shifts to occur was dependent upon length of race. It may be that the pre-performance status of an athlete competing in races of shorter duration may be more important than for those competing in longer events. It is therefore suggested that future research should examine the relationship between performance length and momentum patterns.

### *Recommendations arising from Study Two:*

Although ability level was controlled for as far as possible within this study, it is acknowledged that differences may have existed. Future studies should try to control ability, possibly by examining tournament finals, where both opponents should be of a similar standard.

### *Recommendations arising from Study Three:*

The findings from this study helped to formulate a new model of micro and macro psychological momentum. Further empirical research is required to test this new model and validate its conceptual components. In addition, the depth of detail gained from using a constructivist approach, particularly in terms of obtaining a more holistic examination of psychological momentum, is seen as a valuable methodological avenue to continue down.

## 6.5 Summary of thesis findings

- Different mental states were associated with successful and unsuccessful performances and were linked to positive and negative momentum patterns
- Self confidence was hypothesised to play a mediating role in the perception of momentum
- Statistical analysis indicated that winning the first point in a game resulted in a greater likelihood of winning the game, compared to when the first point was lost
- Content analysis highlighted the existence of psychological momentum and the differing patterns between winners and losers
- Case studies allowed for a tracking of momentum shifts and a deeper understanding of cognitive appraisal
- The narrative case study tracked momentum shifts over time and revealed on and off court issues impacted upon such shifts
- Through the use of an eclectic methodological approach, a reformulated model of psychological momentum was developed

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## **PRIMARY APPENDIX**

## **WOMENS CONTENT ANALYSIS**

Raw Data Themes

Higher Order Sub-Themes

2. Played the week before  
4. Played tournament week before

Previous match play

2. Played well in tournament week before  
4. Won last tournament

Last tournament outcome

4. Had beaten good players  
4. Confidence high from last win

Match play induced confidence

2. Hadn't played that much

Lack of match play

2. Didn't think playing very well

Negative perceptions of play

3. No carryover effect from first match

Lack of carry over effects

1. Training was normal  
1. Training going fine  
1. Training always okay  
1. No reason why training not good  
2. Just played normally

Positive perceptions of training

2. Hadn't trained that much  
4. Wasn't hitting ball great

Negative perceptions of training

1. Didn't have any injuries

Lack of injury concerns

2. Had a hip injury  
4. Had problems with knee

Injury concerns

4. Knee wasn't any better or worse

Neutral injury effects

1. Not worried about not hitting ball well

Lack of playing concerns

4. Would hit better if I had

1. Fell more into it than last  
1. Quad felt was like last

1. Confidence built up  
2. Know what to do with  
3. Knee had more experience  
2. Felt I would win

1. Every match is important  
 1. Rated importance a 10/10  
 1. Wanted to do well at Nationals  
 1. Important to do well  
 3. Match was as important as first round  
 3. Important to go out and do well  
 2. Obviously wanted to do well  
 4. Important for improvement of my tennis

High match importance

2. Wasn't the be all and end all  
 4. Wasn't biggest match of year  
 4. Wasn't biggest tournament of year  
 4. Knew had bigger tournament to play

Low match importance

1. Tournament put pressure on me  
 1. Importance put on pressure  
 1. Importance had detrimental effect

Perceived external pressures

4. Wasn't a pressure match

Lack of perceived pressures

1. Felt nervous  
 1. Worried wouldn't perform well  
 3. Felt bit nervous

Debilitative cognitive anxiety

3. Knew wouldn't be so nervous today  
 3. Not so jittery as first match

Cognitive anxiety comparisons

1. Felt nervous in a good way  
 1. Wanted to feel nervous  
 1. Nerves wasn't a huge thing  
 1. Nerves weren't a bad thing

Facilitative cognitive anxiety

1. Had butterflies  
 3. Had some butterflies

Debilitative somatic anxiety

4. Woke up pretty relaxed

Lack of somatic anxiety

3. Felt more relaxed than first match  
 3. Could relax with this match

Somatic anxiety comparisons

3. Confidence 10/10 to win  
 3. Knew was better player  
 3. Knew had more experience  
 3. Felt I would win

High confidence levels

- 1. Felt excited
- 3. Felt more excited than first match
- 3. Felt could play own game
- 3. Could go out and do what I love

Positive cognitions

- 3. Thought about game plan
- 4. Thinking about how to plan

Match cognitions

- 2. Tried not to think too much
- 2. Chatted to friends

Distractor strategies

- 2. Just tried to relax

Relaxation strategies

<ul style="list-style-type: none"> <li>1. Felt nervous</li> <li>1. Felt daunted</li> <li>1. Was really nervous</li> <li>3. Still bit nervous</li> <li>4. Felt apprehensive</li> <li>4. Apprehensive of how I would play</li> <li>4. Apprehensive of having heavy legs</li> <li>4. Worried how match would go</li> <li>4. Worried what would happen on court</li> </ul>	Debitative cognitive anxiety
<ul style="list-style-type: none"> <li>1. Importance made me nervous</li> <li>3. Nervous watching matches</li> <li>3. Seeing others made me nervous</li> <li>3. Watching everything made me nervous</li> </ul>	External influences on cognitive anxiety
<ul style="list-style-type: none"> <li>2. Knew it was going to be a difficult match</li> <li>2. It was quite challenging</li> </ul>	Match concerns
<ul style="list-style-type: none"> <li>4. Needed to be nervous</li> </ul>	Facilitative cognitive anxiety
<ul style="list-style-type: none"> <li>3. Not as nervous as first match</li> <li>3. More nervous than the morning</li> </ul>	Cognitive anxiety comparisons
<ul style="list-style-type: none"> <li>3. Bit nervous as she was younger</li> <li>3. Nervous because of opponents potential</li> </ul>	Opponent induced cognitive anxiety
<ul style="list-style-type: none"> <li>4. Didn't worry about her</li> <li>4. Knew she would be nervous playing me</li> </ul>	Opponent cognitions
<ul style="list-style-type: none"> <li>3. Still felt positive</li> <li>3. Didn't have negative thoughts</li> <li>4. Wasn't nervous</li> </ul>	Lack of cognitive anxiety
<ul style="list-style-type: none"> <li>1. Felt under pressure</li> </ul>	Perceived pressure
<ul style="list-style-type: none"> <li>3. Felt more pressure than first match</li> </ul>	Pressure comparisons
<ul style="list-style-type: none"> <li>1. Put pressure on self</li> <li>1. Always put pressure on self</li> <li>1. Put pressure on self as family watching</li> <li>3. Pressure came from self</li> <li>2. I put pressure on myself</li> </ul>	Self induced pressure
<ul style="list-style-type: none"> <li>1. Pressurised as she was ranked lower</li> <li>3. Felt more pressure as she was younger</li> </ul>	Opponent induced pressure

Raw Data Themes

Higher Order Sub-Themes

<ul style="list-style-type: none"> <li>3. Pressure from what everyone was thinking</li> <li>3. Was expected to win</li> <li>3. Parents expected me to do well</li> <li>3. Coaches expected me to do well</li> <li>3. Everyone expected me to do well</li> <li>3. Manager expected me to do well</li> <li>3. Important to show what I could do</li> <li>3. Important to play well</li> </ul>	Externally induced pressure
<ul style="list-style-type: none"> <li>2. There was no pressure on me</li> <li>2. Didn't feel under pressure to do well</li> </ul>	Lack of externally induced pressure
<ul style="list-style-type: none"> <li>3. Got nervous feeling inside</li> <li>3. Felt jittery</li> <li>4. Had butterflies</li> </ul>	Debilitative somatic anxiety
<ul style="list-style-type: none"> <li>3. Butterflies were good for me</li> </ul>	Facilitative somatic anxiety
<ul style="list-style-type: none"> <li>2. Felt fine</li> <li>2. Felt relaxed</li> <li>2. Didn't have any butterflies</li> <li>4. Not particularly tense</li> <li>4. Felt pretty relaxed</li> <li>4. Didn't have a lot of butterflies</li> </ul>	Lack of somatic anxiety
<ul style="list-style-type: none"> <li>1. Felt pretty confident</li> <li>1. Felt the better player</li> <li>4. Went in pretty confidently</li> </ul>	High confidence levels
<ul style="list-style-type: none"> <li>1. Confident would win</li> <li>3. Confident I was going to win it</li> <li>3. No reason why I should lose</li> <li>2. Definitely felt I could win</li> <li>2. Knew I was a dangerous floater</li> <li>2. Knew I was capable of winning</li> <li>4. Thought I had a good chance</li> </ul>	Confidence in winning match
<ul style="list-style-type: none"> <li>2. Confidence quite up and down</li> </ul>	Fluctuations in confidence levels
<ul style="list-style-type: none"> <li>2. Didn't tell self would win for sure</li> <li>2. It was 60:40 in her favour</li> </ul>	Low confidence levels
<ul style="list-style-type: none"> <li>1. Had a nervous game plan</li> <li>1. Didn't rely on self's game plan</li> <li>4. Set a game plan</li> </ul>	

1. Had to focus on own game  
 4. Focused on my own game  
 4. Goal was to focus on how I was going to play  
 4. Just wanted to play my tennis

Task goals

3. Plan was to attack  
 3. Plan was to go for weaknesses  
 3. Play without distractions  
 2. Knew the tactics I needed to employ  
 4. Wanted to make lots of serves and returns  
 4. Goals were technical

Game plan goals

2. Play as well as I could  
 2. Wanted to do the best I could  
 2. Wanted to go out and do my best

Self focus goals

4. See what needed to be improved

Improvement goals

3. Goal was to see what happened  
 2. Go and see how it went

Vague goals??\*\*

1. The only goal was to win  
 1. Winning was the main thing  
 2. Wanted to win

Ego goals

1. Pressure makes me outcome conscious

Pressure induced ego goals

4. Didn't set outcome goals

Lack of outcome goals

3. Didn't set any goals  
 2. Didn't have any specific goals  
 4. Don't generally set goals

Lack of goals

4. Felt goal was realistic

Perceived realistic goals

1. Knew what to do  
 1. Knew what to do to win  
 4. Knew had to play well to beat her  
 4. Knew what had to do

Confidence in game plan

1. Had a specific game plan  
 1. Can't rely on only one plan  
 4. Set a game plan

Game plan cognitions

Raw Data Themes

Higher Order Sub-Themes

- 1. Talked to coach about game plan
- 3. Spoke to coach about game plan

Coach influence on game plan

- 4. Game plan set with coach

Mutually set game plan

- 1. Knew her game well
- 3. Helped knowing her game plan
- 4. Knew her strength

Knowledge of opponent

- 1. Had brief talk with coach
- 3. Got pep talk from coach
- 3. Coach gave me tips

Positive coach influence

- 1. Excited about playing Nationals
- 2. Playing Nationals was a bonus
- 2. Looking forward to the match

Positive cognitions?

- 3. Feeling better after winning first match
- 2. Felt good being the underdog

Externally induced positive feelings

- 1. People are watching you
- 1. My family were there
- 3. Parents were there
- 2. Dad came down to watch
- 2. Tennis friends were there

Significant others

- 1. Tried not to worry about winning
- 1. Telling self not to worry
- 1. Told self not to put pressure on self
- 1. Learned to deal with nerves
- 1. Didn't make big deal out of match
- 1. Know worrying about winning isn't good
- 4. Hoped tennis was good enough

Cognitive anxiety coping strategies

- 1. Concentrated on own match
- 1. Kept game plan brief
- 4. Thought about game plan

Game plan focus

1. Tried not to think too much about match
1. Thinking about other things
1. Didn't watch other matches
1. Came back to centre just before match
1. Tried not to think about match over lunch
1. Blocked out thoughts during lunch
1. Took time away from others
1. Went away from centre
2. 1. Hung around courts before match
3. Went away on my own
2. Popped into town for some air
2. Tried to switch off
2. Wasn't difficult to switch off
2. Chatted to other players
2. Watched a few matches
4. Tried not to think too early
4. Thought about match 1 hour before

Blocking out strategies

1. Told myself to relax
2. Dossed about really

Relaxation strategies

1. Used visualisation
4. Had picture of how to play

Visualisation

- 1. Practice went well
- 2. Hitting the ball okay
- 4. Had a good hit
- 4. Pleased with hit

Positive perceptions of play

- 2. Didn't worry much about knock-up

Lack of concerns about play

- 1. Hit-up put me at ease

Reduction of somatic anxiety

- 2. Bit slow to begin with
- 2. Felt a bit stiff

Negative physical symptoms

- 2. Good practice increased confidence

Confidence levels

- 1. Thinking about game plan
- 2. Thought about what I had to do
- 2. Focused on tactical things
- 4. Thought about the match

Game plan cognitions

<ul style="list-style-type: none"> <li>3. Feeling bit nervous</li> <li>3. Still felt bit nervous</li> <li>2. Knew I could play very badly</li> <li>2. Thought about losing 6-0 6-0</li> </ul>	Debilitative cognitive anxiety
<ul style="list-style-type: none"> <li>1. Wasn't worried about shots</li> </ul>	Lack of play concerns
<ul style="list-style-type: none"> <li>4. Didn't get that nervous</li> </ul>	Lack of cognitive anxiety
<ul style="list-style-type: none"> <li>1. Centre Court didn't add pressure</li> </ul>	Lack of external pressures
<ul style="list-style-type: none"> <li>1. Saw she was nervous</li> <li>2. Felt she would be nervous</li> <li>2. Felt all the pressure was on her</li> <li>4. Picked on her nerves through body language</li> <li>4. Thought she was nervous</li> </ul>	Opponents perceived cognitive anxiety
<ul style="list-style-type: none"> <li>2. She didn't have any effect on me</li> </ul>	Lack of opponent effect
<ul style="list-style-type: none"> <li>4. Her nerves helped me slightly</li> </ul>	Positive opponent effect
<ul style="list-style-type: none"> <li>1. Body felt sort of jellyfish</li> <li>1. Arms were wobbly</li> <li>2. Felt a little bit tense</li> <li>2. Shoulders felt tense</li> </ul>	Debilitative somatic anxiety
<ul style="list-style-type: none"> <li>1. Legs felt heavy</li> <li>3. Legs didn't feel 100%</li> <li>2. Felt a bit rusty</li> <li>4. Tried to get lead feeling out of legs</li> </ul>	Negative physical symptoms
<ul style="list-style-type: none"> <li>1. Warm-up not good because of nerves</li> </ul>	Negative somatic effects on play
<ul style="list-style-type: none"> <li>1. Calmed down a lot</li> <li>1. Felt okay once court</li> <li>1. Wobbliness lessened as time went by</li> <li>1. Started to loosen up</li> <li>1. Eased up during warm-up</li> <li>3. Settled down a bit</li> <li>2. Felt more loose as time went on</li> </ul>	Reduction of somatic anxiety
<ul style="list-style-type: none"> <li>3. Felt okay</li> <li>3. Didn't feel too bad</li> <li>3. Arms not too shaky</li> <li>3. Felt pretty relaxed</li> </ul>	Lack of somatic anxiety

2. Kept positive  
1. Tried to relax

2. Felt better after a few good backhands	Play induced relaxation
3. Felt much better than first match 3. Relaxed quicker than in first match	Somatic anxiety comparisons
2. Confidence was about average 4. Was as confident as normal 4. Confidence was average to good	Confidence levels
4. Knew I could make a lot of balls	Confidence in match ability
1. Her inconsistencies helped my confidence 4. Got confidence from opponents nerves	Opponent induced increase in confidence
1. Tried to keep feet moving 1. Warmed up my shots 1. Serves felt pretty good 3. Shots were going okay 4. Focused on good foot work 4. Focused on hitting the ball early 4. Did what I wanted to do	Positive perceptions of play
2. Thought about getting in some good serves	Technical cognitions
3. Not thinking about tactics	Lack of tactical cognitions
1. Didn't read much into shots 3. Didn't read much into her game 2. Didn't pick up much about her	Lack of perceptions of opponent
1. Noticed she wasn't very consistent 3. Looked for bits from her game 4. Felt she was trying to impose herself 4. She was trying to be aggressive 4. She tried to smack the ball 4. Felt she was rushing a bit	Perceptions of opponent
1. Wanted match to begin 3. Just wanted to get on with it	Perceived readiness
3. Felt a little excited 2. Felt nice to be playing	Positive emotions
1. Kept moving to help nerves 2. Kept positive 2. Tried to relax	Coping strategies Warm-Up

3. Looked up to find coach  
3. Found parents in crowd

Significant others

3. Only aware of crowds to start with  
2. Bright lights was off-putting

Acknowledgement of external factors

1. Felt totally ready for match  
3. Mentally ready for match  
3. Physically ready for match  
3. Felt ready to go  
4. Felt physically and mentally ready for match  
4. Felt ready for match  
4. Desperate to start

Perceived readiness

1. Felt nervous

Perceived nervousness

1. Felt nervous  
2. Felt nervous  
3. Felt nervous  
4. Felt nervous

Perceived nervousness

1. Felt nervous  
1. Felt nervous  
1. Felt nervous  
2. Negative thought after point

Perceived nervousness

3. Felt into the serve  
1. Felt nervous  
1. Felt nervous

Perceptions of panic

1. Felt nervous  
1. Felt nervous

Perceived nervousness

1. Felt nervous

Perceived nervousness

2. Feeling the pressure

Perceptions of pressure

2. Pressure to hold serve  
2. Expected to hold serve  
2. More pressure to hold than last time

Perceptions of pressure

Perceptions of pressure

Warm-Up

Raw Data Themes

Higher Order Sub-Themes

3. Little bit worried now (6-3/3-1/15-40)  
2. Feel quite negative now (4-6/4-4/?-?)

Debilitative cognitive anxiety

3. Felt anxious at score (6-3/2-1/0-30)  
1. Had to dig out of big hole (6-4/4-4)  
4. Didn't know what caused errors (3-6/1-3)

Negative match cognitions

3. She was scaring me a bit (6-3/4-2/30-30)

Opponent induced cognitive anxiety

1. Didn't feel so nervous (6-4/1-1)  
1. Didn't think negatively (6-4/4-4)  
1. Didn't feel worried (6-4/4-4/15-15)  
3. Nerves had gone (6-3/1-0)  
2. Didn't feel concerned (4-6/4-4/40-A)  
2. Not worried (4-6)

Lack of cognitive anxiety

3. Forgot nerves with confidence (6-3/1-0)

Confidence influence on cognitive anxiety

1. Thought she was really nervous (6-4/1-1/15-0)  
1. Errors showed she was nervous (6-4/1-1/40-15)  
3. Thought she was nervous (6-3/0-0/30-0)  
3. Sensed opponent was nervous (6-3/0-0/40-0)  
4. Double fault meant she was nervous (3-6/1-1/0-15)  
4. Sensed she was getting tight (3-6/2-5/?-?)

Opponents perceived cognitive anxiety

1. Nerves affected game plan (6-4/1-1/30-15)  
1. Nerves kept me behind baseline (6-4/1-1/30-15)  
3. Last game shook me up (6-3/4-1)  
2. Negative thoughts affect play (4-6/4-5/15-15)

Cognitive anxiety effects on game plan

3. Felt little bit panicky (6-3/3-1/0-30)  
3. Felt panicky (6-3/4-1/0-15)  
3. Felt bit panicky (6-3/4-1/30-40)

Perceptions of panic

1. Panicked about serving (6-4/0-1)  
3. Panicked might lose game (6-3/3-1/0-30)

Panic cognition effects on play

3. Didn't panic (6-3/1-1/0-15)

Lack of panic perceptions

2. Feeling the pressure now (4-6/4-4)

Perceptions of pressure

2. Pressure to hold serve (4-6/1-1)  
2. Expected to hold serve (4-6/1-1/0-15)  
2. More pressure to hold than break (4-6/1-1/0-15)

Pressures with play

First Set Cognitive Anxiety

- 1. Didn't put pressure on self (6-4/0-0)
- 1. Felt pressure was off me (6-4)
- 3. Didn't put much expectation on self (6-3/1-0)
- 3. Didn't feel pressure (6-3/5-3/A-40)

Lack of perceived pressure

- 1. Felt she was under pressure (6-4/1-1/30-15)
- 3. Felt pressure was on her (6-3/0-0/40-0)
- 3. Sensed pressure on her now (6-3/4-1/15-15)

Opponents perceived pressure

- 1. Wanted to put pressure on her (6-3)
- 4. Serve put her under pressure (3-6/1-1)
- 4. Tried to put her serve under pressure (3-6/1-1/15-0)
- 4. Had chance to put pressure on serve (3-6/1-1/15-0)
- 4. Tried to put her under pressure (3-6/1-3)
- 4. Wanted to make her win game (3-6/1-3)
- 4. Tried to put her under pressure (3-6/1-3/30-0)
- 4. Tried to put pressure on her serve (3-6/2-4)
- 4. Put pressure on her (3-6/2-5/?-?)

Pressure exerted on opponent

- 1. Didn't put much expectation on self (6-3/1-0)
- 1. Didn't feel pressure (6-3/5-3/A-40)

Lack of perceived pressure

- 1. Felt she was under pressure (6-4/1-1/30-15)
- 3. Felt pressure was on her (6-3/0-0/40-0)
- 3. Sensed pressure on her now (6-3/4-1/15-15)

Opponents perceived pressure

- 1. Didn't put much expectation on self (6-3/1-0)
- 1. Didn't feel pressure (6-3/5-3/A-40)

Lack of perceived pressure

- 4. Sensed she was putting pressure on her (3-6/1-3)
- 4. Thought she felt pressure (3-6/1-3)
- 4. Sensed she was putting pressure on her (3-6/1-3)

Opponents perceived opponent anxiety

- 1. Sensed she was putting pressure on her (3-6/1-3)
- 4. Thought she felt pressure (3-6/1-3)
- 4. Sensed she was putting pressure on her (3-6/1-3)

Opponents perceived opponent anxiety

- 1. Didn't put much expectation on self (6-3/1-0)
- 1. Didn't feel pressure (6-3/5-3/A-40)

Lack of perceived pressure

- 1. Didn't put much expectation on self (6-3/1-0)
- 1. Didn't feel pressure (6-3/5-3/A-40)

Lack of perceived pressure

Raw Data Themes	Higher Order Sub-Themes
<p>2. Little bit of nerves (4-6/0-0/0-0)                      2. Feeling a bit tight (4-6/4-4)                      2. Felt tense (4-6)                      4. Felt slightly tense (3-6/0-1)                      4. Felt slightly tight (3-6/1-2)                      4. Still felt tight (3-6/1-3)</p>	<p>Debilitative somatic anxiety</p>
<p>1. Legs felt bit heavy (6-4/0-0/15-30)                      1. Legs still heavy (6-4/0-0/15-40)                      1. Arms felt wobbly (6-4/0-0/15-40)                      2. Felt a bit stiff (4-6/1-1/A-40)                      2. Arm bit tighter now (4-6/4-5/15-0)                      4. Felt tense in legs (3-6/0-1)                      4. Legs felt like lead (3-6/0-1)                      4. Felt rush of blood to head (3-6/0-1)</p>	<p>Negative physical symptoms</p>
<p>2. Pushed shot and didn't relax (4-6/1-1/40-A)                      2. Arm stiffness caused loss of rhythm (4-6/1-1/A-40)                      4. Tenseness cause errors (3-6/0-1)</p>	<p>Somatic anxiety effects on play</p>
<p>1. Felt fairly relaxed (6-4/0-0)                      1. Felt much better (6-4/0-1/30-15)                      1. Felt more relaxed (6-4)                      3. Felt relaxed (6-3/1-0)                      3. Felt pretty good (6-3/4-1)</p>	<p>Lack of somatic anxiety</p>
<p>1. Legs not so heavy (6-4/0-1/30-15)                      1. Felt moving better (6-4)                      4. Felt relaxed physically (3-6/1-3)                      4. Loosened off a bit (3-6/1-3)</p>	<p>Positive physical symptoms</p>
<p>1. Felt too relaxed (6-4/2-2/0-15)                      1. Relaxed too much (6-4/4-4/40-40)</p>	<p>Over relaxation</p>
<p>4. Sensed she was quite tight (3-6/0-1)                      4. Thought she felt tense (3-6/1-3)                      4. Sensed she was tensing up (3-6/2-5/?-?)</p>	<p>Opponents perceived somatic anxiety</p>
<p>1. Sensed she was relaxing (6-3/1-0/0-30)                      3. Felt she had relaxed (6-4/4-2/30-30)                      3. Felt she had relaxed (6-4/4-4/40-A)</p>	<p>Opponents perceived relaxation</p>
<p>3. Less nervous than her (6-3/1-0)</p>	<p>Comparisons of somatic anxiety</p>
<p>3. Less confidence than her (6-3/1-0)                      Caused confidence from her (6-3/1-0)</p>	<p>Negative subject increase in confidence</p>

- 1. Confidence was pretty high (6-4/1-1)
- 1. Never thought I'd lose (6-4/4-4/15-15)
- 3. Confidence is quite high (6-3/1-0)
- 3. Confidence was 9/10 (6-3/2-1/40-30)
- 2. Feeling pretty confident with break (4-6/4-2)
- 2. Confidence still felt high (4-6/4-4/40-A)

High confidence levels

- 3. Felt pretty confident now (6-3/1-1)
- 1. Felt quite confident (6-4/1-2/40-15)
- 3. Felt pretty confident (6-3/2-1)
- 3. Felt pretty confident (6-3/2-1/40-30)
- 3. Felt pretty confident (6-3/3-1)
- 3. Felt confident (6-3/4-1/15-15)
- 3. Felt pretty confident (6-3/5-2/30-30)
- 3. Felt confident (6-3/5-3)
- 4. Confidence was about average (3-6/1-4)
- 4. Confidence even so far (3-6/2-4)

Confidence levels

- 1. Not lost much confidence (6-4/1-2)
- 1. Lost point but not confidence (6-4/2-3/0-15)
- 3. Not lost confidence (6-3/3-1/0-30)
- 3. Didn't think confidence was lost (6-3/5-2/15-30)
- 4. Confidence wasn't affected (3-6/0-1)
- 4. Confidence unchanged (3-6/3-5)

Maintenance of confidence levels

- 1. Confidence now level again (6-4/2-2)
- 3. Picked up bit of confidence (6-3/0-0/30-0)
- 3. Confidence come up a bit (6-3/1-1/30-15)
- 3. Felt bit more confident now (6-3/2-1/30-15)
- 3. Confidence gone up a bit (6-3/2-1/A-40)
- 3. Little bit more confident (6-3/2-1/A-40)
- 3. Confidence perked up (6-3/4-1/30-15)
- 2. Feel confident now (4-6/3-2/0-40)
- 4. Confidence improved (3-6/1-1)

Increase on confidence levels

- 1. Really lost confidence now (6-4/3-4/30-40)

Decrease in confidence levels

- 3. Not feeling super confident (6-3/4-1)
- 3. Needed to be more confident (6-3/4-1/30-40)

Low levels of confidence

- 2. Confidence affected by momentum (4-6/1-1/40-40)

Perceived momentum effects on confidence

- 4. Wasn't confident on forehands (3-6/1-2)

Lack of confidence in play

- 3. Got confidence from her nerves (6-3/0-0/40-0)
- 3. Gained confidence from her nerves (6-3/1-0)

Opponent induced increase in confidence

- 3. Didn't think she was confident (6-3/4-1/0-15)
- 3. Aware she wasn't confident (6-3/4-1/0-15)

Opponents perceived confidence levels

- 1. Point gave me confidence (6-4/0-0/15-40)
- 1. Gained confidence winning point (6-4/0-1/30-15)
- 1. Freeby point increased confidence (6-4/1-1/15-0)
- 1. Winning point increased confidence (6-4/1-1/A-40)
- 1. Point gave me confidence (6-4/1-1/?-?)
- 1. Winning game increased confidence (6-4/3-4)
- 1. Got confidence from shot (6-4/3-4/15-0)
- 3. Gained confidence from serve (6-3/0-0/15-0)
- 3. Winning point gave me confidence (6-3/3-1/15-30)
- 2. Feeling more confident winning game (4-6/1-0)
- 2. Clever play increased confidence (4-6/1-0/15-15)
- 2. Good serve increased confidence (4-6/1-1/30-40)
- 2. Good serve increased confidence (4-6/1-1/40-40)
- 4. Winning game boosted confidence (3-6/1-1)
- 4. Winning point good for confidence (3-6/1-3/15-0)
- 4. Confidence winning and losing games (3-6/2-4)

Confidence gained from play

- 1. Serve didn't affect confidence (6-4/1-1/40-40)
- 1. Felt could let game go (6-3/5-3)
- 3. Had confidence on own serve (6-3/1-0)
- 3. Confident with serve in first game (6-3/1-1)
- 3. Believed could still win game (6-3/3-1/15-40)
- 3. Thought could easily equalise (6-3/3-1/30-40)
- 3. Knew if raised game I'd win (6-3/5-2)
- 3. Confidence helped to win point (6-3/5-2/30-30)
- 2. Losing point no problem (4-6/0-0/0-0)

Confidence in play

- 1. Knew I could come back (6-4/2-3/0-40)
- 1. Felt I was catching up (6-4/3-4)
- 1. Thought I had a chance (6-4/3-4/A-40)
- 3. Felt had a chance to win game (6-3/2-1/A-40)
- 3. Felt okay being level (6-3/2-1/15-15)
- 2. Expected to hold serve (4-6/2-2)
- 2. Didn't feel I'd lost the game (4-6/4-3/15-40)
- 2. Knew could get game back (4-6/4-4/40-A)
- 4. Knew could play a good game (3-6/0-1)
- 4. Knew had come back before (3-6)

Confidence in position

- 3. Gained confidence from errors (6-3/1-1/15-15)
- 3. Confident from her errors (6-3/2-1/40-30)
- 3. Her errors raised confidence (6-3/2-1/A-40)
- 3. Easy error raised confidence (6-3/4-1/30-15)

Opponents errors effect on confidence

- 1. Talked to self like coach (6-4/2-4/15-0)
- 1. Believed coach in head! (6-4/2-4/15-0)
- 1. Talking made me more aware (6-4/2-4/15-0)
- 2. Self talk more corrective (4-6)
- 4. Talked to self between points (3-6/2-4)

Use of self-talk

- 1. Needed to stay positive (6-4/4-4)
- 1. Tried to talk positively (6-4/4-4/30-40)
- 1. Didn't get too down on self (6-4/4-4/40-A)
- 2. Told self to regroup (4-6)
- 4. Trying to get my head together (3-6/1-2)
- 4. Tried to cut out negative thoughts (3-6/1-2)
- 4. Tried to keep positive (3-6/1-2)

Use of positive self-talk

- 1. Thought, lets go for it! (6-4/0-0)
- 1. Thinking, right go! (6-4/0-1/15-0)
- 1. Thought my game would change now (6-4)
- 3. Told self to be consistent (6-3)
- 2. Well done! (4-6/1-0/15-15)
- 2. Good shot! (4-6/3-2)
- 2. Come on! (4-6/4-3)
- 2. Good shot! (4-6/4-4/?-?)
- 2. Come on, this time! (4-6/4-4/40-40)

Positive affirmations

- 1. Thinking back to level (6-4/2-2/15-15)
- 1. Felt it was same as 0-0 (6-4/2-2/15-15)
- 1. Felt all level again (6-4/4-4/30-30)
- 1. Knew if lost set would still be level (6-4)
- 1. Nothing you could have done (6-4/1-1/40-40)
- 3. Thinking, okay level (6-3/2-1/30-30)

Reassurance self-talk

- 1. Thinking, one more point (6-4/3-4/40-40)
- 3. Told self to stick with it (6-3/5-2)
- 2. Oh dear, never mind! (4-6/0-0/0-15)
- 2. Told self to do better next time (4-6/1-1/40-40)
- 2. Game was just beginning (4-6/2-1)
- 4. Thought anything could happen (3-6/1-3/40-40)
- 4. Knew I had come back before (3-6)
- 4. Told self match wasn't over (3-6)

Encouragement self-talk

- 1. Told self to improve tennis (6-4/4-4)
- 1. Forced self to play well (6-4/4-4/40-40)
- 3. Told self to improve from last game (6-3/2-1)
- 2. Told self to get it together (4-6/1-1/A-40)
- 4. Tried to get on with it (3-6)

Chastising self-talk

<ul style="list-style-type: none"> <li>1. Told self not to be stupid (6-4/2-4)</li> <li>1. Thought 'Oh, God!' (6-4/4-4/40-A)</li> <li>2. That was terrible! (4-6/3-2/40-15)</li> <li>2. Back to square one again (4-6/4-3)</li> <li>2. Set's gone, well done! (4-6)</li> <li>2. That's dire (4-6)</li> <li>2. That's terrible (4-6)</li> </ul>	Negative affirmations
<ul style="list-style-type: none"> <li>1. Told self to relax (6-4)</li> <li>3. Told self to stay relaxed (6-3/1-0)</li> </ul>	Use of positive relaxation
<ul style="list-style-type: none"> <li>1. Told self not to relax (6-4/4-4/A-40)</li> </ul>	Use of negative relaxation
<ul style="list-style-type: none"> <li>2. Played back bad point in mind (4-6/4-5)</li> </ul>	Visualisation
<ul style="list-style-type: none"> <li>1. Was really concentrating (6-4/1-1/A-40)</li> <li>1. Reminded self not concentrating (6-4/2-4)</li> <li>1. Asked self why not concentrating (6-4/2-4)</li> <li>1. Told self to concentrate (6-4/2-4)</li> <li>1. Knew had to concentrate (6-4/2-4/15-0)</li> <li>1. Told self to keep concentrating (6-4/3-4)</li> <li>1. Thinking about concentrating (6-4/3-4/40-40)</li> <li>3. Realised importance of concentration (6-3/1-1)</li> <li>3. Told self to concentrate (6-3/3-1/0-30)</li> <li>3. Reminded self to concentrate (6-3/3-1/40-40)</li> <li>3. Needed to concentrate (6-3/4-2/15-15)</li> <li>3. Told self to concentrate more (6-3/5-3/30-15)</li> <li>3. Told self to concentrate (6-3/5-3/A-40)</li> <li>3. Told self to continue focusing (6-3)</li> <li>4. Tried to concentrate on next game (3-6)</li> </ul>	Concentration cognitions
<ul style="list-style-type: none"> <li>1. She made me concentrate (6-3/4-2/30-15)</li> <li>1. She forced me to concentrate (6-3/4-2/30-30)</li> </ul>	Opponents effects on concentration
<ul style="list-style-type: none"> <li>1. Told self to be aggressive (6-4/1-2/15-0)</li> <li>1. Told self to be aggressive (6-4/4-4/A-40)</li> </ul>	Use of positive aggression
<ul style="list-style-type: none"> <li>2. Tried not to panic too much (4-6/1-1/15-40)</li> </ul>	Control of panic
<ul style="list-style-type: none"> <li>1. Tried to turn anger around (6-4/2-3)</li> </ul>	Control of anger
<ul style="list-style-type: none"> <li>1. Tried to hide annoyance (6-4/2-4)</li> </ul>	Control of annoyance

- 1. Felt easier serving (6-4/0-1)
- 3. Happier with second serve (6-3/2-1/30-30)
- 3. Knew I was serving well (6-3/3-1)
- 3. Pleased with my serve (6-3/4-2/30-15)
- 2. Serve is a strength in my game (4-6/1-1/0-15)
- 2. Hit good serves (4-6/1-1/15-40)
- 2. Hit a good first serve (4-6/1-1/40-40)
- 2. Hit a good first serve (4-6/1-1/A-40)
- 2. Quite pleased with serve (4-6/1-1/A-40)
- 2. Served well this game (4-6/1-1/A-40)
- 2. Felt good holding serve (4-6/2-1)
- 2. Serve still felt good (4-6/2-2/40-15)
- 2. Hit a good serve (4-6/4-4/40-A)
- 4. Serves felt solid (3-6/1-1)
- 4. Second serves pretty solid (3-6/1-1)
- 4. Held serve pretty well (3-6/1-1)
- 4. Had plenty on first serves (3-6/1-3)
- 4. Didn't mind dropping serve (3-6/3-5/?-?)

Positive perceptions of serve

- 3. Didn't make enough serves (3-6/1-1)
- 2. Dodgy throw up due to nerves (4-6/0-0/30-15)
- 2. Bad throw up (4-6/0-0/30-15)
- 4. Had problems with throw-up (3-6/2-5/?-?)

Negative perceptions of serve

- 1. Thinking about first serve (6-4/0-1)
- 1. Wanted to take advantage of serve (6-4/1-1)
- 3. Thinking about serve (6-3/0-0/0-0)
- 3. Thinking about serving (6-3/1-1/0-15)
- 3. Thinking where to serve (6-3/3-1/40-40)
- 2. Trying to get first serve in (4-6/0-0/0-0)
- 2. Focused on good serve (4-6/1-1/A-40)
- 2. Focusing on first serve (4-6/4-3/0-40)
- 2. Trying to concentrate on serve (4-6/4-3/30-40)
- 2. Took more time on serve (4-6/4-3/30-40)
- 4. Concentrated on my serve (3-6/0-1)
- 4. Thought about good first serves (3-6/0-1)
- 4. Thinking about first serve (3-6/1-2)

Serve cognitions

- 3. Got used to her serve (6-3/1-1)
- 3. Getting used to her game (6-3/1-1)
- 3. Thinking about her serve (6-3/2-1)
- 2. Slow to read her serve (4-6/4-5/15-15)

Cognitions on opponents serve

- 3. Good serve didn't affect me (6-4/1-1/40-40)
- 2. Didn't feel her serve was big (3-6/3-5)

Lack of opponent serve concerns

<ul style="list-style-type: none"> <li>1. Couldn't do anything about her (6-4/1-1/40-40)</li> <li>1. Good serve annoyed me (6-4/1-1/40-40)</li> <li>1. Aware of her good serve (6-3/2-1/30-15)</li> <li>3. Knew she had good serve (6-3/1-0)</li> <li>3. Nothing could do about serve (6-3/1-0/0-30)</li> <li>3. Her serve was difficult (6-3/1-1)</li> <li>3. Knew her serve was good (6-3/1-1)</li> <li>3. Her serve was too good (6-3/2-1/0-30)</li> <li>3. Struggled with big serves (6-3/2-1/30-15)</li> <li>2. She hit a good serve (4-6/4-5/15-15)</li> <li>4. She made really good serve (3-6/3-5/0-15)</li> <li>4. Couldn't do anything with serve (3-6/3-5/0-15)</li> </ul>	Opponents perceived positive serve
<ul style="list-style-type: none"> <li>4. Pressure on her to serve (3-6/3-5)</li> </ul>	Opponents perceived pressure on serve
<ul style="list-style-type: none"> <li>1. Got close to breaking her (6-4/1-2)</li> <li>3. Thought about breaking her (6-3/1-0)</li> <li>3. Hoped to break soon (6-3/1-1)</li> <li>4. Thought about breaking serve (6-4/0-0)</li> </ul>	Breaking cognitions
<ul style="list-style-type: none"> <li>1. Had a chance to break (6-4/1-1/40-30)</li> <li>4. Thought had chance to break (3-6/1-3/40-40)</li> </ul>	Perceived chances of breaking
<ul style="list-style-type: none"> <li>1. She hasn't got close to breaking yet (6-4/2-2)</li> </ul>	Opponents perceived chances of breaking
<ul style="list-style-type: none"> <li>1. Felt better when she missed (6-4/4-4/40-A)</li> <li>3. Breaking serve lifted me (6-3/3-1)</li> </ul>	Opponent induced positive effects
<ul style="list-style-type: none"> <li>1. Felt returns were good (6-4/1-1)</li> <li>3. Concentrated on making return (6-3/2-1)</li> <li>3. Concentrated on returns (6-3/2-1/30-15)</li> <li>3. Concentrated on making return (6-3/2-1/A-40)</li> <li>4. Tried to make solid return (3-6/1-3/40-40)</li> </ul>	Positive perceptions of returns
<ul style="list-style-type: none"> <li>3. Should have made the ball (6-3/4-1/0-15)</li> <li>4. Failed to make returns (3-6/0-1)</li> <li>4. Missed a basic return (3-6/3-5/30-40)</li> </ul>	Negative perceptions of returns
<ul style="list-style-type: none"> <li>3. Focused on her return (6-3/2-1)</li> <li>3. Aware of winning off good return (6-3/2-1/30-15)</li> </ul>	Return cognitions
<ul style="list-style-type: none"> <li>2. Missed an easy volley (4-6/4-4/40-A)</li> </ul>	Negative perception of volley
<ul style="list-style-type: none"> <li>2. She played a good volley (3-6/2-5/?-?)</li> </ul>	Opponents positive volley
<ul style="list-style-type: none"> <li>3. Trying to make feet move forward (6-3/0-0/0-0)</li> <li>3. Feet moving much better (6-3/1-0)</li> </ul>	Positive perceptions of footwork

Raw Data Themes	Higher Order Sub-Themes
<ul style="list-style-type: none"> <li>1. Didn't move my feet (6-4/0-0/15-30)</li> <li>1. Didn't move my feet (6-4/4-4/30-30)</li> <li>2. Didn't move my feet (4-6/1-1/40-40)</li> <li>2. Bad footwork (4-6/1-1/40-40)</li> </ul>	Negative perceptions of footwork
<ul style="list-style-type: none"> <li>1. Moved up to ball (6-4/0-1/30-15)</li> <li>1. Told self to step up to ball (6-4/4-4/A-40)</li> <li>3. Needed to step up to ball (6-3/2-1/A-40)</li> </ul>	Footwork cognitions
<ul style="list-style-type: none"> <li>2. Played a shocking forehand (4-6/4-4/40-A)</li> <li>2. Lost game on that forehand (4-6/4-4/40-A)</li> <li>4. Played a loose forehand (3-6/1-2)</li> </ul>	Negative perceptions of forehand
<ul style="list-style-type: none"> <li>2. Hit a bad backhand (4-6/1-1/40-40)</li> <li>2. Missed three backhands (4-6)</li> </ul>	Negative perceptions of backhand
<ul style="list-style-type: none"> <li>1. Wasn't way wanted to win point (6-4/5-4)</li> <li>3. Managed to turn point round (6-3/2-1/A-40)</li> <li>3. Nothing could do about losing point (6-3/3-1/15-40)</li> <li>2. Not doing anything with point (4-6/1-1/0-15)</li> <li>2. Told self to get point back (4-6/1-1/15-40)</li> <li>2. Thought about losing first point (4-6/4-5)</li> <li>2. Aware it was match point (4-6/4-5/40-A)</li> </ul>	Cognitions on point
<ul style="list-style-type: none"> <li>1. Felt played a good point (6-4/1-1/A-40)</li> <li>1. Played how I wanted to (6-4/2-3/0-15)</li> <li>1. Felt aggressive on shot (6-4/2-3/0-15)</li> <li>1. Played point well (6-4/3-4/A-40)</li> <li>1. Played ad points well (6-4/4-4/40-40)</li> <li>3. Got some easy points (6-3/0-0/30-0)</li> <li>3. Played a good point (6-3/5-2/30-30)</li> <li>4. Did well on couple of points (3-6/1-3)</li> <li>4. Played how I wanted to (3-6/1-3)</li> <li>4. Felt played good point (3-6/1-3/40-40)</li> <li>4. Played a good point (3-6/3-5/40-40)</li> </ul>	Positive perceptions of point
<ul style="list-style-type: none"> <li>1. Felt good to win first point (6-4/3-4/15-0)</li> <li>3. Felt good winning first point (6-3/0-0/15-0)</li> <li>4. Pleased with first point (3-6/1-3/15-0)</li> <li>4. Pleased with winning point (3-6/1-3/30-0)</li> </ul>	Positive emotions elicited point
<ul style="list-style-type: none"> <li>2. That was a bad point (4-6/4-4/0-15)</li> <li>2. Got excited and missed shot (4-6/4-4/40-40)</li> </ul>	Negative perceptions on point
<ul style="list-style-type: none"> <li>4. Made her play good point (3-6/2-5)</li> </ul>	Forcing best from opponent
<ul style="list-style-type: none"> <li>4. Hoped she'd miss (3-6/2-5/?-?)</li> <li>4. Hope she would lose shot (3-6/2-5/?-?)</li> </ul>	Wishing errors into opponent

## Raw Data Themes

## Higher Order Sub-Themes

- 2. She played a good point (4-6/4-4/40-A)
- 4. She played couple of good points (3-6/1-3)
- 4. She played a good point (3-6/1-3/15-0)
- 4. Thought she was lucky with point (3-6/1-3/15-0)
- 4. She made couple of good points (3-6/2-5)

Opponents positive point

- 4. Thought she played loose point (3-6/1-3/30-0)

Opponents negative point

- 2. Wanted to play couple of good shots (4-6/4-5)
- 4. Avoided flash shots (3-6/0-1)

Shots cognitions

- 1. Thought I lost the game (6-4/3-4/30-40)
- 1. Could easily have lost game (6-4/4-4)
- 3. Told self to make next game (6-3/2-1)
- 3. Thought could have lost game (6-4/4-1)
- 3. Felt had advantage in that game (6-3/4-2)
- 3. Felt game slip away (6-3/4-2)
- 2. Trying to get first game under belt (4-6/0-0/0-0)
- 2. Felt like a long game (4-6/1-0)
- 2. Wanted to get more games (4-6/1-4)
- 2. Felt it was a long game (4-6/4-5)
- 4. Knew it was only first game (3-6/0-1)
- 4. Let her back into the game (3-6/1-3)
- 4. Felt back in set if won game (3-6/3-5)

Game cognitions

- 3. Playing how I wanted to play (6-3/2-1/A-40)
- 4. Felt game was good (3-6/1-1)
- 4. Started game off well (3-6/1-3)
- 4. Didn't feel it was a bad game (3-6/2-5)

Positive perceptions of game

- 1. Reasonably pleased with game (6-4/0-1)
- 1. Felt good to get game under belt (6-4/1-1)
- 3. Quite happy with own play (6-3/1-1)
- 3. Pleased with that game (6-3/4-1)
- 4. Pleased to hold game (3-6/2-4)

Positive emotions elicited from game

- 1. Felt she gave me the game (6-4/4-4)

Opponent capitalisation

- 4. Easy game for her (3-6/0-1)

Opponents positive game

- 1. Wasn't one of my best games (6-4/0-1)
- 1. Played a bad game (6-4/2-4)
- 3. Last game wasn't great (6-3/1-1)
- 2. Terrible losing 4 games (4-6/4-5)
- 2. Gave set away (4-6)
- 4. Played a poor game (3-6/1-2)
- 4. Felt it was a poor game (3-6/1-3)
- 4. Didn't play very well (3-6/2-4)

Negative perceptions of game

Raw Data Themes

Higher Order Sub-Themes

- 3. Not 100% happy with game (6-3/5-2)
- 4. Hard to lose first set (3-6)

Negative emotions elicited from game

- 1. Felt playing better (6-4/0-1/15-15)

Increase in level of play

- 3. She was at her level (6-3/4-2/15-15)
- 3. She was playing better (6-3/4-2/30-30)
- 3. She was going for a bit more (6-3/4-2/30-30)

Opponents increase in level of play

- 1. Knew plan would work soon (6-4/4-4/15-15)

Game plan cognitions

- 1. Took few points to get into match (6-4/0-1/30-15)
- 1. Didn't get right back into game (6-4/2-2/0-15)
- 1. Found some rhythm (6-4/2-4/15-40)
- 1. Not into match yet (6-4/2-4/15-40)
- 1. Still not back into match yet (6-4/3-4/30-40)
- 1. Felt no pattern to points (6-4/4-4/15-15)
- 4. Hard to get into rhythm of match (3-6/1-3)

Rhythm of match cognitions

- 1. Thought about pace (6-4/0-0)
- 1. Thought about overall game (6-4/1-2)
- 3. Reminded self to consolidate (6-3/3-1)
- 3. Couldn't lower my standards (6-3/5-2)
- 3. Aware of what I had to do (6-3)
- 2. Thinking about consolidating (4-6/1-0)
- 2. Hit a few good shots (4-6/1-0)
- 2. Played a good rally (4-6/1-0/15-15)
- 4. Thought how to rally from back (3-6/0-1)
- 4. Tried to play solidly (3-6/1-1/15-0)
- 4. Tried to play solidly (3-6/1-1/15-0)
- 4. Told self to play solidly (3-6/1-2)
- 4. Put short ball away (3-6/1-3)
- 4. Was decisive with shot (3-6/1-3/40-40)
- 4. Was decisive with shot (3-6/1-3/40-40)
- 4. Thought about playing solidly (3-6)

Technical/tactical cognitions

- 4. Made her play more balls (3-6/2-5/?-?)
- 4. Wanted to make it hard for her (3-6)
- 4. Told self to make her play each point (3-6)
- 4. Wanted her to play more balls (3-6)

Made opponent strive

- 3. Didn't read much into her game (6-3/1-1)
- 3. She didn't have much effect (6-3/2-1/40-40)
- 2. Didn't pick up much about her game (4-6/1-0/15-30)
- 2. Her behaviour had no effect on me (4-6/3-2/30-0)

Lack of opponent

- 1. Didn't think about specifics (6-4/0-0)
- 3. Didn't think about tactics (6-3/0-0/0-0)

Lack of tactical cognitions

<ul style="list-style-type: none"> <li>1. Things not working to plan (6-4/4-4/40-A)</li> <li>2. Couldn't do what I wanted to do (4-6/1-1/0-30)</li> <li>2. Need to do more next time (4-6/2-4/30-15)</li> <li>2. Can't do what I want to do (4-6)</li> </ul>	Lack of perceived control
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<ul style="list-style-type: none"> <li>1. Felt lucky to win game (6-4/4-4)</li> <li>1. Pure luck to win point (6-4/4-4/A-40)</li> <li>1. Felt lucky to win point (6-4/5-4)</li> <li>3. Very lucky to have won (6-3/4-1)</li> </ul>	Perceptual luck
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<ul style="list-style-type: none"> <li>4. Knew shouldn't be doing unforced errors (3-6/1-3)</li> <li>4. Unforced errors let her back in (3-6/1-3)</li> <li>4. Errors could be due to injury (3-6/2-4)</li> </ul>	Error cognitions
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<ul style="list-style-type: none"> <li>1. Shouldn't have made error (6-4/1-1/40-40)</li> <li>1. Lost of two unforced errors (6-4/1-2)</li> <li>1. Made a bad error (6-4/3-4/30-30)</li> <li>3. Faults started to appear (6-3/3-1/0-30)</li> <li>3. Made a bad error (6-3/4-1/0-15)</li> <li>3. Made an easy error (6-3/5-2/15-30)</li> <li>2. Making mistakes (4-6/3-2)</li> <li>2. Unforced error there (4-6/4-3/0-15)</li> <li>2. Played lot of unforced errors (4-6/4-4/?-?)</li> <li>2. Made a mistake (4-6/4-4/0-15)</li> <li>2. Made an unforced error (4-6/4-5/15-15)</li> <li>4. Couple of unforced errors (3-6/2-5)</li> </ul>	Recognition of errors
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<ul style="list-style-type: none"> <li>2. Didn't like the mistakes (4-6/2-2/15-15)</li> <li>2. Tried to cut out mistakes (4-6/3-2)</li> <li>2. Told self to stop mistakes (4-6/4-3)</li> <li>2. Tried to attend to mistakes (4-6/4-4/0-15)</li> </ul>	Focus on errors
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<ul style="list-style-type: none"> <li>1. Didn't like the mistakes (4-6/2-2/15-15)</li> <li>1. Tried to cut out mistakes (4-6/3-2)</li> <li>1. Told self to stop mistakes (4-6/4-3)</li> <li>1. Tried to attend to mistakes (4-6/4-4/0-15)</li> <li>2. Didn't like the mistakes (4-6/2-2/15-15)</li> <li>2. Tried to cut out mistakes (4-6/3-2)</li> <li>2. Told self to stop mistakes (4-6/4-3)</li> <li>2. Tried to attend to mistakes (4-6/4-4/0-15)</li> <li>2. Wanted to get on with game (4-6/4-4)</li> <li>4. Switched at approach (3-6/4-1)</li> <li>4. Wanted to make quick returns (4-6/4-4)</li> <li>4. Wanted quick points (4-6/4-4)</li> </ul>	Strategic intent
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<ul style="list-style-type: none"> <li>1. Felt bad a point, didn't (4-6/4-4)</li> <li>1. Felt a number of points (4-6/4-4)</li> <li>1. Disappointed in being out of game (4-6/4-4)</li> <li>2. Mixed experience (4-6/4-5/15-15)</li> </ul>	Emotional experience
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- 1. Made wrong choice of shot (6-4/1-1/40-A)
- 1. Pushed it bit too far (6-4/15-15)
- 1. Didn't play right shot (6-4/3-4/30-40)
- 3. Realised playing defensively (6-3/2-1/A-40)
- 3. Chose wrong shot (6-3/4-1/30-30)
- 3. Should have rallied with her (6-3/4-1/30-40)
- 3. Needed to raise game (6-3)
- 2. Needed a better length (4-6/1-0/15-30)
- 2. Didn't hit the right shot (4-6/1-1/40-A)
- 2. Need more balls into court (4-6/2-2/15-15)
- 2. Shouldn't have missed that shot (4-6/4-3/40-40)
- 2. Double faulted (4-6/4-5)
- 2. Out of position (4-6/4-5/30-30)
- 2. Pushed rather than hit shot (4-6/1-1/40-A)
- 2. Playing patchy so far (4-6/2-1)
- 4. Went to close to line (3-6/1-1/15-30)
- 4. Went for too big shots (3-6/1-2)
- 4. Went for too much on shot (3-6/1-3)
- 4. Played too many one-offs (3-6/2-4)
- 4. Didn't think pass was good (3-6/2-5/?-?)
- 4. Knew hadn't made enough balls (3-6)
- 4. Hadn't worked hard enough (3-6)

Tactical and technical errors

- 1. She made lots of mistakes (6-4/1-1/30-15)
- 1. She's still making errors (6-4/1-1/40-15)
- 1. She was making errors (6-3/0-0/30-0)
- 1. Felt she made silly errors (6-3/4-1)
- 2. She was playing patchy (4-6/2-1)

Opponents errors

- 4. Didn't do much wrong (3-6/2-5/?-?)

Limited mistakes

- 2. Not making as many mistakes (4-6/2-4/40-15)

Reduction in errors

- 1. Wanted to finish game off (6-4/1-1/40-40)
- 1. Got impatient with shot (6-4/3-4/15-15)
- 1. Wanted to finish point to early (6-4/3-4/15-15)
- 3. Wanted to finish point quickly (6-3/4-1/30-40)
- 2. Wanted to get on with match (4-6/4-5)
- 4. Snatched at approaches (3-6/0-1)
- 4. Wanted to make quick winners (3-6/0-1)
- 4. Wanted quick points (3-6/0-1)

Rushing play

- 1. Felt had a wasted chance (6-4/1-2)
- 1. Felt a waste of a point (6-4/2-3/0-40)
- 2. Disappointed at losing advantage (4-6/4-3)
- 2. Missed a chance (4-6/4-5/15-15)

Wasted opportunities

- 1. Thought back to previous point (6-4/4-4/30-40)
- 1. Didn't feel in the present (6-4/4-4/30-40)
- 2. Last set still lingering (4-6/0-0/0-0)
- 2. Been thinking about last two games (4-6/4-3)
- 2. Thought about last game (4-6/4-4/0-15)
- 2. Still pissed off over last game (4-6/4-5/15-0)

Past performance cognitions

- 1. Didn't think about last point (6-4/0-0/15-30)
- 1. Didn't dwell on good serve (6-4/1-1/40-40)
- 1. Didn't think about last game (6-4/5-4)
- 1. Didn't think about getting set (6-4/5-4/30-15)
- 1. Thinking one point at a time (6-4/5-4/30-15)
- 1. Thinking one point at a time (6-4/5-4/30-15)
- 3. Shut door on last point (6-3/2-1/0-15)
- 3. Didn't think about next set (6-3)
- 2. Didn't dwell on lost point (4-6/1-0/15-30)
- 2. Thinking point at a time (4-6/3-4/15-0)
- 2. Focused on each point (4-6/3-4/40-30)
- 2. Thinking one point at a time (4-6/4-3/0-40)
- 2. Tried to forget about bad line call (4-6/4-4/0-15)
- 2. Didn't think back to last game (4-6/4-5/15-0)
- 4. Knew could put game behind me (3-6/0-1)
- 4. Tried to forget game (3-6/1-3)
- 4. Blocked out last game (3-6/1-3)
- 4. Tried to forget past games (3-6/2-5)
- 4. Let the point go (3-6/3-5/0-30)
- 4. Told self to forget set (3-6)

Present performance cognitions

- 1. Thought about getting few points (6-4/0-0)
- 1. Thinking about getting game (6-4/1-1/A-40)
- 1. Could see I would win match (6-4/1-2)
- 1. Aware next game had to be better (6-4/1-2)
- 3. Felt game was in the bag (6-3/1-1/40-15)
- 3. Thinking one point away now (6-3/3-1/15-30)
- 3. Thought how to play next set (6-3)
- 3. Got ready for next game (6-3)
- 4. Tried to get good start in next game (3-6/1-3)
- 4. Thought about bigger picture (3-6/2-4)
- 4. Tried to get on with next game (3-6/2-5)
- 4. Thought about next point (3-6/3-5/40-40)
- 4. Thought how to play next game (3-6)
- 4. Knew had to win next two sets (3-6)

Future performance cognitions

- 1. Felt focus had improved (6-4/3-4)
- 1. Focus was how I wanted it (6-4/3-4)
- 2. Last point increased concentration (6-4/5-3/30-0)

Increase in concentration level

- 1. Was concentrating less (6-4/2-2/0-15)
- 1. Concentration was wavering (6-4/2-3)
- 1. Not concentrating well (6-4/4-4/30-40)
- 3. Concentration dipped (6-3/1-1/40-15)
- 3. Lost focus (6-3/4-2)
- 3. Lost a bit of concentration (6-3/5-3)
- 3. Didn't focus so well (6-3/5-3)

Decrease in concentration level

First Set Technical Cognitions Cont.



3. Happier now (6-3/2-1/A-40)  
 3. Felt a lot happier (6-3/3-1/40-40)  
 4. Felt quite comfortable (3-6/1-1)  
 4. Didn't feel so bad now (3-6/2-5)

Positive emotional response

1. Relieved to have won game (6-6/4-4)  
 1. Relieved to win first set (6-4)  
 3. Relieved had won game (6-3/4-1)  
 2. Relieved to win game (4-6/2-1)  
 4. Relieved to get first service game (3-6/1-1)

Relief with play

3. Unhappy with errors (6-3/5-2)  
 3. Not happy with my play (6-3/5-2)  
 2. Not a happy bunny (4-6/4-5)

Negative emotional response

2. Got angry with umpire (4-6/4-4/0-15)

Anger with external factors

4. Didn't get annoyed (3-6/3-5)

Lack of annoyance

1. Bit annoyed with myself (6-4/2-2/0-15)  
 1. Felt bit angry with myself (6-4/2-3)  
 1. Pretty annoyed with myself (6-4/2-4)  
 3. Felt slightly annoyed (6-3/4-2)  
 3. Felt annoyed (6-3/5-3/30-15)  
 2. Felt really pissed off (4-6/4-5)  
 2. Felt pissed off (4-6/4-5)  
 2. More pissed off (4-6/4-5/15-0)  
 2. Pretty pissed off (4-6)  
 2. Felt annoyed (4-6)

Annoyance with self

1. Got annoyed with shot (6-4/3-4/30-40)  
 1. Point really annoyed me (6-4/4-4/30-30)  
 1. Annoyed with last few points (6-4/4-4/40-40)  
 1. Very annoyed with point (6-4/4-4/40-40)  
 1. Annoyed at throwing point away (6-4/4-4/40-A)  
 3. Annoyed at giving point away (6-3/1-0/0-15)  
 3. Annoyed with cheap point (6-3/4-2/30-30)  
 3. Annoyed concentration slipped (6-3/5-3/30-15)  
 2. Pissed off netting shot (4-6/1-1/40-A)  
 2. Annoyed at losing game (4-6/4-3)  
 2. Annoyed with bad shot selection (4-6/4-3/40-40)  
 2. Annoyed at that game (4-6/4-5)  
 2. Patchiness in game pissed me off (4-6)  
 4. Annoyed giving points to her (3-6/2-5)  
 4. Annoyed at not raising game (3-6)

Annoyance with play

1. Felt frustrated (6-4/1-1/40-A)  
 1. Felt frustrated (6-4/2-3)  
 1. Felt frustrated (6-4/4-4/40-A)  
 2. Felt frustrated (4-6/4-5)

Frustration with self

4. Frustration fired me up (3-6/3-5/30-40)  
 4. Frustration made me fight (3-6/3-5/30-40)  
 4. Frustration helped play better (3-6/3-5/40-40)

Positive use of frustration

1. Frustrated at unforced error (6-4/1-1/40-A)  
 3. Frustrated didn't win point (6-3/2-1/40-40)  
 2. Frustrated with tenseness in arm (4-6/1-1/A-40)  
 2. Frustrated with errors (4-6/2-2)  
 2. Frustrated at letting ad slip (4-6/3-4)  
 2. Frustrated at losing first point (4-6/4-4/0-15)  
 4. Frustrated at missing return (3-6/3-5/30-40)  
 2. More frustrated (4-6/4-5/15-0)  
 2. Mistakes increased frustration (4-6/4-5/15-15)

Frustration with play

4. Her frustration was good (3-6/2-5/?-?)

Opponents frustration

1. Got down on myself (6-4/1-2)  
 4. Started to get down on myself (3-6)

Depression with self

2. Disappointed with game (4-6/4-3)  
 4. Disappointed in my game (3-6/0-1)

Disappointment with play

1. Still felt defensive (6-4/0-1/30-15)  
 1. Felt a bit cautious (6-4/1-2/40-15)

Lack of assertiveness

- 1. Momentum lying with me (6-4/2-2)
- 1. Felt momentum with me (6-4)
- 3. Momentum definitely with me (6-3/1-0)
- 3. Momentum going with me (6-3/2-1/30-30)
- 3. Momentum definitely with me (6-3/3-1)
- 3. Think momentum's with me (6-3/5-2)

Momentum with self

- 1. Momentum shifted back to her (6-4/2-3/0-30)
- 3. Momentum slightly with her (6-3/4-1)
- 3. She gained some momentum (6-3/4-1)

Momentum with opponent

- 1. Momentum wasn't with anyone (6-4/2-3)
- 2. Felt game was up and down a lot (4-6/1-1/40-40)

Shifts in momentum

- 1. This was a key point (6-4/0-1/15-0)
- 2. Needed that first point (4-6/4-4/0-15)
- 2. Important point (4-6/4-4/40-A)
- 2. Key point here (4-6/4-5/15-0)
- 4. First point was crucial (3-6/0-1/0-15)
- 4. Next point was crucial (3-6/3-5/30-30)

Key points

- 3. Knew had to win this game (6-3/5-3)
- 2. First game was massive (4-6/0-0/0-0)
- 2. Was an important game (4-6/3-4)
- 2. Quite an important game (4-6/4-4/40-40)
- 2. Important game to lose (4-6/4-5)

Key games

## Raw Data Themes

## Higher Order Sub-Themes

- 1. Feeling anxious now (6-4/4-4)
- 1. Thinking negatively (6-4/4-4)
- 4. Getting bit desperate (3-6/0-0/?-?)

Debilitative cognitive anxiety

- 3. Thoughts bit more panicky (6-3/0-0/0-30)
- 3. Felt a bit panicky (6-3/0-0/40-A)
- 3. Felt panicky now (6-3/3-2/15-30)

Perceptions of panic

- 3. Felt game slipping away (6-3/0-0/0-30)
- 3. Thought I was out of game (6-3/3-1/15-40)
- 3. Thinking game might slip away (6-3/3-2/15-30)
- 4. Didn't know how to stop errors (3-6/0-0/?-?)
- 4. Concerned about losing the game (3-6/1-0)
- 4. Unforced errors at back of mind (3-6/1-0/?-?)
- 4. Wondered what was wrong with me (3-6/0-0/?-?)
- 4. Couldn't get head round last points (3-6/0-0/?-?)
- 4. Felt confused about errors (3-6/1-0/40-15)
- 4. Wondered why missing shots (3-6/1-2)

Negative cognitions on play

- 1. Felt could relax (3-6/1-3)
- 3. Didn't feel scared at all (6-3/4-3)
- 3. Not feeling nervous (6-3/5-3/15-0)
- 3. Didn't feel nervous (6-3/5-3/A-40)
- 2. Not really worried (4-6/1-1)
- 4. Relaxed a bit (3-6/1-3)
- 4. Wasn't negative about double fault (3-6/1-3/0-15)
- 4. Nerves had completely gone (3-6/2-4)
- 4. Felt relaxed about match now (3-6/2-4)
- 4. Felt pretty relaxed (3-6/3-5)
- 4. Losing game didn't cause nervousness (3-6/3-5/0-30)

Lack of cognitive anxiety

- 3. Aware she was nervous (6-3/1-1/40-30)
- 3. Aware she may be nervous (6-3/5-3/40-40)
- 2. Aware she was nervous (4-6/4-5/30-30)
- 4. Felt she was more nervous than me (3-6/0-0/0-0)

Opponents perceived cognitive anxiety

- 1. Didn't think she was nervous (6-4/0-1/40-0)
- 2. She's less nervous (4-6/1-2)

Opponents lack of cognitive anxiety

- 1. Felt she was putting on pressure (6-4/3-1/15-30)
- 1. More pressure on me now (6-4/4-2)
- 1. Didn't want pressure (6-4/4-2)
- 1. Felt more pressure on me (6-4/4-3)
- 1. Pressure on me bit more (6-4/4-4/15-15)
- 3. Feeling the pressure (6-3/0-0/40-A)
- 2. Put a bit of pressure on self (4-6/0-0/0-0)
- 4. Felt pressure at back of mind (3-6/0-0/?-?)

Perceived pressure on self

- 1. Pressure had eased off (6-4/4-1/0-0)
- 3. Pressure didn't affect me (6-3/0-0/?-?)
- 3. Didn't feel under pressure (6-3/5-3/A-40)
- 4. Pressure not on me (3-6/1-3)
- 4. Pressure had gone (3-6/1-3)
- 4. Never a pressure match (3-6/1-3)

Lack of pressure

- 2. Pressure's on her to hold serve (4-6/3-4)
- 2. Pressure's still on her (4-6/3-4/40-30)
- 2. Pressure's on her (4-6/4-5)
- 4. Felt pressure was on her (3-6/0-0/?-?)
- 4. Felt pressure back on her (3-6/1-0)
- 4. Felt pressure on her (3-6/1-0)
- 4. Told self pressure back on her (3-6/2-3)

Opponents perceived pressure

- 3. Wanted to keep her under pressure (6-3/5-3/40-40)
- 4. Wanted to put pressure on her (3-6/2-4)
- 4. Good shots put pressure on her (3-6/3-4/?-?)

Pressure exerted on opponent

- 4. Didn't put her under enough pressure (3-6/3-5)

Lack of pressure on opponent

1. Didn't feel relaxed (6-4/0-0/0-30)  
 3. Felt a little tense (6-3/5-3/A-40)  
 2. Felt tense (4-6/1-1)  
 2. Not feeling great (4-6/4-4/15-40)

Debilitative somatic anxiety

1. Relaxed a bit (6-4/0-1/15-0)  
 1. Still felt fairly relaxed (6-4/0-1/40-15)  
 1. Felt good now (6-4/3-1/40-30)  
 1. Relaxed a little bit (6-4/4-1/0-0)  
 1. Didn't feel so intense (6-4/4-1/0-0)  
 1. Still felt relaxed (6-4/4-1/0-15)  
 3. Feeling good (6-3/3-1)  
 3. Felt nice and relaxed (6-3/5-3/15-0)  
 3. Still felt relaxed (6-3/5-3/30-0)  
 2. Feeling okay (4-6/1-3)  
 2. Relaxed a bit (4-6/3-4)  
 2. Felt okay (4-6/3-4/40-30)  
 4. Shoulders felt fine (3-6/3-5)  
 4. Arms felt fine (3-6/3-5)  
 4. Felt pretty relaxed (3-6/3-5)  
 4. Didn't feel bad (3-6/3-5/0-30)

Lack of somatic anxiety

1. Relaxed enough to let her win (6-4/0-0/30-30)

Over relaxed

2. Didn't think she was feeling great (4-6/2-4/A-40)

Opponents perceived somatic anxiety

1. Thought she was quite relaxed (6-4/0-0/0-30)  
 1. Felt she won because she was relaxed (6-4/0-1)  
 1. Knew would be more relaxed serving (6-4/1-1)  
 1. Felt she relaxed as pressure off her (6-4/4-2/?-?)  
 3. Aware she was relaxing a bit (6-3/0-0)

Opponents lack of somatic anxiety

1. Felt relaxed because she was relaxed (6-4/0-0/0-30)

Opponent's lack of somatic anxiety

1. Felt relaxed because she was relaxed (6-4/0-0/0-30)

Opponent's lack of somatic anxiety

1. Felt relaxed because she was relaxed (6-4/0-0/0-30)  
 1. Felt relaxed because she was relaxed (6-4/0-0/0-30)  
 4. Thought I'd get a lot of points (6-4/1-1)  
 7. Opponent's serve was making it hard (6-4/1-1)  
 5. Didn't feel like she was making me nervous (6-4/1-1)  
 3. Felt like she was making me nervous (6-4/1-1)  
 3. Didn't think she would win (6-3/1-1)  
 4. Thought I could win game (3-6/2-1/40-40)

Opponent's lack of somatic anxiety

1. Confidence was well up (6-4/4-1)  
3. Confidence still pretty high (6-3/4-3)

High levels of confidence

1. Felt confident now (6-4/0-1/30-0)  
1. Feeling pretty confident (6-4/3-1)  
3. Feeling confident (6-3/2-1)  
3. Feeling pretty confident (6-3/2-1)  
3. Felt confident (6-3/3-1)  
2. Feeling confident (4-6/3-4/15-0)  
2. Confidence still okay (4-6/4-5)  
2. Keeping positive (4-6/4-5/30-15)  
4. Felt positive throughout match (3-6/1-0/?-?)  
4. Still had self-belief (3-6/1-3)  
4. Felt reasonably positive (3-6/2-4)

Confidence levels

3. Didn't lose much confidence (6-3/4-2/0-40)  
4. Confidence levels didn't change (3-6/1-3)

Maintenance of confidence level

1. Gained more confidence (6-4/0-1/40-0)  
1. Confidence shot back up (6-4/4-4/40-15)  
1. Feeling more confident (6-4/5-4/30-30)  
3. Confidence increased (6-3/0-0/30-40)  
3. Confidence crept back up again (6-3/0-0/30-40)  
3. Definitely getting more confident (6-3/1-1/40-30)  
3. Gaining confidence (6-3/2-1/30-0)  
2. Feeling bit more confident (4-6/2-4)  
2. Confidence is higher now (4-6/3-4)  
2. Confidence much better (4-6/4-4)  
4. Confidence slightly higher (3-6/1-0)  
4. Got slight increase in confidence (3-6/2-3)  
4. Confidence slightly higher (3-6/2-3/40-40)  
4. Feeling slightly more confident (3-6/3-4)

Increase in confidence levels

1. Confidence dropped in last three games (6-4/4-4)

Decrease in confidence levels

1. Confidence wasn't that high (6-4/4-4)

Low confidence levels

1. Felt match definitely going my way (6-4/3-1)  
1. Felt match was almost finished (6-4/4-2/?-?)  
1. Thought I'd got it now (6-4/5-4)  
3. Confident would win match (6-3/2-1)  
3. Felt I had won the game (6-3/2-1/40-30)  
3. Felt on way to winning match (6-3/3-1)  
3. Didn't think she would win (6-3/4-3)  
4. Thought I could win game (3-6/2-3/40-40)

Confidence in winning



1. Talked self through situation (6-4/4-1)

Use of self-talk

1. Tried to get positive (6-4/5-4)  
 3. Told self to think positively (3-6/0-0/?-?)  
 3. Tried to keep positive about score (6-3/3-2/30-30)  
 2. Trying to keep upbeat (4-6/1-0/0-15)  
 2. Feeling more positive (4-6/2-4/40-15)  
 2. Forcing self to keep positive (4-6/1-3)  
 2. Trying to keep positive (4-6/4-5/40-40)  
 4. Kept myself positive (3-6/1-0)  
 4. Had to get back to positive side (3-6/1-2)  
 4. Got positive by thinking it through (3-6/1-2)

Use of positive self-talk

2. Confidence helped me think positively (4-6/1-0/?-?)

Confidence effects on self-talk

2. At last! (4-6/1-0)  
 2. Good shot! (4-6/1-3/30-15)  
 2. Come on! (4-6/2-4/0-15)  
 2. Come on! (4-6/2-4/A-40)  
 2. Good shots! (4-6/3-4)  
 2. Well done ! (4-6/3-4/15-0)

Positive affirmations

1. Told self was all level (6-4/1-1)  
 1. Thought not far away now (6-4/5-4/40-40)  
 3. Didn't think it was over (6-3/5-3/30-40)  
 2. Felt back in game now (4-6/3-4)  
 2. Feel like back in game again (4-6/4-4)  
 4. Told self not end of world (3-6/1-3/0-15)  
 4. Would be back in game if won point (3-6/1-2/30-40)  
 4. Would be back in set if won point (3-6/1-2/30-40)

Reassurance self-talk

1. Told self to continue and would win (6-4/4-1)  
 1. Told self to start doing something (6-4/4-4)  
 1. Told self to keep trying (6-4/5-4/0-15)  
 1. Thought, right this one (6-4/5-4/A-40)  
 1. Thinking, good shot now (6-4/5-4/A-40)  
 3. Told self to knuckle down (6-3/1-1)  
 3. Need to keep going (6-3/2-1)  
 3. Told self to do the right things (6-3/3-2/0-15)  
 2. Needed to get over last set (4-6/0-0/0-0)  
 2. Come on, you're getting there (4-6/1-0)  
 2. Make a difference here (4-6/1-0/0-15)  
 2. Thinking lets get back (4-6/1-3)  
 2. You're doing the right thing (4-6/2-4/40-40)  
 2. I'm never going to give up (4-6/3-4)  
 2. Not going to give it to her (4-6/3-4)  
 2. Come on, this one (4-6/3-4/40-30)  
 2. Need to keep tough (4-6/4-4/0-15)  
 2. Come on now, this time (4-6/4-5/40-30)  
 4. Told self to get on with it (3-6/1-3)

Encouragement self-talk

Raw Data Themes

Higher Order Sub-Themes

1. Told myself off (6-4/4-1/0-40)

Use of negative self-talk

2. Story of my life (4-6/0-0/40-40)  
 2. Oops! (4-6/1-0/0-15)  
 2. Not taking opportunities, come on! (4-6/2-4/40-40)  
 2. All going pear-shaped (4-6/2-4/40-40)  
 2. Come on! (4-6/4-5/15-15)  
 2. Oh, Christ (4-6)

Negative affirmations

1. Told self to get concentration back (6-4/0-1)  
 1. Tried not to let mind wander (6-4/2-1)  
 1. Made myself concentrate (6-4/4-2/15-40)  
 1. Reminded self to concentrate (6-4/5-4/30-40)  
 3. Tried to concentrate (6-3/0-0/40-A)  
 3. Needed to concentrate on specific things (6-3/0-1)  
 3. Told self to concentrate (6-3/0-1/40-0)  
 3. Told self to concentrate (6-3/1-1)  
 3. Tried to really concentrate on point (6-3/1-1/30-30)  
 3. Tried to focus on next game (6-3/3-2)  
 3. Tried to focus on next game (6-3/4-2)  
 3. Told self to concentrate (6-3/5-3)  
 3. Needed to concentrate (6-3/5-3/30-40)  
 3. Tried to keep concentrating (6-3/5-3/A-40)  
 2. Told self to focus (4-6/0-0/0-0)  
 4. Told self to focus on serve (3-6/1-1)

Concentration cognitions

2. Don't use imagery (4-6/0-0/A-40)

Lack of visualisation

2. Didn't use the physical aspects of the

Physical aspects of the physical game

2. Didn't use the physical aspects of the

Optimise non-technical effects

1. Didn't use the physical aspects of the

Positive aspects of the non-technical

2. Didn't use the physical aspects of the  
 2. Didn't use the physical aspects of the

Breaking cognitions

2. Didn't use the physical aspects of the  
 2. Didn't use the physical aspects of the

Perceived changes in break

<ul style="list-style-type: none"> <li>1. Serving hotly now (6-4/2-1)</li> <li>4. Felt no pressure serving (3-6/1-0)</li> <li>4. Wasn't down about my serve (3-6/1-1/?-?)</li> <li>4. Serve best part of game (3-6/1-1/?-?)</li> <li>4. Felt serving going well (3-6/1-3/0-15)</li> <li>4. Hit some good serves (3-6/2-3)</li> <li>4. Happy to hold serve (3-6/2-3)</li> <li>4. Comfortable holding serve (3-6/2-3)</li> <li>4. Felt I served well (3-6/3-4)</li> </ul>	Positive perceptions of serve
<ul style="list-style-type: none"> <li>1. Thought where to serve (6-4/2-1/0-0)</li> <li>1. Focused on keeping serve in (6-4/4-1/0-0)</li> <li>1. Thought about where to serve (6-4/4-1/0-0)</li> <li>2. Thinking about placement of serve (4-6/0-0/A-40)</li> <li>2. Thinking about holding serve (4-6/2-4)</li> <li>4. Wanted to make good serve (3-6/0-0/0-0)</li> <li>4. Thought about first point (6-3/0-0/0-0)</li> <li>4. Thought about serve (3-6/0-0/0-0)</li> <li>4. Told self to keep serve in (3-6/1-1/?-?)</li> <li>4. Thought about getting serve in (3-6/1-3/0-15)</li> <li>4. Thinking about holding serve (3-6/2-4)</li> </ul>	Serve cognitions
<ul style="list-style-type: none"> <li>1. Felt she served well (6-4/0-1)</li> <li>4. She hit two good shots (3-6/3-5/0-30)</li> </ul>	Opponents positive serve
<ul style="list-style-type: none"> <li>4. Wanted to pressure on her serve (3-6/3-4)</li> <li>4. Tried to make her serve out (3-6/3-5)</li> </ul>	Pressure exerted on opponents serve
<ul style="list-style-type: none"> <li>2. Pleased when she missed serve (4-6/2-3/15-0)</li> </ul>	Positive effects from opponents serve
<ul style="list-style-type: none"> <li>1. Felt more nervous when she served (6-4/1-1)</li> <li>1. Tougher to win games on her serve (6-4/1-1)</li> </ul>	Opponent induced cognitive effects
<ul style="list-style-type: none"> <li>1. Happy with her double fault (6-4/1-1/15-0)</li> </ul>	Positive emotions elicited from opponent
<ul style="list-style-type: none"> <li>1. Told self to break serve (6-4/1-1)</li> <li>1. Thinking about breaking again (6-4/3-1)</li> <li>3. Wanted to break her serve (6-4/0-0)</li> <li>3. Wanted to break her serve (6-3/4-2)</li> <li>3. Thinking about next point (6-3/5-3/40-40)</li> <li>2. Thought about breaking (4-6/1-2)</li> </ul>	Breaking cognitions
<ul style="list-style-type: none"> <li>1. Felt had a chance to break (6-4/1-1/40-0)</li> <li>1. Felt had a chance to break (6-4/3-1/40-30)</li> </ul>	Perceived chances to break
<ul style="list-style-type: none"> <li>4. Winning point made me feel great (3-6/3-3/15)</li> </ul>	Positive emotions elicited from point
<ul style="list-style-type: none"> <li>4. Didn't play very good point (3-6/2-3/40-40)</li> </ul>	Negative perceptions of point

Second Set Technical Cognitions Cont.

Figure 3.17 Second Set Technical Cognitions

Raw Data Themes

Higher Order Sub-Themes

- 3. Felt pressure on her returns (6-3/1-1)
- 3. Concentrated on making returns (6-3/1-1)
- 3. Tried to make the return (6-3/5-3/A-40)
- 2. Played a good return (4-6/3-4/40-0)

Returns cognitions

- 4. Wondered why couldn't make forehand (3-6/0-0/?-?)

Forehand cognitions

- 4. Played couple of good forehands (3-6/3-4)

Positive perceptions of forehand

- 2. Played a shocking forehand (4-6/1-0/0-40)
- 2. Good backhand (4-6/3-4/40-0)
- 2. Missed an easy forehand (4-6/3-5/?-?)
- 2. Bad technique on forehand (4-6/4-5/40-A)

Negative perceptions of forehand

- 1. Missing basic backhands (3-6/0-0/?-?)
- 2. Backhand is getting to me (4-6/1-2/0-40)

Negative perceptions of backhand

- 1. Focused on match point (6-4/4-2/40-40)
- 3. Tried to win deuce points (6-3/0-0/40-40)
- 3. Thought about getting point back (6-3/3-2//0-15)
- 3. Thought about winning another point (6-3/3-2/15-15)
- 3. Thinking about getting ad point (6-3/5-3/40-40)
- 3. Thought about letting match points go (6-3/5-3/A-40)
- 3. More focused on third match point (6-3/5-3/A-40)
- 4. Thought had won the point (3-6/0-0/?-?)
- 4. Knew needed next point (3-6/0-0/?-?)
- 4. Thinking about getting into first point (3-6/2-4/0-0)
- 4. Thought about next point (3-6/3-5/0-30)

Point cognitions

- 4. Got positive about next point (3-6/0-0/?-?)

Positive re-focus

- 1. Wasn't thinking how to structure point (6-4/5-4)
- 3. Didn't think too much about point (6-3/4-3/30-15)

Lack of point cognitions

- 1. Easy point (6-4/0-1/40-0)
- 1. Played a better point (6-4/5-4/30-30)
- 3. Felt that point better (6-3/3-2/30-30)
- 4. Played couple of good points (3-6/1-0)
- 4. Played a good point (3-6/1-1/30-30)
- 4. Played couple of good shots (3-6/3-5)

Positive perceptions of point

- 3. Felt good about last few points (6-3/0-1/40-0)
- 3. Really happy with point (6-3/1-1/40-30)
- 2. Winning point made me feel good (4-6/1-3/30-15)

Positive emotions elicited from point

- 4. Didn't play very good point (3-6/2-3/40-40)

Negative perceptions of point

Raw Data Themes

Higher Order Sub-Themes

- 3. Felt shot was sloppy (6-3/2-1/40-30)
- 4. Wasn't pleased about my shots (3-6/1-0/?-?)
- 4. Not happy with shot (3-6/3-4/?-?)

Negative perceptions of shot

- 2. Felt gutted about point (4-6/1-1/0-30)

Negative emotions elicited from point

- 1. She played a good point (6-4/4-3/0-15)
- 2. She played well (4-6/1-1/0-30)
- 2. She played two good points (4-6/1-1/0-40)
- 2. She played a good shot (4-6/2-4/40-40)
- 2. She hit a good shot (4-6/3-4/40-15)

Opponents positive point

- 2. She hit a poor shot (4-6/2-4/A-40)

Opponents negative point

- 2. She gave me the point (4-6/4-5/30-15)

Opponent capitulation

- 1. Didn't think I should have lost game (6-4/0-1)
- 1. Told self to have a good game (6-4/1-1)
- 1. Knew advantage with me if won game (6-4/1-1)
- 1. Thinking about playing solid game (3-6/2-4/0-0)
- 1. Thinking about next game (6-4/5-4)
- 1. Told self to get the game (6-4/5-4)
- 3. Felt could have won game (6-3/0-1)
- 3. Knuckled down for next game (6-3/4-2)
- 3. Thinking about finishing it (6-3/5-3/A-40)
- 2. Winning game made big difference (4-6/1-0)
- 4. Thought about playing a solid game (3-6/1-0)
- 4. Felt should have won game (3-6/0-1)
- 4. Mind was on next game (3-6/3-4)
- 4. Concentrated on next game (3-6/3-4)

Game cognitions

- 3. Felt it was an easy game (6-3/1-1)
- 2. Played some good games (4-6/4-5)

Positive perceptions of game

- 3. Pleased with that game (6-3/1-1)
- 3. Glad game out of the way (6-3/4-3)
- 4. Pleased with that game (3-6/3-4)

Positive emotions elicited from game

- 1. Threw game away (6-4/4-2)
- 1. Felt it was a bad game (6-4/4-3)
- 1. Thought game was a waste (6-4/4-3)
- 1. Didn't play last 3 games well (6-4/4-4)
- 1. Didn't play last game well (6-4/5-4)
- 1. Thought might have played better (6-4/5-4/0-15)
- 3. Game felt sloppy (6-3/3-2)
- 3. Let game go a bit (6-3/3-2)
- 2. Played a crap game! (4-6/1-1)

Negative perceptions of game

<ul style="list-style-type: none"> <li>1. Felt was letting her back into game (6-4/4-3)</li> <li>2. Gave her the game (4-6/4-5)</li> </ul>	Opponents gain
<ul style="list-style-type: none"> <li>1. Playing a lot better (6-4/1-1/30-0)</li> <li>1. Playing good tennis now (6-4/2-1)</li> <li>1. Raised the tempo (6-4/3-1/A-40)</li> <li>3. Felt had raised game (6-3/3-1)</li> <li>2. Doing quite well (4-6/1-4/40-0)</li> <li>2. Level of play gone up (4-6/2-4/30-15)</li> <li>4. Felt game was better (3-6/2-3)</li> </ul>	Increase in level of play
<ul style="list-style-type: none"> <li>1. She was stepping up her game (6-4/0-0/0-30)</li> <li>1. She won because she raised her game (6-4/0-1)</li> <li>1. Thought she was playing better (6-4/3-1/15-30)</li> <li>3. Felt she was upping her game (6-3/3-2)</li> <li>2. She's attacking more (4-6/1-2)</li> <li>2. Her performance is going up (4-6/1-2)</li> <li>2. She's free hitting more (4-6/1-2)</li> </ul>	Opponents increase in level of play
<ul style="list-style-type: none"> <li>2. My game had dropped (4-6/1-2)</li> <li>4. Playing below par (3-6/1-0/40-15)</li> </ul>	Decrease in level of play
<ul style="list-style-type: none"> <li>1. Felt things slipping away from her (6-4/1-1/30-0)</li> <li>1. Didn't think she was in match (6-4/1-1/30-0)</li> <li>1. Didn't think she had a chance (6-4/2-1/15-0)</li> </ul>	Opponents decrease in level of play
<ul style="list-style-type: none"> <li>3. Agitated game not working (6-3/0-0/40-A)</li> </ul>	Negative perceptions of game plan
<ul style="list-style-type: none"> <li>1. She made me think a bit (6-4/3-1/15-30)</li> <li>4. Thought tactically (3-6/0-0/0-0)</li> <li>4. Focused technically (3-6/0-1)</li> </ul>	Tactical and technical focus
<ul style="list-style-type: none"> <li>1. Little time to think (3-6/0-0/0-0)</li> <li>1. Didn't think about tactics (6-4/2-1)</li> <li>1. Didn't need to think technically now (6-4/5-4)</li> <li>4. Didn't think technically (3-6/0-0/0-0)</li> </ul>	Lack of tactical and technical focus
<ul style="list-style-type: none"> <li>3. Used the right tactic (6-4/1-1/0-15)</li> <li>4. Played how I wanted to play (3-6/3-4)</li> </ul>	Correct use of tactics
<ul style="list-style-type: none"> <li>3. Didn't want to ease off (6-3/5-3/40-40)</li> <li>4. Wanted to make her win points (3-6/0-0/0-0)</li> <li>4. Felt it her turn to work hard (3-6/1-0)</li> </ul>	Desire for opponent to work hard
<ul style="list-style-type: none"> <li>2. Wasn't thinking about her (4-6/4-5/30-30)</li> <li>4. Don't care what she's thinking (3-6/0-0)</li> <li>4. Don't care what she's doing (3-6/0-0)</li> </ul>	Lack of opponent concern

- 1. Lucky to win game (6-4/5-4)
- 3. Lucky winning point (6-3/2-1/40-15)
- 2. Lucky to win point (4-6/1-3/15-15)
- 2. That was lucky! (4-6/2-4/30-15)
- 2. Lucky with that point (4-6/4-4/15-15)

Perceived luck

- 3. Didn't feel in control of game (6-3/4-2/0-40)
- 3. Didn't feel I could do much (6-3/4-3)

Lack of match control

- 1. Wasn't playing the right shots (6-4/4-3)
- 4. It was the wrong shot (3-6/3-4/?-?)

Error recognition

- 1. Unforced error gave her point (3-6/1-0/?-?)
- 1. Bad errors coming in (6-4/4-1/0-40)
- 3. Coming out with silly errors (6-3/0-0/40-A)
- 4. Felt errors all over the place (3-6/0-0/?-?)
- 4. Unforced errors major problem (3-6/1-0/?-?)
- 4. Making unforced errors (3-6/1-3)

Errors

- 2. She's making more mistakes now (4-6/2-4/40-15)
- 4. Forced some errors (3-6/2-3)

Opponents errors

- 2. Her mistakes made me feel good (4-6/2-4/40-15)

Positive effect induced by opponents errors

- 1. Relaxed game when she raised hers (6-4/0-0/40-40)
- 1. Didn't play well at all (6-4/4-3)
- 1. Not working hard enough mentally (6-4/4-3)
- 2. Needed to play better (4-6/1-4)
- 2. Technique not very good (4-6/4-4/40-40)
- 4. Missing my best shots (3-6/0-0/?-?)
- 4. Just couldn't hit a good shot (3-6/1-0/?-?)
- 4. Wasn't making her play balls (3-6/1-0/?-?)
- 4. Double faulted on point (3-6/1-1/30-40)
- 4. Should have made clean shot (3-6/1-2/?-?)
- 4. Wasn't using her missed serves (3-6/2-3/15-0)
- 4. Didn't have spin on racket (3-6/3-4/?-?)
- 4. Missed taking initiative (3-6/3-4/?-?)
- 4. Should have made the ball (3-6/3-5/?-?)

Tactical and technical errors

- 3. Felt rushed (6-3/1-1/0-15)

Rushing play

- 1. Analysed score at end of games (6-4/2-1/30-0)
- 4. Thought slightly about last game (3-6/1-0)

Past performance cognitions

Lack of concentration

<ul style="list-style-type: none"> <li>1. Tried to block out winning match (6-4/4-1)</li> <li>1. Didn't think about winning match (6-4/5-4/A-40)</li> <li>3. Didn't think much after serve (6-3/3-1/15-40)</li> <li>3. Tried to forget last game (6-3/3-2)</li> <li>3. Didn't think about game (6-3/3-2)</li> <li>3. Didn't think very much about game (6-3/4-2/0-40)</li> <li>2. Needed to block out last set (4-6/0-0/0-0)</li> <li>2. Forgotten frustrations of last game (4-6/1-0/0-15)</li> <li>2. Easy to block out past now (4-6/1-0/?-?)</li> <li>2. Didn't think back to previous game (4-6/2-4/0-15)</li> <li>4. Anger didn't stay into next serve (3-6/3-5/?-?)</li> <li>4. Thought about staying in present (3-6/1-3)</li> </ul>	<p>Present performance cognitions</p>
<ul style="list-style-type: none"> <li>1. Jumped too far ahead about winning (6-4/4-1)</li> <li>3. Felt break enough to finish match (6-3/3-2)</li> <li>3. Felt game was mine (6-3/3-2/A-40)</li> </ul>	<p>Future performance cognitions</p>
<ul style="list-style-type: none"> <li>1. Aware concentration could be lost (6-4/2-1)</li> </ul>	<p>Concentration cognitions</p>
<ul style="list-style-type: none"> <li>1. Felt I was focusing well (6-4/3-1/40-30)</li> <li>3. Pleased with concentration level (6-3/1-1)</li> <li>3. Concentration definitely higher (6-3/3-1)</li> <li>3. Concentration higher than before (6-3/5-3/30-0)</li> </ul>	<p>Positive concentration levels</p>
<ul style="list-style-type: none"> <li>1. Maintaining concentration (6-4/0-1/15-0)</li> <li>1. Felt focused in last few games (6-4/3-1)</li> <li>3. Only one point where focus lost (6-4/0-0/0-40)</li> <li>3. Managing to keep concentration (6-3/1-1/15-15)</li> <li>3. Still concentrating (6-3/3-1)</li> </ul>	<p>Maintenance of concentration levels</p>
<ul style="list-style-type: none"> <li>1. Re-focused quite quickly (6-4/4-2)</li> <li>3. Got concentration back (6-3/0-1/40-0)</li> </ul>	<p>Increase in concentration levels</p>
<ul style="list-style-type: none"> <li>1. Focus went in and out (6-4/4-1)</li> <li>1. Concentration started to waver (6-4/5-4/15-30)</li> <li>3. Concentration was wavering (6-3/0-0/40-A)</li> <li>3. Tried not to lose concentration (6-3/1-1)</li> <li>3. Concentration dipped when returning (6-3/1-1)</li> <li>3. Didn't concentrate on ad point (6-3/5-3/A-40)</li> </ul>	<p>Fluctuation in confidence levels</p>
<ul style="list-style-type: none"> <li>1. Wasn't concentrating (6-4/0-0/0-30)</li> <li>1. Concentration lost again (6-4/0-1)</li> <li>1. Definitely lost concentration (6-4/4-1/0-15)</li> <li>1. Not focusing well (6-4/4-1/0-15)</li> <li>1. Needed to start concentrating (6-4/4-3/0-40)</li> <li>3. Not focusing on what to do (6-3/0-0/40-40)</li> <li>3. Not giving enough attention (6-3/0-0/40-40)</li> <li>3. Not concentrating (6-3/0-0/40-A)</li> <li>3. Concentration wasn't there (6-3/0-1)</li> <li>3. Didn't concentrate enough (6-3/0-1)</li> <li>3. Didn't concentrate enough (6-3/3-</li> </ul>	<p>Lack of concentration</p>

Raw Data Themes

Higher Order Sub-Themes

1. Fault caused by lack of concentration (6-4/0-0/40-40)  
 1. She won because of my poor concentration (6-4/0-1)

Negative effects from concentration

1. Switched off at change of ends (6-4/2-1)  
 1. Wasn't thinking about tennis (6-4/2-1)  
 1. Wondering if I'd switched off (6-4/3-1/15-30)  
 3. Didn't think too much (6-3/3-2/0-15)

Lack of match focus

3. She wasn't concentrating (6-3/1-1/40-30)

Opponents lack of concentration

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Frustration with play

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Frustration with play

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Frustration with play

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Frustration with self

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Frustration with play

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Depressed with self

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Opponents perceived depression

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Disappointment with self

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Disappointment with play

1. Frustrated with opponent's play (6-3/1-1/15-30)  
 1. Frustrated with opponent's play (6-3/1-1/15-30)

Embarrassed with play

Raw Data Themes

Higher Order Sub-Themes

4. Pretty pleased with self (3-6/3-4)	Positive emotional response
2. Felt relieved to win game (4-6/1-0) 4. Relieved had won game (3-6/1-0)	Relief with play
4. Getting angry with self (3-6/1-2) 4. Pretty angry with self (3-6/3-5/?-?)	Anger with self
1. Felt annoyed (6-4/0-0/0-30) 1. Felt annoyed (6-4/4-3) 1. Felt a bit annoyed (6-4/4-3/0-15) 3. Felt annoyed with self (6-3/0-0/40-A) 3. Getting annoyed with self (6-3/0-0/40-A) 2. Feel bit pissed off (4-6/1-3) 2. Pissed off (4-6/4-5) 2. Pissed off right now (4-6/4-5/15-40) 4. Got pretty annoyed (3-6/3-5)	Annoyance with self
1. Annoyed threw game away (6-4/4-2) 3. Annoyed not playing well (6-3/0-1) 3. Annoyed game slipping away (6-3/4-2/0-40) 2. Annoyed with losing point (4-6/4-4/0-15) 4. Angry with unforced errors (3-6/1-3)	Annoyance with play
4. Felt she would be annoyed if she lost (3-6/1-3)	Opponents perceived annoyance
1. Felt frustrated (6-4/4-4/?-?) 2. Frustrated with myself (4-6/4-5/15-15) 4. Felt pretty frustrated (3-6/3-5/0-30)	Frustration with self
3. Frustrated not in point (3-6/4-2/0-40) 4. Frustrated with unforced errors (3-6/1-3)	Frustration with play
4. Got down on self (3-6/0-0/?-?) 4. Started to get depressed (3-6/1-2)	Depressed with self
3. Aware she was feeling down (6-3/5-3)	Opponents perceived depression
2. Pretty disappointed (4-6/4-5) 4. Disappointed with self (3-6/1-2)	Disappointment with self
4. Disappointed not upping game (3-6/1-0/40-15)	Disappointment with play
2. Felt embarrassed about shot (4-6/1-0/0-40)	Embarrassed with play

Raw Data Themes	Higher Order Sub-Themes
1. Felt momentum with me (6-4/1-1) 3. Momentum slightly with me (6-3/2-1)	Momentum with self
1. Needed to keep momentum (6-4/4-2/15-40)	Momentum cognitions
1. I lost the momentum (6-4/4-3/0-40)	Loss of momentum
1. Momentum maybe with opponent (6-4/0-1) 1. Things swung back to her (6-4/4-3/0-40)	Momentum with opponent
3. No momentum at all with her (6-3/2-1)	Lack of momentum with opponent
2. Big change in momentum (4-6/1-4)	Shifts in momentum
1. Felt she sensed change in momentum (6-4/4-2/15-40)	Opponents perceived sense of momentum
4. Both aware of game's importance (3-6/0-0)	Perceived share of thoughts
1. 4-1 in second set was a bit change in momentum 2. Next game is massive (4-6/0-0) 2. 4-2 first set and losing it 2. 4-4 with two bad calls 2. From 4-1 to 4-4 in second set 4. Felt next game was vital (3-6/3-4)	Key momentum moments
3. Not really any key points that turned the match 3. No key games turned the match	Lack of key momentum shifts
3. Didn't play as well as I wanted to	Lack of disappointment with play
4. Didn't play as well as I wanted to 4. Pretty annoyed with my game 4. Disappointed I didn't pick up my tennis 4. Disappointed I didn't play enough balls 3. Disappointed I didn't raise my standard	Disappointment with play
1. Concentration level disappointed me 1. Concentration in the second was poor	Disappointment with concentration
2. Couldn't dictate when I wanted to do 2. Didn't feel in control of match 2. Gave away winning situations	Disappointment with lack of perceived control

- 1. Thank God it was over!
- 1. It felt like a release
- 1. Could relax a bit more
- 1. First match out of the way
- 1. Didn't need to think about it any more
- 3. Pleased it was over
- 3. Just pleased it was over

Relief with play

- 1. Didn't enjoy the match
- 1. Found the match quite daunting
- 2. Felt pissed off
- 2. Frustrated at giving it to her
- 4. Really annoyed with myself
- 4. Felt angry
- 4. Felt upset
- 4. Felt pretty down
- 4. Really annoyed with myself
- 4. Not the way I wanted to lose the match

Negative emotional response

- 1. It was enough to see me through
- 1. Game plan worked
- 1. Working on game was paying off
- 1. Still knew I could play better
- 1. Really pleased I'd won yet not played well
- 3. Pleased reaching the quarters
- 3. Pleased it was better than last match
- 3. Pleased concentration was better
- 3. Happy concentration was improving
- 3. Felt good with my play
- 3. Happy I had raised my game from first match
- 3. Second set was good as I kept concentration
- 3. Felt good to stay with her in second set
- 4. Felt my serve had improved
- 4. Thought my slice backhand was better
- 4. Thought I played worse than I actually did

Positive perceptions of match

- 1. No huge things disappointed me

Lack of disappointment with play

- 1. Didn't play as well as I wanted to
- 4. Pretty annoyed with my game
- 4. Disappointed I didn't pick up my tennis
- 4. Disappointed I didn't play enough balls
- 4. Disappointed I didn't raise my standard

Disappointment with play

- 1. Concentration level disappointed me
- 1. Concentration in second set was poor

Disappointment with concentration

- 2. Couldn't dictate what I wanted to do
- 2. Didn't feel in control of match
- 2. Gave away winning situations

Disappointment with lack of perceived control

Raw Data Themes

Higher Order Sub-Themes

<p>4. Disappointed I didn't make her play well 4. Disappointed she wasn't made to win match point</p>	<p>Disappointment with play</p>
<p>1. Rated performance as 5/10 1. Rated match as very average 3. Rated performance as 7/10 3. Match was about average 2. Very average, about a 5 4. Rated performance as 4/10 4. Performance was below average</p>	<p>Rating of match</p>
<p>4. Couldn't pinpoint why I lost 4. Don't know why I played like that 4. There wasn't a specific reason 4. Don't know why I played like that</p>	<p>Lack of attributions</p>
<p>1. Training didn't affect winning match</p>	<p>Training effects</p>
<p>2. Just rustiness really 2. Wasn't able to practice properly 2. Lack of practice before hand</p>	<p>Lack of training</p>
<p>2. Injury didn't affect result 4. Knee injury wasn't a factor</p>	<p>Lack of injury effects</p>
<p>1. Won because I was the better player 1. Technically better than her 1. Tactically more better than her 1. Had more to hurt her with 3. Knew I was the better player 3. Just knew I could play better 3. Felt I won it and she lost it 3. Knew I had a game plan</p>	<p>Positive tactical and technical effects</p>
<p>1. Mentally better than her 4. I wasn't bad mentally 4. Felt I was good mentally</p>	<p>Positive mental state</p>
<p>1. Maybe more confident than she was 3. Didn't have any doubts about losing</p>	<p>High confidence levels</p>
<p>2. Lack of match play 4. Hadn't been playing great recently 4. Wasn't on a hot streak</p>	<p>Lack of match play</p>
<p>4. Nothing especially worked 4. There was nothing I could do</p>	<p>Lack of perceived control</p>

Post Match Cont.

Raw Data Themes

Higher Order Sub-Themes

- 2. Made lots of unforced errors
- 2. Made blatant mistakes
- 2. Had chances but wasted them
- 2. Didn't play well on important points

Technical and tactical failure

- 2. Felt I lost, not that she won
- 2. Kind of gave it to her
- 2. Gave her the important points

Self-induced loss

- 4. Positive mental attitude didn't help

Negative mental state effects\*

- 4. It was just one of those days
- 4. Maybe it wasn't my day

Off day

- 3. She didn't play crucial points well
- 2. She didn't put me under pressure

Opponents poor play

- 2. She played well at times

Opponents good play

- 2. It plays a big part in tennis
- 4. I think momentum exists
- 4. Did a lot of work on it with last coach
- 4. Momentum definitely exists on big points

Existence of momentum

- 3. I'm playing better at that stage
- 3. Everything is on your side
- 3. One in the winning position
- 3. To do with playing well
- 3. Playing how I want to play
- 3. Opponent is weaker than you

Positive effects on play

- 2. Winning first point in game is important
- 2. It's all to do with winning the important points

Importance of key points

- 1. Confidence can be the key to change things
- 1. Confidence with winning a big point gives momentum
- 3. To do with confidence
- 4. Self-belief on one point can give energy

Link to confidence

- 4. Confidence isn't necessarily the key

Lack of confidence effects

- 3. I feel more confident
- 3. I've got more guts
- 3. I'm braver

Increase in confidence levels

- 3. I haven't got as many worries
- 3. Not thinking too much

Decrease in cognitions

- 3. It raises my performance
- 3. Game is a lot freer and easier
- 3. The shots usually come off
- 3. I'll try more risky shots with momentum
- 3. I'll take the ball out of the air
- 3. I'm not going to lose the point
- 3. I'm not going to lose the game

Improvement in play

- 1. Couple of points can change momentum
- 3. Momentum can change in a couple of points
- 4. Match point can change momentum
- 4. Occasionally one point can change momentum
- 4. Even leading, momentum can change

Shift in momentum

- 3. Momentum can change quickly
- 3. Momentum can snowball

Fast temporal pacing of momentum

- 4. Momentum changes gradually

Slow temporal pacing on momentum

**Momentum**

Raw Data Themes

Higher Order Sub-Themes

2. Can't really control momentum switches	Lack of control
4. Don't know if momentum is down to me or not	Confusion with perceived control
3. My play can influence momentum changes 3. I can pull momentum back 3. Momentum is affected by how I play 3. If I play well, momentum comes to me 2. Momentum is down to me	Perceived control of momentum
4. If stay positive, can keep momentum forever	Maintenance of momentum
4. Momentum doesn't happen much if I'm not ahead	Lack of momentum
3. If I lose concentration momentum goes to her 3. If I make errors momentum goes to her	Loss of momentum to opponent
2. Opponent losing gives me back momentum	Opponents influence over momentum
4. Momentum is with her is she's on a good streak 4. Momentum is with her if she hits a lot of winners	Opponents momentum causes
3. Performance gets a little bit worse 3. Errors start to creep in	Negative momentum effects on play
3. I panic things are running away	Negative effects from negative momentum
3. I play safer when momentum's with her	Positive effects from opponents momentum

## **MENS CONTENT ANALYSIS**

5. Played the week before  
 7. Played tournament week before  
 6. Played tournament in Far East  
 8. Played in a tournament in last week

Previous match play

7. Won last tournament  
 6. Won qualies

Last tournament outcome

7. Feeling pretty confident from win  
 6. Qualies helped confidence

Match play induced confidence

6. Hadn't been playing that well

Negative perceptions of play

5. Training going very well  
 5. Playing okay  
 7. Practice went pretty well  
 7. It was a good week  
 7. Everything was going well  
 6. Training went okay

Positive perceptions of training

5. Worked on fitness  
 7. Got a lot of things done  
 6. Got used to playing again  
 6. Tried to get my game back

Appraisal of training

5. No major problems  
 7. Didn't have any injuries

Lack of injury concerns

6. Recovering from an injury

Injury concerns

7. Coach increased my confidence

Positive coach influence

6. Wasn't confident in my game  
 6. Hard to be positive

Lack of confidence

5. Didn't have any problems  
 7. Had no injuries or setbacks  
 8. Felt a bit strong  
 8. Had a feeling in my stomach

Detritative somatic anxiety

8. Wake up feeling good  
 8. Felt quite relaxed

Lack of somatic anxiety

5. Positive somatic anxiety

Facilitative somatic anxiety

5. It was a very important match  
 7. It was an important match  
 8. Match more important than first round  
 8. Felt it was a very important match

High match importance

6. Wasn't an unusually important match

Low match importance

8. Knew it was tougher than first round

Match comparisons

5. Pressure from the LTA to do well  
 5. Press and coverage added pressure  
 8. Second round added pressure on me  
 8. Felt I was in the limelight  
 8. Needed to show how far I could go

Perceived external pressures

7. Pressure came from myself

Perceived internal pressures

6. Coach didn't add any pressure to win  
 6. No pressure for me to win

Lack of outcome pressures

7. Didn't feel a lot of pressure  
 6. Didn't put pressure on myself  
 6. Didn't feel any pressure to do well  
 6. Helped being the underdog

Lack of perceived pressures

8. Pressure wasn't making me uptight

Lack of pressure effects/symptoms

6. He had more pressure on him

Perceived pressure on opponent

5. Concerned about jet lag effects  
 7. Concerned wouldn't play as well  
 8. Didn't know what to expect

Debilitative cognitive anxiety

6. Wasn't particularly nervous

Lack of cognitive anxiety

5. Tiny bit of butterflies  
 7. Had butterflies in stomach  
 8. Felt a bit tingly  
 8. Had a feeling in my stomach

Debilitative somatic anxiety

8. Woke up feeling good  
 8. Felt quite relaxed

Lack of somatic anxiety

5. Needed butterflies

Facilitative somatic anxiety

Morning of Match

5. Confidence pretty high  
 5. Wasn't over confident  
 7. Confident I'd play well  
 7. Confident I could beat him  
 8. Felt confident I could beat him  
 8. Thought I'd be alright

High confidence levels

5. Room-mate increase confidence  
 8. Gained confidence from last match

External influences on confidence

5. Looking forward to match  
 7. Excited about playing  
 6. Looking forward to match  
 6. Felt fine  
 6. Didn't have anything to lose  
 6. Felt it was a good opportunity  
 8. Looking forward to the match  
 8. Was enjoying myself  
 8. Saw match as great opportunity

Positive cognitions

7. Concentrated on holding serve  
 8. Match would be very tough

Match cognitions

8. Thinking about reaching quarters  
 8. Thinking what if I beat him?  
 8. Thought about what if's

Future performance cognitions

5. Knew he was an all court player  
 8. Knew he'd been playing well

Opponent cognitions

8. Told myself I could win match  
 8. Told myself game plan would be effective  
 8. Told myself I'd be okay

Positive self-talk

8. Needed to deal with the pressure  
 8. Tried to go with the pressure  
 8. Used the pressure in a positive way

Dealing with pressure

8. To win second round match

Eye goals

7. Thought about his game  
 7. Knew he was playing well  
 6. Thought about my game  
 6. Thought about what to do

Game cognitions

Raw Data Themes

Higher Order Sub-Themes

<p>7. No negative thoughts 6. Didn't worry about anything</p>	<p>Lack of cognitive anxiety</p>
<p>6. Nerves gave me energy</p>	<p>Positive use of cognitive anxiety</p>
<p>7. Had some butterflies 6. Had butterflies</p>	<p>Debilitative somatic anxiety</p>
<p>7. Felt pumped up 6. Liked the butterflies</p>	<p>Facilitative somatic anxiety</p>
<p>8. Came in very relaxed</p>	<p>Timing of somatic anxiety</p>
<p>7. Confidence was high 6. Confidence was average</p>	<p>Positive confidence levels</p>
<p>7. Knew I had a good chance 7. Had a chance of winning</p>	<p>Confidence in winning match</p>
<p>5. To play the way I wanted to 5. To create chances 5. To put him under pressure 7. Wanted to play normal game 7. Wanted to stick with him 7. Not to worry about him 7. Wanted to play well 6. Try and get my game back 6. Wanted to move forward 6. To improve my forehand 6. Try to keep positive 6. Be aggressive 8. Focus on game plan 8. Not to rush 8. To serve and volley less 8. Serve to his forehand 8. Finish point at net 8. See how far I could go in</p>	<p>Task goals</p>
<p>8. To win second round match</p>	<p>Ego goals</p>
<p>7. Thought about his game 7. Knew he was playing well 6. Thought about my game 6. Thought about what to do</p>	<p>Game cognitions</p>

5. Had a smile on my face  
5. Pretty happy going in  
5. Felt excited  
5. Couldn't wait to play  
6. Nice feeling  
6. Excited to play  
6. Wanted to play now

Positive cognitions

7. Coach was motivating  
5. Coach gave me confidence boost  
5. Coach gave me a pep talk  
6. Got coaches opinions on match

Positive coach influence

5. Told myself to take it easy and relax  
8. Relaxed with friends

Relaxation strategies

8. Took mind off match chatting to friends  
8. Others kept me distracted

Blocking out strategies



8. More nervous than last match

Cognitive anxiety comparisons

5. Thoughts were all positive  
 5. Wasn't worried  
 7. Felt okay  
 7. Didn't worry about anything  
 8. Wasn't thinking about nerves

Lack of cognitive anxiety

5. Bit more relaxed  
 5. Getting more relaxed  
 8. Butterflies had almost gone

Reduction of somatic anxiety

7. Feeling relaxed  
 7. No real butterflies  
 6. Butterflies had gone  
 6. I'm pretty relaxed  
 6. Felt lively  
 6. Didn't feel too stiff  
 8. Felt very relaxed  
 8. Arms felt nice and loose

Lack of somatic anxiety

7. Tried to get my feet moving  
 6. Focused on getting loose  
 8. Tried to get my arms loose

Relaxation methods

5. Felt pretty confident  
 8. Confidence went up quite a bit

Confidence levels

6. Confident I had a chance to win  
 6. Didn't think I'd get killed  
 8. Felt I could beat him

Confidence in match ability

7. Made sure I hit the ball cleanly  
 7. Went through the motions  
 6. Focused on timing the ball  
 6. Concentrated on hitting the ball  
 6. Trying to get all my strokes  
 8. Thought about technical things  
 8. Told myself to swing arms  
 8. Told myself to keep low  
 8. Told myself to keep out in front

Technical cognitions

5. Didn't miss a ball  
 5. Felt I was moving well  
 5. Was just mucking around  
 7. Shots going okay  
 6. Serving okay  
 6. Went automatic  
 8. Things went well  
 8. Hitting the ball well

Positive perceptions of play

7. Missed a lot of balls  
 7. Didn't warm-up that well

Negative perceptions of play

5. He didn't warm-up well  
 6. Looked at opponent a bit

Perceptions of opponent

7. Didn't look for any weaknesses  
 7. Concentrated on myself

Self focus

7. Enjoyed being centre stage  
 7. Enjoyed the crowd being there

Positive effects from external sources

6. Looking forward to the match  
 6. More excited then normal

Positive emotions

5. Didn't think about tennis now  
 5. Telling myself not to get too tight  
 7. Not really thinking about the match  
 7. Not thinking of anything  
 6. Didn't think that much

Coping strategies

8. Thinking about the future

Future performance cognitions

5. Felt physically ready for the match  
 7. Felt mentally ready for the match  
 6. Up for the match

Perceived readiness

5. Pressure in hold serve (1-7/1-2/1-2)  
 7. Pressure in hold (1-7/1-2/1-2)  
 6. Felt pressure on serve (4-6/3-4/6-6)  
 8. Under pressure in 1st few serves (5-7/2-0/11-13)  
 6. Felt pressure on 1st serve (5-7/3-1/6-11)  
 6. Felt pressure on 2nd serve (5-2/3-1/6-11)  
 8. Felt pressure to hold game (1-7/1-1/1-0)  
 8. Pressure to hold serve long (1-7/1-1/1-0)

Pressure with play

8. Past games get pressure on me (1-7/3-3/10-10)

Pressure from previous games

<p>7. Bit worried now (7-5/0-1/15-40)                      7. Felt a bit nervous (7-5/0-2)                      7. Bit anxious (7-5/0-2)                      7. Felt a bit of anxiety (7-5/1-3/40-30)                      7. Little bit worried (7-5/3-4/15-40)                      6. I was worrying (4-6/0-1/15-40)                      8. Felt negative (5-7/3-1/0-30)</p>	<p>Debilitative cognitive anxiety</p>
<p>7. Major concern was first serves (7-5/0-3/40-40)                      7. Serve's a concern (7-5/3-4/15-30)                      6. Worried might lose serve (4-6/0-1/15-40)                      8. Thinking negative about serve (5-7/0-0/30-30)                      8. Getting serves in at back of mind (5-7/2-0/0-15)                      8. Worried might get broken (5-7/3-0)                      8. Worried about second serve (5-7/3-0)                      8. Concerned might miss first serves (5-7/3-0)                      8. Serve was on back of my mind (5-7/4-3)                      8. Serve at back of mind (5-7/4-3)</p>	<p>Negative serve cognitions</p>
<p>5. Wasn't worried at all (6-4/1-0/40-30)                      5. Not worried at all (6-4/4-3)                      5. Not worried (6-4/5-4)                      7. Didn't feel too worried (7-5/0-0/0-0)                      7. Not much nerves (7-5/0-1)                      7. Got nothing to worry about (7-5/5-5)                      7. Not worrying about anything (7-5/6-5/?-?)                      7. Settled down completely (7-5)</p>	<p>Lack of cognitive anxiety</p>
<p>6. Didn't worry too much (4-6/0-0/0-0)</p>	<p>Reduction in cognitive anxiety</p>
<p>7. Not too worried about serve (7-5/3-4/15-30)                      8. Nothing to worry about first serve (5-7/3-0)</p>	<p>Lack of negative serve cognitions</p>
<p>7. Feeling a bit of pressure (7-5/1-3/40-30)                      6. Felt a little bit of pressure (4-6/3-4/A-40)                      6. Feeling more pressure (4-6/4-5/0-0)                      6. Feeling under pressure (4-6/4-5/30-40)</p>	<p>Perceptions of pressure</p>
<p>7. Pressure to hold serve (7-5/0-3/0-0)                      7. Pressure to hold (7-5/4-5/0-0)                      6. Felt pressure on serve (4-6/3-4/0-0)                      8. Under pressure to hit first serves (5-7/2-0/40-15)                      8. Felt pressure on this game (5-7/3-1/0-15)                      8. Felt pressure on first serve (5-7/3-1/0-15)                      8. Felt pressure to hold game (5-7/4-4/0-0)                      8. Pressure to hold serve here (5-7/5-5/0-0)</p>	<p>Pressures with play</p>
<p>8. Past games put pressure on me (5-7/3-3/30-40)</p>	<p>Pressure from previous games</p>

Raw Data Themes

Higher Order Sub-Themes

8. Most of the pressure had gone now (5-7/5-6/0-30)

Reduction of pressure

6. Didn't think collapsed under pressure (4-6)

Neutral effects of pressure

5. Putting him under pressure (6-4/1-1/0-0)  
 5. Put him under pressure (6-4/4-4)  
 6. I put him under pressure there (4-6/1-1/?-?)  
 6. Just want to make him play (4-6/2-2/30-0)  
 6. Keep putting him under pressure (4-6/2-2/30-30)  
 6. Putting more pressure on him (4-6/2-2/A-40)  
 6. Kept the pressure on him (4-6/2-3/0-0)  
 6. Made it tough for him (4-6/4-5)

Pressure exerted on opponent

5. Want to have a go at him (6-4/2-1)  
 6. Want to put him under pressure (4-6/2-2/0-0)  
 6. Tried to make him uncomfortable (4-6/2-3)  
 6. Should be putting him under pressure (4-6/4-5/30-40)  
 8. Needed to put pressure on in first game (5-7/1-0)  
 8. Wanted to use next game to put pressure on him (5-7/3-2)  
 8. If get point pressure's on him (5-7/5-4/30-40)

Cognitions on pressure on opponent

8. Didn't put the pressure on him (5-7/1-0)

Lack of pressure exerted on opponent

5. Pressure was on him (6-4/5-4)

Perceived pressure on opponent

5. Thought he was nervous (6-4/1-0)  
 7. He's a bit shaken up (7-5/3-3)  
 5. He's stressing now (6-4/4-3/40-40)  
 5. It's getting to him (6-4/5-4)  
 8. Thought he was a bit nervous (5-7/1-0/?-?)

Perceived opponents cognitive anxiety

8. He was worried about missing serves (5-7/3-0/15-15)

Opponents perceived concerns

7. Didn't think he was worried (7-5/0-0/15-0)  
 7. Don't think he was nervous (7-5/3-3)

Opponents perceived lack of anxiety

8. Had to get loose for serve (5-7/2-0)

Need for relaxation

3. Got stressed now (4-6/30-1)

Positive physical symptoms

5. He was sweating up (6-4/4-4)  
 5. He was a bit shaky (6-4/3-4)  
 6. He's probably a bit shaky (4-6/2-2/30-30)

Opponents perceived somatic anxiety

<p>5. Was a little tense (6-4/4-3)</p> <p>7. Wasn't as relaxed as I wanted to be (7-5/1-3)</p> <p>6. Heart was racing (4-6/0-0/0-0)</p> <p>6. Got butterflies (4-6/0-0/0-0)</p> <p>6. Felt heart going (4-6/0-1/0-0)</p> <p>6. Had a little bit of butterflies (4-6/0-1/0-0)</p> <p>6. Felt a bit more tense (4-6/4-4/0-15)</p> <p>8. Was very tense (5-7/0-0/30-30)</p> <p>8. Still not totally relaxed yet (5-7/2-0)</p> <p>8. Tensed up slightly (5-7/3-1/0-15)</p> <p>8. Started to tighten up a bit (5-7/3-2)</p>	Debilitative somatic anxiety
<p>5. Butterflies on first point (6-4/0-0/0-0)</p> <p>7. Had butterflies before first point (7-5/0-0/0-0)</p> <p>6. Tensed up after double fault (4-6/0-1/15-15)</p> <p>6. Tense after double fault (4-6/ 0-1/15-30)</p>	Timing of somatic anxiety
<p>5. Wasn't comfortable (6-4/2-2/40-40)</p> <p>6. Arm felt tense (4-6/0-1/15-15)</p> <p>6. Got tense in arm (4-6/4-5/30-40)</p> <p>8. My body wasn't moving that well (5-7/1-0)</p> <p>8. Arms not swinging as is should (5-7/3-1/0-15)</p> <p>8. Arm tensed up (5-7/3-1/0-30)</p>	Negative physical symptoms
<p>6. Tenseness affected game (6-4)</p>	Somatic anxiety effects on play
<p>5. Butterflies had gone (6-4/1-0)</p> <p>7. Relaxed a bit (7-5/2-3)</p> <p>7. Settled down a bit (7-5/2-3)</p> <p>7. Relaxed at change of ends (7-5/3-4)</p> <p>6. Heart had slowed down (4-6/0-0/0-30)</p> <p>6. Just relaxed now (4-6/0-1/15-0)</p> <p>6. Butterflies gone now (4-6/1-1)</p> <p>8. Felt more relaxed now (5-7/2-0)</p> <p>8. Felt a bit looser now (5-7/2-0)</p> <p>8. Arm felt more relaxed (5-7/3-0)</p> <p>8. Was relaxed here (5-7/3-0/40-30)</p>	Lack of somatic anxiety
<p>6. Ace got rid of tension (4-6/0-1/40-40)</p>	Serve induced decrease in somatic anxiety
<p>8. Had to get loose for serve (5-7/2-0)</p>	Need for relaxation
<p>5. Felt energised (6-4/4-3/0-0)</p>	Positive physical symptoms
<p>5. He was tensing up (6-4/5-4/40-30)</p> <p>5. He got a bit tight (6-4/5-4/?-?)</p> <p>6. He's probably a bit tense (4-6/2-2/30-30)</p>	Opponents perceived somatic anxiety

5. Over confident on his serve (6-4/2-1/0-0)  
5. Was overconfident (6-4/2-2/0-15)

Over confidence

5. Confidence was unbelievable (6-4/1-0/40-15)  
5. Confidence very high (6-4/2-1)  
7. Confidence is high (7-5/4-5/40-0)  
7. Confidence is high (7-5)

High levels of confidence

5. Still pretty confident (6-4/4-3)  
5. Still confident (6-4/4-4)  
5. Confidence still fine (6-4/5-4)  
7. Feeling confident now (7-5/0-1)  
7. Got a bit of confidence now (7-5/1-3)  
7. Confidence is fine now (7-5/3-3)  
7. Feel really confident (7-5/6-5/?-?)  
7. Just feel confident (7-5)  
6. Would be confident now (4-6/2-2)  
6. Certainly feel more confident now (4-6/2-3)  
8. Confidence was there (5-7/3-0)

Confidence levels

5. Confidence leveled off (6-4/2-2/30-30)  
5. Confidence pretty even throughout (6-4)  
8. Confidence didn't change (5-7/3-1)

Maintenance of confidence levels

5. Confidence got higher (6-4/1-0)  
5. Confidence gone up (6-4/1-0/40-15)  
5. Confidence went up (6-4/5-4/15-0)  
7. Got a confidence boost (7-5/6-5)  
6. Confidence gone up (4-6/2-2/30-0)  
8. Confidence increased (5-7/4-4/15-0)

Increase in confidence levels

8. Still not confident (5-7/3-3/15-15)

Low levels of confidence

8. Felt confident in breaking him (5-7/5-4)

Confidence in breaking

5. Knew I could get back (6-4/1-0/40-40)  
8. Could come back into this (5-7/3-1/0-15)  
8. Thought had a chance in game (5-7/3-1/30-40)  
8. Thought could get back into game (5-7/5-4/30-40)

Confidence in coming back

8. Still not confident on my serve (5-7/2-0)  
8. Still lacking confidence on serve (5-7/2-0)

Lack of confidence in play

8. He got a bit of confidence (5-7/3-0/40-40)  
8. Gave him confidence from serve (5-7/3-2/30-40)

Opponents perceived confidence levels

- 6. Got confidence from my play (4-6/2-2/A-40)
- 6. Point gave me confidence (4-6/3-3/15-0)
- 6. Got confidence from last game (4-6/3-4/0-0)
- 6. Got more confidence from winning (4-6/4-4)
- 8. Game plan gave me more confidence (5-7/3-0)

Confidence gained from play

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First Set Confidence Cont.

7. Collected my thoughts (7-5/0-3)  
 7. Trying to keep myself up (7-5/3-4/15-40)  
 7. Got rid of negative thoughts (7-5/4-5)  
 7. Didn't get down on myself (7-5/4-5)  
 6. Didn't put myself down (4-6/0-1/15-30)  
 6. Tried to get upbeat (4-6/0-1/30-40)  
 8. Trying to keep positive by talking to self (5-7/4-3)  
 8. Got self more positive (5-7/4-3/30-15)  
 8. Got more positive at change of ends (5-7/4-3/30-15)

Use of positive self-talk

5. Good start (6-4/0-0/15-0)  
 5. Get stuck in there! (6-4/1-0)  
 5. Let's take it now! (6-4/1-0/40-15)  
 5. It's my chance now (6-4/1-1)  
 5. Fantastic shot! (6-4/1-1/15-0)  
 5. Very lucky! (6-4/2-2/15-30)  
 5. Couldn't believe I'd won (6-4/3-2)  
 7. Come on! (7-5/0-1/15-40)  
 7. That was good! (7-5/0-3/40-40)  
 7. That was good! (7-5/6-5)  
 6. Not a bad shot! (4-6/2-2/40-40)  
 6. Gave myself a pat on the back (4-6/3-4/15-0)  
 8. Made a good start (5-7/3-0)  
 8. Told self to ride the wave (5-7/3-3)  
 8. I've got it back! (5-7/4-4)

Positive affirmations

5. Everything's fine (6-4/4-3/40-40)  
 5. It's going to be alright (6-4/4-4)  
 7. Be alright now (7-5/3-3/40-40)  
 8. Nothing to worry about (5-7/1-0)  
 8. Be fine if win this game (5-7/3-2/30-15)  
 8. Still level! (5-7/3-3)  
 8. Should be alright (5-7/5-6/0-40)

Reassurance self-talk

5. Unlucky there (6-4/1-0/40-30)  
 5. Get back on the road (6-4/2-2/0-30)  
 5. Still got a chance (6-4/4-3/40-40)  
 5. Keep on track (6-4/4-3/A-40)  
 5. Got to make a chance (6-4/4-4/0-0)  
 7. Told self it wasn't my fault (7-5/0-2)  
 7. Only need one break (7-5/0-3)  
 7. Try and get back (7-5/3-4/15-30)  
 6. Good to get name on board (4-6/1-1)  
 6. Just hanging in there (4-6/2-2/40-40)  
 8. Told self to get into gear (5-7/1-0)  
 8. Stay there and keep it up (5-7/3-0)

Encouragement self-talk

5. Laughing to self (6-4/1-0)  
 5. Kept smiling (6-4/1-1/40-0)

Positive emotions

5. Tried not to laugh (6-4/2-1)  
 5. Tried to keep serious (6-4/2-1)

Emotional control

First Set Coping Strategies



- 5. Got first serve in (6-4/0-0/15-0)
- 5. Serve going well (6-4/2-1)
- 5. Serve is going okay (6-4/2-2/?-?)
- 6. Whacked an ace (4-6/0-1/40-40)
- 6. I'm serving quite well (4-6/2-2)
- 6. Played an ace (4-6/3-4/15-0)
- 6. Started well (4-6/3-4/15-0)
- 6. Good serve there (4-6/4-5/30-30)
- 6. Knew my serve was good (4-6/2-2)
- 8. First serves turn out alright (5-7/2-0/?-?)
- 8. Did a good first serve (5-7/3-1/30-40)
- 8. Feeling happier about serve (5-7/3-3/15-15)
- 8. Managed to hold onto serve (5-7/4-3)
- 8. Had the weight on second serve (5-7/4-4/40-0)

Positive perceptions of serve

- 5. Problems with second serves (6-4/1-0)
- 7. Lost second serve twice (7-5/0-1/15-30)
- 7. Lost first service game (7-5/0-2)
- 6. Played two double faults (4-6/0-1/15-30)
- 6. Second serve not good (4-6/2-3/0-15)
- 6. Didn't give enough on serve (4-6/4-5/15-30)
- 6. Need better serves (4-6/4-5/30-40)
- 6. Missed two first serves (4-6)
- 8. Had to sort out own serve (5-7/2-0)
- 8. First serves still a problem (5-7/2-0)
- 8. Missed a second serve (5-7/3-0/40-40)
- 8. Didn't think I was serving that well (5-7/3-1)
- 8. Mucked it up with my serving (5-7/3-2)
- 8. Serve didn't go at all well (5-7/4-3)
- 8. First serve wasn't going great (5-7/5-4)
- 8. Blamed bad game on serve (5-7/5-6)

Negative perceptions of serve

- 5. Thinking where to place serve (6-4/0-0/30-0)
- 5. Get the serve now (6-4/2-2/?-?)
- 5. Get first serve in (6-4/2-2/?-?)
- 5. Wanted to get serve out the way (6-4/2-2/?-?)
- 5. Need more first serves (6-4/3-3/0-0)
- 5. First serve important (6-4/3-3/0-15)
- 7. Need to hold serve (7-5/0-3)
- 7. Try and get first serve in (7-5/0-3/0-0)
- 7. Take pace of serve (7-5/0-3/15-15)
- 7. Get first serve in (7-5/0-3/?-?)
- 7. Concentrating on service game (7-5/4-5/0-0)
- 6. Thinking about placement of serve (4-6/0-1/15-0)
- 6. Thinking just do a good serve (4-6/0-1/15-40)
- 6. Thinking just do a good serve (4-6/0-1/30-40)
- 6. Concentrated on holding serve (4-6/1-1/0-40)
- 6. Knew would be level if I held serve (4-6/1-2)
- 6. Really focused on own serve (4-6/1-2)
- 6. Keen to go and hold serve (4-6/2-3/0-0)
- 6. Important to hold serve now (4-6/4-5)
- 8. Thinking about making the first serve (5-7/0-0/15-15)
- 8. Just to go in on second serve (5-7/0-0/30-30)
- 8. Told self to hold onto next serve (5-7/2-0)
- 8. Thinking too much about serve (5-7/3-1/0-30)

Serve cognitions

First Set Technical Cognitions

- 6. Wanted to get back on his serve (4-6/2-3/0-0)
- 6. Thinking about getting his service game (4-6/3-3)
- 6. Get into his service game now (4-6/3-3)
- 6. Trying to get used to his serve (4-6/0-1)
- 6. Another chance to get used to his serve (4-6/1-1)
- 6. Thinking about getting on his serve (4-6/2-2/0-0)

Cognitions on opponents serve

- 5. He's not made enough serves (6-4)
- 7. He's missed some first serves (7-5/1-3/40-15)
- 7. He missed his first serve (7-5/3-3/40-30)
- 6. He went for too much (4-6/2-2/A-40)
- 6. His serves putting him under pressure (4-6/3-3/15-0)

Opponents perceived negative serve

- 5. His second serve working well (6-4/3-3)
- 7. He hit an ace (7-5/0-2/?-?)
- 7. He played an ace (7-5/3-3/40-40)
- 7. His serves been good (7-5/2-3)
- 6. He's hit some good first serves (4-6/2-2/30-0)
- 6. He played a good serve (4-6/2-2/40-A)
- 6. He came out with some good serves (4-6/2-2/40-A)
- 8. He did a good serve (5-7/3-0/40-30)
- 8. He hit a good serve (5-7/3-0/40-30)
- 8. He nailed a great serve (5-7/3-2)

Opponents perceived positive serve

- 7. Expecting him to hold serve (7-5/0-1)
- 8. Knew he would improve his serve over time (5-7/2-0)

Concerns on opponents serve

- 7. He's getting on my second serve (7-5/0-3/15-15)
- 8. He's getting onto my serve (5-7/2-0/0-15)
- 8. He's not hitting my serve (5-7/2-0/0-15)

Opponents reaction to serve

- 7. Told self to get the break (7-5/0-2/0-0)
- 7. Important to break him (7-5/1-3/0-0)
- 7. Focused on breaking him (7-5/5-5/0-0)
- 6. Needed to break here (4-6/4-4)
- 8. Wanted to get two breaks (5-7/3-0)
- 8. Thinking about breaking him (5-7/3-0/40-15)
- 8. Wanted to break him (5-7/3-2)
- 8. Thinking about breaking (5-7/4-3/40-15)

Breaking cognitions

- 5. More chances to break (6-4/5-4)
- 7. Felt a chance to break (7-5/3-3/40-30)
- 6. Felt I had a chance to break (4-6/2-2/30-0)
- 6. Knew I'd have chances to break (4-6/2-2/A-40)
- 6. He's giving me some chances (4-6/3-3/15-0)
- 8. Want to get stuck into him again (5-7/3-0)
- 8. Thought had done enough to break (5-7/3-0/40-30)
- 8. Thought I could still break (5-7/3-0/40-A)
- 8. Thought I could break him (5-7/3-1)
- 8. Still thinking had a chance to break (5-7/4-3/40-30)
- 8. Felt I could break him (5-7/5-4)

Perceived chances of breaking

<p>7. Good to break back (7-5/2-3) 7. Important to have broken (7-5/2-3)</p>	Positive perceptions of breaking
<p>5. Second break got to me (6-4/4-3/40-40) 5. Recovered from break point (6-4/4-3/40-40)</p>	Break point cognitions
<p>5. Could have taken break point (6-4/4-3/40-40) 5. Missed all but one chance to break (6-4) 8. Gutted didn't take chances (5-7/3-1) 8. Didn't do enough at time to break (5-7/3-1) 8. Should have broken him (5-7/3-1)</p>	Lost opportunities to break
<p>6. He's going to look to break (4-6/4-5) 7. He had chances to break me (7-5/1-3)</p>	Opponents perceived chances of breaking
<p>7. He knows he's a break up (7-5/1-3/0-0) 7. He's still got a break (7-5/1-3/40-30)</p>	Opponents perceived cognitions of breaks
<p>7. Double break down if I lose (7-5/0-3/0-0)</p>	Concerns about breaking
<p>5. Want to hold on here (6-4/2-2)</p>	Holding cognitions
<p>5. Trying to get returns in (6-4/3-3/0-0) 5. Missed returns (6-4/3-3) 7. Get hold of some returns (7-5/0-3/0-0) 7. Hit a winning return (7-5/2-3) 6. Wondering what return would be like (4-6/0-1/15-0)</p>	Return cognitions
<p>7. He hit a good return (7-5/1-3/30-0) 6. He hit a good return (4-6/2-3/0-15) 6. He's been returning well (4-6/3-4/A-40)</p>	Cognitions on opponents returns
<p>5. Made a good volley (6-4/4-3/15-15) 6. Been volleying well (4-6/3-4/40-40) 6. Made a better volley there (4-6/3-4/40-40)</p>	Positive perceptions of volley
<p>6. Should have made volley (4-6/3-4/40-40)</p>	Negative perceptions of volley
<p>5. Kept feet moving (6-4) 7. Got my feet moving (7-5/1-0) 7. Important to keep moving (7-5/2-3) 7. Moving better (7-5/2-3/?-?)</p>	Positive perceptions of footwork

<p>5. Poor footwork (6-4/5-4/40-30)  8. Didn't move there (5-7/3-0/40-30)  8. Wasn't moving at all (5-7/3-0/40-A)  8. I wasn't moving my feet (5-7/5-6/0-30)</p>	Negative perceptions on footwork
<p>6. I'm coming in a lot (4-6/2-3/40-15)  6. Coming in well (4-6/3-4/30-30)</p>	Positive perceptions of coming in
<p>6. Didn't come in (4-6/2-3/0-15)</p>	Negative perceptions of coming in
<p>7. He made a good forehand (7-5/1-3/0-0)</p>	Opponents positive forehand
<p>5. Played a good backhand (6-4/3-2/0-15)  5. Pleased with backhand (6-4/4-3/0-15)  8. Still pleased with my backhand (5-7/5-4)</p>	Positive perceptions of backhand
<p>5. Get over backhand (6-4/3-3)  5. Don't chip backhand (6-4/4-3/0-0)</p>	Negative perceptions of backhand
<p>6. Trying to be tight on every point (4-6/4-5/30-30)  8. Knew needed three good points (5-7/5-5/0-40)  6. Thinking how to win a point (4-6/1-1/0-0)  8. Need to win next point (5-7/3-1/30-40)</p>	Cognitions on points
<p>5. Played a good point (6-4/0-0/15-0)  5. Played a positive point (6-4/1-0/40-30)  5. Pleased with point (6-4/3-2)  5. Hit a great shot (6-4/3-2/15-0)  7. Good first point (7-5/0-0/15-0)  7. That's a good point (7-5/5-5/30-0)  6. Played a couple of good points (4-6/2-2/30-0)  6. Played a good point (4-6/2-2/40-40)  6. Good to get first point (4-6/3-3/15-0)  8. Hit clean winners off last two (5-7/3-0/30-15)</p>	Positive perceptions of point
<p>5. Happy with shot (6-4/3-2/15-0)  5. Wasn't a bad shot (6-4/4-3/40-40)  5. Point made me laugh (6-4/5-4/15-0)  5. Pleased with that shot (6-4/5-4/30-15)  7. Happy to have point to win (7-5/0-3.A-40)  6. Not missing many shots (4-6/3-4/A-40)  8. Very pleased with that point (5-7/1-0/40-15)</p>	Positive emotions elicited point

5. Just missed shot (6-4/4-3/40-40)  
 5. Lost too many points (6-4/4-4)  
 6. I was losing the points (4-6/3-4/30-30)  
 6. Should have got that point (4-6/4-4/0-15)  
 6. Tried for a cheap point (4-6/4-5/15-30)  
 6. Played a few poor points (4-6/4-5/30-40)

Negative perceptions of point

7. He hit three winners (7-5/0-2)  
 6. He's come out with good shots (4-6/4-5)  
 6. He hit a good shot (4-6/4-5/0-15)  
 8. He made a good shot (5-7/3-2)

Opponents positive point

6. Didn't feel bad missing shot (4-6/3-4/40-A)

Positive emotions elicited from shot

5. Got negative on shots (6-4/3-3)  
 8. Was too nervous to hit shot (5-7/0-0/30-30)

Negative effects on shots

5. Need a good game (6-4/0-0/15-0)  
 5. Don't want game to slip (6-4/1-1)  
 6. Next game was important (4-6/4-4)  
 6. Need to have a good game (4-6/4-5)  
 6. Thought next game would be tough (4-6/4-5)  
 6. Should be winning the game (4-6/4-5/30-30)  
 8. Wanted to next game (5-7/3-0)  
 8. Thinking I had to win next game (5-7/3-1/0-0)  
 8. Hoping to get this game (5-7/5-4)

Game cognitions

5. It was a tough game (6-4/3-3)  
 6. Having a tight game (4-6/3-4/A-40)  
 6. It was a tough game (4-6/4-4)

Perceptions on game

5. Playing positively (6-4/4-3/A-40)  
 5. Good game (6-4/5-4)  
 5. Positive on that game (6-4)  
 7. Played good game so far (7-5/1-3/40-15)  
 7. Played a good game (7-5/6-5)  
 7. Played a good game (7-5/5-5)  
 6. Played a good game (4-6/0-1)  
 6. Played a good game there (4-6/2-2)  
 6. Had four good service games (4-6)  
 8. Got away with first game (5-7/1-0)

Positive perceptions of game

5. Pleased with game (6-4)  
 7. Happy getting game (7-5/1-3)  
 7. Pleased I held the game (7-5/5-5)  
 8. Very pleased with that game (5-7/2-0)

Positive emotions elicited game

5. He had a good game (6-4/2-2)  
 7. He's playing a good game (7-5/0-2/?-?)  
 6. He played a good game (4-6/3-4)  
 6. He played a good game (4-6)

Opponents positive game

5. Nearly lost the game (6-4/3-2)  
 5. Not a brilliant game (6-4/3-3)  
 7. First game not good (7-5/0-2)  
 7. Game a bit patchy (7-5/2-3/?-?)  
 6. Didn't play such a good game (4-6)  
 8. Wasn't a positive game at all (5-7/1-0)  
 8. Felt lucky to hold game (5-7/4-3)  
 8. Played a terrible game (5-7/5-6)

Negative perceptions of game

5. Happy with my play (6-4/1-0/40-A)  
 6. Happy with my play (4-6/3-4/A-40)

Positive emotions with play

5. Playing sensibly (6-4/2-2/?-?)  
 5. Thought I did alright (6-4/2-2/?-?)  
 8. Was playing well (5-7/2-0)  
 8. Been playing well (5-7/3-0/40-30)

Positive perceptions with play

7. He played really well (7-5/0-2)  
 7. He's settled into his game(7-5/3-3)  
 6. He's hitting the ball fast (4-6/0-1)  
 6. He's playing well (4-6/1-1/0-40)

Positive perceptions of opponent

5. Got back on track (6-4/5-4)  
 7. Bouncing back now (7-5/1-3)  
 7. Level of play gone up (7-5/2-3)  
 7. Gone up a level (7-5/6-5/?-?)  
 8. Felt back on track (5-7/4-3/30-15)  
 8. Felt I was coming back (5-7/5-4/30-40)

Increase in level of play

5. Went from extremes (6-4/2-2/0-30)  
 5. Level of play went down (6-4/3-2)  
 5. He brought me down to earth (6-4/3-2)  
 6. Giving it away (4-6/4-5/30-30)

Decrease in level of play

8. Wanted a hard one this

5. Didn't look like a good  
 5. Thinking about  
 8. Thinking more about

<ul style="list-style-type: none"> <li>5. Had a clear game plan (6-4/0-0)</li> <li>5. Reset game plan (6-4/3-3)</li> <li>5. Thought about my play (6-4/3-3)</li> <li>5. Not sticking to one way of playing (6-4/3-3/0-0)</li> <li>5. Kept reevaluating game (6-4/ 4-4)</li> <li>5. Going over things (6-4/5-4/?-?)</li> <li>7. Starting to come together (7-5/2-3)</li> <li>6. Focused on what I had to do (4-6/0-1/0-0)</li> <li>6. Thought about what to do next time (4-6/1-2)</li> <li>6. Went over things in my head (4-6/1-2)</li> <li>6. Thinking about what to do (4-6/2-3)</li> <li>8. Game plan was still working (5-7/1-0/?-?)</li> <li>8. Felt game plan was right (5-7/3-0)</li> <li>8. Game plan was going well (5-7/3-0)</li> <li>8. Game plan was winning me points (5-7/3-0)</li> <li>8. Thinking about game plan more (5-7/4-3/30-15)</li> <li>8. Knew did right thing on last point (5-7/4-3/40-30)</li> <li>8. Felt game plan was back on track (5-7/5-4)</li> <li>8. Thinking how to get back into game now (5-7)</li> </ul>	Game plan cognitions
<ul style="list-style-type: none"> <li>8. Wasn't concentrating on game plan (5-7/3-2/30-40)</li> <li>8. Not sticking to game plan (5-7/3-3/30-40)</li> </ul>	Game plan deviations
<ul style="list-style-type: none"> <li>7. Wondering what to do (7-5/0-2/?-?)</li> <li>8. Nothing seemed to work (5-7/5-6)</li> </ul>	Game plan doubts
<ul style="list-style-type: none"> <li>7. Thinking about counter-punching (7-5/0-2/15-0)</li> <li>7. Told self to hit ball deeper (7-5/0-2/15-15)</li> <li>7. Trying to make opportunities (7-5/5-5/30-0)</li> <li>6. Trying to get what I can (4-6/2-2/40-40)</li> <li>6. Wanted to get lots of deuces (4-6/2-2/40-A)</li> <li>6. Tried to correct mistakes (4-6/3-4/40-A)</li> <li>6. Need to be really solid (4-6/4-5)</li> <li>6. Trying to get what I can (4-6/4-5/30-30)</li> <li>8. Thinking about doing the right thing (5-7/0-0/15-15)</li> <li>8. Thinking about keeping solid (5-7/0-0/15-15)</li> <li>8. Told self to go out and hit ball well (5-7/1-0)</li> <li>8. Knew needed to do a lot more (5-7/3-0)</li> <li>8. Tried to hit ball harder (5-7/5-6)</li> </ul>	Technical/tactical cognitions
<ul style="list-style-type: none"> <li>6. Need good start to next set (4-6)</li> <li>8. Wanted a good start (4-6)</li> </ul>	Cognitions on a good start
<ul style="list-style-type: none"> <li>5. Didn't think about technique (6-4/1-1/40-0)</li> <li>5. Thinking about technique (6-4/3-3)</li> <li>8. Thinking more about technique (5-7/5-6)</li> </ul>	Lack of technical cognitions

- 5. Did what I wanted to (6-4/2-2)
- 5. Felt I could do anything (6-4/2-2/0-15)
- 5. Did everything right (6-4/4-3/40-40)
- 7. Back in the match now (7-5/1-3)
- 7. Back on level terms (7-5/3-3)
- 7. I've got the position (7-5/5-5/30-0)
- 7. Taking control of the match (7-5)
- 5. Not done anything silly (6-4/2-1/?-?)
- 7. Not done anything wrong (7-5/0-1/15-40)
- 6. Didn't do much wrong (4-6/4-5/0-15)
- 8. Did everything right (5-7/2-0)
- 8. Started doing things right (5-7/3-0)
- 8. Did a lot wrong in that game (5-7/3-2)
- 8. Did the right thing there (5-7/4-3/30-15)
- 8. Started doing the right thing (5-7/4-3/30-15)
- 8. No real major faults (5-7/5-5)

Self control

- 5. Let him dominate (6-4/3-3)
- 5. Gave it away there (6-4/4-4/30-15)
- 6. Couldn't have done any more (4-6/2-2/40-40)
- 6. Couldn't have done anything (4-6/2-2/40-A)
- 6. Couldn't have done anything (4-6/2-2/40-A)
- 6. It wasn't in my hands (4-6/4-4/A-40)
- 6. Couldn't do much (4-6/4-5/30-40)
- 8. Didn't take charge of match (5-7/1-0)
- 8. Didn't get on to him (5-7/1-0)
- 8. Felt he was getting away (5-7/3-0/40-40)

Perceived lack of control

- 5. Things not going right (6-4/3-3/0-0)
- 5. Wasn't doing the right thing (6-4)
- 8. Went for the wrong shot (5-7/0-0/0-15)
- 8. Didn't do the right thing (5-7/1-0)
- 8. Wasn't doing the right thing (5-7/5-6/0-30)

Acknowledgement of technical problems

- 7. Making some errors (7-5/2-3/?-?)

Recognition of errors

- 5. Didn't take charge
- 6. Wanted things in his hands
- 8. Missed few opportunities
- 8. Lost an opportunity there

- 5. Thought ball was in (6-4/1-0/40-40)
- 5. Played a risky shot (6-4/2-2/0-15)
- 5. Was too sensible on shot (6-4/2-2/0-30)
- 5. Shouldn't have done that shot (6-4/2-2/0-30)
- 5. Being silly here (6-4/2-2/0-30)
- 5. Too hesitant (6-4/2-2/0-30)
- 5. Got a bit chippy (6-4/3-3)
- 5. Wasn't taking my chances (6-4)
- 7. Bit deep (7-5/0-2/15-0)
- 7. Not taking opportunities (7-5/4-5)
- 6. Handed him a nice ball (4-6/2-3/0-15)
- 6. Playing too safely (4-6/4-4/?-?)
- 8. Worry caused wrong shot selection (5-7/0-0/0-15)
- 8. Just slacked off a bit (5-7/3-0/40-30)
- 8. Should have come in (5-7/3-0/40-A)
- 8. Just not hitting the ball (5-7/3-2/30-40)
- 8. Not serve-volleying at all (5-7/3-3/30-40)
- 8. Missing a lot off the ground (5-7/5-5/0-40)
- 8. Trying for too much (5-7/5-5/0-40)
- 8. I was slow hitting (5-7/5-6/0-30)
- 8. Didn't keep my eye on the ball (5-7/5-6/0-30)
- 8. Been trying to force shots (5-7)
- 8. Not hitting the ball going forward (5-7)

Tactical and technical errors

- 7. He's making errors (7-5/3-4/15-30)

Opponents errors

- 5. Trying to get game over (6-4/2-2/0-0)

Rushing play

- 5. Taking my time (6-4/2-2/A-40)

Taking time over play

- 5. Getting more chances (6-4/4-4)
- 6. Hadn't wasted any chances (4-6/2-2/40-A)
- 6. Had chances in all games (4-6)

Perceived opportunities

- 5. Didn't take chances (6-4/3-2)
- 6. Wasted chance on his game (4-6/4-4/0-15)
- 8. Missed few opportunities at start of game (5-7/5-5)
- 8. Lost an opportunity there (5-7/5-6/0-30)

Wasted opportunities

- 6. Thought set was pretty much gone (5-7/3-3/0-15)
- 6. Thought game could be over (5-7/3-3/0-15)
- 8. Thought it could be 1-0-0 (5-7/3-3/0-15)
- 8. Thinking about being 2-1 up (5-7/3-3/0-15)
- 8. Ball set had gone (5-7/3-3/0-15)

- 5. Thinking back to last game (6-4/2-2)
- 5. Thought about first point (6-4/4-3/40-40)
- 5. Earlier points in subconscious (6-4/4-3/40-40)
- 6. Thought about what I did wrong (4-6/1-2)
- 8. Still thinking about the last game (5-7/3-2/0-0)
- 8. Thinking about last point (5-7/3-2/30-40)
- 8. Thinking about the past games (5-7/3-3/30-40)
- 8. Didn't focus ahead (5-7/3-3/30-40)
- 8. Knew shouldn't think about the past (5-7/3-3/30-40)
- 8. Thinking about last game's problems (5-7/4-3/40-15)
- 8. Thought back to 15-40 (5-7/4-3/40-A)
- 8. Lost game due to thinking back to 15-40 (5-7/4-4)
- 8. Thinking about how well I played before (5-7/5-6)
- 8. Thinking about lost opportunities (5-7/5-6)
- 8. Not thinking about the way forward (5-7/5-6)
- 8. Just thinking of the past (5-7/5-6)

Past performance cognitions

- 5. Thinking about a good start (6-4/0-0/0-0)
- 5. Thinking point by point (6-4/2-2/?-?)
- 5. Blocked out last point (6-4/4-4/30-15)
- 7. Trying to get next point (7-5/3-4/15-40)
- 7. Trying to get next two points (7-5/3-4/0-0)
- 7. Thinking one point at a time (7-5/3-4/15-30)
- 7. Taking one point at a time (7-5/6-5/0-0)
- 7. Wouldn't think of last game (7-5/4-5)
- 7. Thinking about first point (7-5/3-4)
- 6. Thought about next point (4-6/1-2/0-0)
- 6. Thinking one point at a time (4-6/2-2/40-A)
- 6. Not thinking about last game (4-6/4-5)
- 6. Looking to get next point (4-6/4-5/0-15)
- 8. Only needed to win this one point (5-7/3-0/40-30)
- 8. Thinking about getting next point (5-7/3-1/30-40)
- 8. Didn't think I had the set yet (5-7/5-4)

Present performance cognitions

- 5. Thinking about being ahead (6-4/5-4)
- 7. Concentrating on first set (7-5/6-5/0-0)
- 6. Thinking it should be 15-0 (4-6/4-4/0-15)
- 8. Thought about reaching quarters (5-7/0-0)
- 8. Knew hadn't won anything yet (5-7/3-0)
- 8. Knew there was a long way to go yet (5-7/3-0)
- 8. Felt I'd already got the break (5-7/3-0/40-15)
- 8. Thought set was pretty much mine (5-7/3-0/40-15)
- 8. Thought game could be mine (5-7/3-2/30-15)
- 8. Thought it could be 15-40 (5-7/3-2/30-30)
- 8. Thinking about being 5-3 up (5-7/4-3/40-15)
- 8. Felt set had gone (5-7/5-6/0-40)

Future performance cognitions



<p>5. Felt over the moon (6-4/1-0)  5. Felt very happy (6-4/1-0/40-15)  5. Felt alright (6-4/2-1/?-?)  5. Still feeling okay (6-4/4-4/30-15)  5. Felt happy (6-4)  5. Very pleased (6-4)  5. Over the moon! (6-4)  7. Feeling okay (7-5/0-1/15-30)  7. Still feeling okay (7-5/0-2)  7. Feeling good now (7-5/0-3/A-40)  7. Felt good (7-5/2-3)  7. Felt fine (7-5/3-3)  7. Still feeling alright (7-5/3-4)  7. I'm feeling fine (7-5/4-4)  7. Feeling really happy (7-5/6-5)  7. Feeling fine (7-5)  6. Felt okay at this stage (4-6/1-1)  6. Feeling a lot better now (4-6/1-1)  6. Felt good (4-6/2-2/30-0)  6. Feeling better (4-6/2-2/40-40)  6. I'm quite happy (4-6/2-2/40-A)  6. 15-15 is cool (4-6/3-3/15-15)  6. Feeling quite happy (4-6/3-4/30-30)  8. Felt a bit better now (5-7/0-0/15-15)  8. Fairly pleased with everything (5-7/2-0)  8. Felt very pleased (5-7/3-0)  8. Felt I was flying (5-7/3-0/30-15)  8. Felt pretty pleased (5-7/5-4)  8. Felt I was flying (5-7/5-4)</p>	Positive emotional response
<p>5. Felt relieved (6-4/3-2)  7. Felt relieved (7-5/0-3/40-40)  7. Felt relieved (7-5/1-3)</p>	Relief with self
<p>6. Relieved got game (4-6/4-4)  8. Felt relieved to hold onto game (5-7/4-3)</p>	Relief with play
<p>7. Thought he'd be feeling good (7-5/0-0/15-0)  7. Think he's feeling alright (7-5/3-3)</p>	Perceived opponents positive emotions
<p>5. Not over the moon (6-4/3-3)  7. Not feeling great (7-5/0-1/15-40)  7. Things starting to snowball (7-5/0-2)  7. Feeling a bit demoralised (7-5/0-3/?-?)  8. Felt really gutted (5-7/3-2)  8. Felt quite negative (5-7/5-5/0-40)  8. Felt gutted (5-7/5-5/0-40)  8. Felt gutted (5-7/5-6)  8. Pretty much gutted really (5-7/5-6)</p>	Negative emotional response
<p>8. Anger disrupted game plan (5-7/5-6/0-30)</p>	Anger effects on play

<p>6. Felt annoyed (4-6)  8. Felt pretty annoyed (5-7/3-1/0-0)  8. Felt very annoyed (5-7/3-1)  8. Just felt annoyed with self (5-7/5-6/0-30)  8. Felt angry with self (5-7)</p>	Annoyed with self
<p>6. Annoyed he hit a good shot (4-6/4-5/0-15)  8. Felt annoyed whilst serving (5-7/3-1/0-0)  8. Annoyed I lost the opportunity (5-7/3-1)</p>	Annoyed with play
<p>8. Annoyance disrupted game plan (5-7/5-6/0-30)</p>	Annoyance effects on play
<p>7. Felt a bit frustrated (7-5/0-1/15-40)  7. Bit frustrated there (7-5/4-5)  6. Felt a bit frustrated (4-6/4-5)  6. Frustrated (4-6)</p>	Frustration with self
<p>7. Frustrated couldn't do anything (7-5/0-2/?-?)  6. Frustrated he hit an ace (4-6/4-4/40-A)  8. Frustrated at losing point (5-7/3-1/0-15)</p>	Frustration with play
<p>7. He's frustrated (7-5/3-3)</p>	Opponents perceived frustration
<p>7. Got really down on myself (7-5/0-3)</p>	Depression with self
<p>5. Still disappointed (6-4/2-2)  5. Felt disappointed (6-4/2-2/40-40)  7. Bit disappointed (7-5/4-5)  6. Disappointed there (4-6/4-4/0-15)  6. Felt disappointed (4-6)  8. Felt disappointed (5-7/3-2)  8. Very disappointed (5-7/3-2/30-40)</p>	Disappointed with self
<p>7. Disappointed at losing opportunity (7-5/4-3/40-30)  7. Disappointed to lose game (7-5/3-4)  6. Disappointed to have lost point (4-6/2-3/0-15)  6. Disappointed didn't make volley (4-6/3-4/40-40)  6. Disappointed didn't make it (4-6/3-4/40-A)  8. Disappointed losing first point (5-7/0-0/0-15)  8. Disappointed lost break (5-7/3-2/30-40)</p>	Disappointment with play
<p>8. Disappointment irradiated game plan (5-7/3-3/30-40)</p>	Disappointment effects on play

7. Momentum back with me (7-5/1-3)  
 7. Momentum with me (7-5/5-5/30-0)  
 8. Momentum was with me (5-7/3-0)

Momentum with self

5. Momentum averaged out again (6-4/4-3)  
 7. Momentum is pretty even (7-5/5-5)

Momentum leveled

5. Momentum's probably with him (6-4/3-3/0-15)  
 7. Momentum definitely with him (7-5/0-3)  
 7. He's on top (7-5/1-3)  
 8. Thought he had a bit of momentum (5-7/3-3)  
 8. Momentum's shifted to him now (5-7/5-6/0-15)

Momentum with opponent

8. Felt game up and down (5-7/4-3/30-15)

Shifts in momentum

5. Big point here (6-4/4-3/A-40)  
 7. First point quite important (7-5/0-1/15-0)  
 6. Big point, deuce 4-3 (4-6/3-4/40-40)  
 6. Key point (4-6/3-4/40-A)  
 6. 4-5, 30-30, missed two first serve  
 6. Key point (4-6/4-4/40-A)  
 8. Lost point changed the match (5-7/3-0/40-15)

Key points

5. Turned out to be a big game (6-4/2-2/?-?)  
 5. Key game (6-4/5-4)  
 6. 4-4 is a big game (4-6/4-4)  
 6. Important game in the match (4-6/4-5)  
 6. Important to break here (4-6/4-4)  
 6. Key game (4-6)

Key games

7. Under a bit of pressure (6-4/3-3)  
 7. Feeling a bit of pressure (6-4/3-3)  
 8. Under a bit of pressure (6-4/3-3)  
 7. Putting a bit of pressure on the game (4-6/4-4)  
 6. Been under a bit of pressure (4-6/4-4)  
 6. Bit more pressure (4-6/4-4)  
 8. Felt pressure was on me (5-7/1-2/40-15)  
 8. Noticing pressure on me (5-7/5-3/15)  
 8. Feeling the pressure's on me (5-7/5-3/15)

Perceived pressure on self

7. Not feeling too much pressure (7-5/1-6)

Opponent's perceived pressure

6. Pressure on me to hold (4-6/4-4)  
 6. Putting pressure on the game (4-6/4-4/A-40)  
 6. Pressure's on to hold (4-6/4-4)  
 8. Pressure to win the match (5-7/5-6/0-15)

Perceived pressure to play

8. He's putting more pressure on me (5-7/5-6/0-15)

Opponent's applied pressure

<p>5. Got nervous (6-4/4-4/?-?)            7. Started to have doubts (7-6/6-6/0-5)            6. Worrying a little bit (4-6/3-4/?-?)            6. Got a bit anxious (4-6/4-5)</p>	<p>Debilitative cognitive anxiety</p>
<p>5. Concerned might lose lead (6-4/4-4/?-?)            5. Negative on second serve (6-4/1-1/30-15)            7. Feeling nervous on returns (7-6/1-1/40-40)            7. Nervous about holding (7-6/3-4/40-40)</p>	<p>Negative cognitions on play</p>
<p>6. Nerves affecting first serves (4-6/4-5/0-30)</p>	<p>Negative effects on play</p>
<p>7. Not too worried (7-6/1-1/A-40)            7. Not concerned (7-6/2-2/15-40)            7. Didn't have any doubts (7-6/6-6/0-3)</p>	<p>Lack of cognitive anxiety</p>
<p>6. Not worried about score (4-6/2-3)            6. Not worried about first serves (4-6/3-4/?-?)            6. Not worried about last point (4-6/4-4/40-40)</p>	<p>Lack of concerns about play</p>
<p>7. He's feeling a bit nervous (7-6/1-1/40-40)            6. He's getting anxious (4-6/4-4/40-40)            8. He'd be nervous now (6-7/1-1)</p>	<p>Opponents perceived cognitive anxiety</p>
<p>7. Put doubt in his mind (7-6/2-2)</p>	<p>Opponent induced cognitive anxiety</p>
<p>5. Put pressure on self (6-4/4-4/?-?)            7. Pressure is on (7-6/3-4/40-40)            7. More pressure on me (7-6/4-5/40-15)            7. Pressure's on me (7-6/6-6/2-5)            6. Under a bit of pressure (4-6/2-3)            6. Pressure's all on me (4-6/4-5)            6. Been under a lot of pressure (4-6/4-5/0-30)            6. Bit more pressure (4-6/4-5/40-A)            8. Felt pressure was on me (6-7/1-1/40-40)            8. Noticing pressure on me (6-7/5-5/?-?)            8. Feeling the pressure's on me (6-7/6-6/5-4)</p>	<p>Perceived pressure on self</p>
<p>7. Not feeling any more pressure (7-6/5-6)</p>	<p>Control on pressure levels</p>
<p>6. Pressure on me to hold (4-6/3-4)            6. Putting pressure on this point (4-6/4-4/A-40)            6. Pressure's on to hold (4-6/4-5)            8. Pressure to stay in match (6-7/6-6/5-6)</p>	<p>Perceived pressure on play</p>
<p>8. He's putting more pressure on me (6-7/5-5/?-?)</p>	<p>Opponents exerted pressure</p>

8. Pressure was back on him (6-7/1-1)  
 8. Pressure was on him to hold (6-7/6-5)  
 8. He was under pressure (6-7/6-5/15-15)

Perceived pressure on opponent

5. Putting pressure on him (6-4/2-1/30-0)  
 6. Hoped to make him uncomfortable (4-6/2-3/30-0)  
 6. Want to put pressure on him (4-6/3-4)  
 6. Want him to be under pressure (4-6/4-4)

Pressure exerted on opponent

5. Felt too relaxed (6-4/1-1/30-15)  
 5. Bit too relaxed (6-4/3-3/30-15)  
 6. Relaxed bit too much (4-6/2-3/30-15)  
 8. Felt too relaxed (6-7/6-6/5-0)

Over relaxed

6. Heart beating faster (4-6/4-5/0-0)  
 6. Sweating more on hands (4-6/4-5/0-0)

Debilitative somatic anxiety

5. Arm started to tense up (6-4/4-4/?-?)  
 5. Starting to feel tired (6-4/4-4/?-?)  
 6. Tense on first serve (4-6/3-4/0-30)  
 6. Tension in first serves (4-6/3-4/?-?)

Negative physical symptoms

6. Tensed up under pressure (4-6/3-4/0-30)

Pressure effects on somatic anxiety

5. Felt more relaxed (6-4/4-4/A-40)  
 7. More relaxed (7-6/0-0/?-?)  
 7. Feeling fine now (7-6/2-2/15-40)  
 6. Relaxing a little bit (4-6/2-2/15-40)  
 6. Relaxed a bit (4-6/3-4/40-30)

Reduction in somatic anxiety

6. Felt pretty loose (4-6/4-4/A-40)  
 8. Tension in arm had gone (6-7/2-2)

Positive physical symptoms

5. Felt nice and relaxed (6-4/0-0/0-0)  
 8. Felt fairly relaxed (6-7/5-4)  
 8. Felt relaxed (6-7/6-6/5-0)

Lack of somatic anxiety

7. Point helped me relax (7-6/5-6/15-0)

Play effects on somatic anxiety

6. He got tight in game (4-6/4-5)

Opponents perceived somatic anxiety

5. Confidence dropped for now  
 5. Confidence was dropping  
 6. Confidence went down  
 8. Confidence has gone

5. Confident in my game  
 6. Confident I could hold  
 6. Going to keep holding  
 8. Confident got through  
 8. Felt pretty confident into

5. Bit over confident (6-4/1-1/30-15)  
 5. Got too cocky (6-4/3-3/30-15)  
 5. Bit over confident there (6-4/4-3/30-15)  
 8. Felt too confident (6-7/6-6/5-0)

Over confidence

5. Confidence very high (6-4/1-0/15-0)  
 5. Very high confidence (6-4/1-1/30-0)  
 5. Still got a lot of confidence (6-4/2-2)  
 5. Confidence still up (6-4/4-3)  
 7. Confidence is high (7-6/0-0/?-?)  
 8. Confidence was high (6-7/6-6/5-0)  
 8. Confidence was fairly high (6-7/5-4)

High levels of confidence

5. Confident (6-4/5-4/A-40)  
 6. Confidence still there (4-6/1-2)  
 8. Confidence is right there (6-7/2-1)

Confidence levels

5. Confidence stayed same (6-4/1-1)  
 7. Confidence not affected (7-6/4-5)  
 6. Confidence still the same (4-6/0-1/A-40)  
 6. Confidence not changed much (4-6/4-4/40-A)  
 8. Confidence wasn't dented (6-7/5-4/0-30)

Maintenance of confidence

5. Confidence back up (6-4/1-0)  
 5. Confidence going up (6-4/2-2/30-0)  
 5. Confidence increased (6-4/4-4/?-?)  
 7. Confidence has gone up (7-6/1-0/30-30)  
 7. Confidence was building (7-6/3-4/A-40)  
 7. Got bit more confidence (7-6/4-4)  
 6. Feeling more confident (4-6/0-1/A-40)  
 6. Feeling bit more confident (4-6/2-3/30-0)  
 6. Fed off confidence (4-6/3-4/40-30)  
 8. Confidence went up (6-7/1-1)  
 8. Got more confident (6-7/6-5/15-15)  
 8. Confidence went up a bit (6-7/6-6/1-0)

Increase in confidence levels

5. Confidence dropping (6-4/4-4/?-?)  
 5. Confidence wandering (6-4/4-4/?-?)  
 6. Confidence went down through set (4-6)  
 8. Confidence has gone down a bit (6-7/0-1)

Decrease in confidence levels

5. Confident in my game (6-4/4-4)  
 6. Confident I could hold (4-6/0-1)  
 6. Going to keep holding (4-6/3-4)  
 8. Confident got through that game (6-7/5-4)  
 8. Felt pretty confident into shot (6-7/5-5/?-?)

Confidence with play

7. Love game gave me confidence (7-6/2-2)  
 7. Point gave confidence a boost (7-6/3-4/40-40)  
 7. Got confidence from serve (7-6/3-4/A-40)  
 7. Got confidence from point (7-6/5-6/15-0)  
 6. Got confidence from winner (4-6/0-1/A-40)  
 8. Got confidence from game (6-7/5-4)

Confidence gained from play

5. Thought could break every time (6-4/1-0)  
 5. I'm all over this guy (6-4/4-4)  
 7. Still had a chance for the set (7-6/6-6/0-5)  
 7. Got a chance to win point (7-6/6-6/2-5)  
 7. There's still a chance (7-6/6-6/3-5)  
 7. Thought set was in reach (7-6/6-6/5-5)  
 6. Still got chance in match (4-6/1-1)  
 6. Can still switch match round (4-6/1-2)  
 6. Know I can stay with him (4-6/4-5/0-30)  
 6. Never thought I'd lose (4-6/4-5/0-30)  
 8. Believed could win game (6-7/0-1/40-30)

Confidence in play

8. Thought had lost match (6-7/0-1)

Lack of confidence in wining

6. He was confident on service games (4-6/1-1/0-15)

Opponents perceived confidence in play

6. He's knocked my confidence (4-6/1-1)

Opponents effect on confidence levels

1. Not really nervous  
 2. Tried to stay positive  
 3. Try and stay positive  
 4. Tried not to worry too much  
 5. Tried not to worry too much  
 6. Tried not to worry too much  
 7. Important to start trying new things

6. Can't get down on self (4-6/1-1/0-15)  
 6. Tried not to get down (4-6/1-1/0-15)

6. Harder to stay positive (4-6/1-1/0-15)

4. Yarny (5-4/1-1/0-15)  
 5. Stay back in defence (6-7/0-1/0-15)  
 5. Yarny in defence (6-7/0-1/0-15)  
 5. Don't do anything sloppy (4-6/1-1/0-15)  
 6. Don't be sloppy (4-6/1-1/0-15)  
 6. Don't do anything sloppy (4-6/1-1/0-15)  
 6. Don't get sloppy (4-6/1-1/0-15)

- 5. Try to be positive (6-4/2-1/30-0)
- 7. Trying to keep positive (7-6/6-6/0-5)
- 6. Took positives out of last set (4-6/0-1)
- 6. Used negatives in a positive way (4-6/0-1/30-40)
- 6. Keeping myself upbeat (4-6/1-1/?-?)
- 6. Thinking more positively (4-6/4-4/40-40)
- 6. Got rid of negative thoughts (4-6/4-4/40-40)
- 8. Tried to see positive side (6-7/0-1)

Use of positive self-talk

- 5. Hang on (6-4/1-0)
- 5. Go for it! (6-4/4-3/30-0)
- 7. Stay with it (7-6/4-4/?-?)
- 7. Come on! (7-6/6-6/3-5)
- 6. Turn things round (4-6/0-0/0-0)
- 6. Only start of set (4-6/0-1)
- 6. Do everything you can (4-6/0-1/15-15)
- 6. Hang in there (4-6/0-1/?-?)
- 6. Be solid (4-6/0-1/30-40)
- 6. Give yourself a chance (4-6/0-1/A-40)
- 6. Good start to set (4-6/1-1)
- 6. It's just one game (4-6/1-2)
- 6. Stay with him (4-6/2-3/0-0)
- 6. That was good (4-6/3-3)
- 6. Come on, this one (4-6/3-4/30-30)
- 6. Keep going (4-6/4-4/15-30)
- 6. This is it! (4-6/4-4/40-30)
- 6. Hang in there (4-6/4-4/40-40)
- 6. Do your best (4-6/4-4/A-40)
- 8. Don't have anything to lose (6-7/0-1)
- 8. Tried to keep myself in it (6-7/0-1)
- 8. Try and win (6-7/1-1)
- 8. Told self would be fine (6-7/2-2)
- 8. Told self to stick in at 3-3 (6-7/3-3)
- 8. Important to start trying now (6-7/4-4)

Positive affirmations

- 6. Can't get down on self (4-6/1-2/0-15)
- 6. Tried not to get down (4-6/4-5/0-15)

Encouragement

- 6. Harder to stay positive (4-6/4-5/0-15)

Positive self-talk concerns

- 5. Damn (6-4/1-1/30-15)
- 5. Shit, back to deuce (6-4/5-4/40-40)
- 5. You're going to lose (6-4/4-4/?-?)
- 5. Don't do anything silly (6-4/1-1/0-0)
- 6. Don't be sloppy (4-6/0-1/A-40)
- 6. Don't do anything sloppy (4-6/4-4/40-30)
- 6. Don't get sloppy (4-6/0-1/A-4)

Negative affirmations

7. Could be in trouble (7-6/3-4/40-40)  
 7. Set's slipping away (7-6/6-6/0-5)  
 6. Don't let him run away with it (4-6/0-0/0-0)  
 6. Don't throw away chance (4-6/0-1/A-40)  
 6. Be careful (4-6/2-3/30-15)

Warning cognitions

8. Told myself to be aggressive (6-7/4-4/A-40)  
 8. Wanted to be aggressive (6-7/5-4/15-40)  
 8. Told self to be aggressive (6-7/6-5)  
 8. Told self to be aggressive (6-7/6-5/0-15)  
 8. Trying to be aggressive (6-7/6-5/30-30)

Positive use of aggression

8. Tried to use anger positively (6-7/6-6)

Positive use of anger

5. Let me win ad point (6-4/4-4/A-40)  
 6. Need to get lucky (4-6/1-2)  
 6. Hoped he'd make errors (4-6/2-2/15-40)  
 6. He could play a bad game (4-6/3-3/0-0)  
 6. He might make errors (4-6/4-5)

Hopeful cognitions

5. Trying to think again (6-4/5-4/0-0)  
 7. Come on, think about it (7-6/3-4/40-40)  
 8. Tried to keep my mind going (6-7/0-1)

Match focus self-talk

7. Held myself in check (7-6/4-4)  
 7. Should be focused now (7-6/5-6/30-30)  
 7. Concentration is up and down (7-6/5-6/30-30)  
 6. Told self to concentrate harder (4-6/0-1/30-40)  
 6. Trying to focus more (4-6/0-1/30-40)  
 6. Stay alert (4-6/1-1/?-?)  
 6. Concentration slipped (4-6/2-3/30-15)  
 6. Focused (4-6/4-4/A-40)

Concentration cognitions

6. Kept concentration going (4-6/1-1/?-?)

Maintenance of concentration

6. Trying to loosen up (4-6/4-4/A-40)  
 6. Jogging around a bit (4-6/4-4/A-40)

Use of physical relaxation

5. Calmed myself down (6-4/0-0)  
 5. Breathed to calm down (6-4/0-0)  
 5. Calmed myself down (6-4/4-4/A-40)

Positive use of relaxation

5. Take your time (6-4/4-4/A-40)  
 7. Tried to compose myself (7-6/6-6/0-3)  
 8. Tried to steady self (6-7/2-2)

Positive use of composure

- 5. Energise again (6-4/4-4/A-40)
- 7. Pumped myself up (7-6/3-4/A-40)

Use of positive energy

- 6. Imaged serve first (4-6/0-1/40-40)

Use of imagery

<ul style="list-style-type: none"> <li>5. Positive on the serve (6-4/0-0/?-?)</li> <li>7. Held serve well (7-6/3-3)</li> <li>7. Service games gone well (7-6/3-3)</li> <li>7. Feeling okay on serve (7-6/4-5/0-0)</li> <li>7. Played an ace (7-6/5-6/40-40)</li> <li>6. Know I'm serving well (4-6/0-1)</li> <li>6. Two good serves (4-6/3-4/40-30)</li> <li>6. Positive on serve (4-6/3-4/40-30)</li> <li>6. Played a good serve (4-6/4-5/?-?)</li> <li>8. Made first serve (6-7/2-1)</li> <li>8. Got the first serves in (6-7/3-2)</li> <li>8. Serving bit better (6-7/4-3)</li> </ul>	Positive perceptions of serve
<ul style="list-style-type: none"> <li>5. Missing a few serves (6-4/4-4/?-?)</li> <li>7. Needed more first serves (7-6/1-0/0-15)</li> <li>6. Struggling with serve (4-6/1-1)</li> <li>6. Need to make first serves (4-6/3-4)</li> <li>6. Not as free with first serves (4-6/3-4/0-30)</li> <li>6. Missed first serves (4-6/3-4/0-30)</li> <li>6. Losing points on second serve (4-6/3-4/0-30)</li> <li>6. First serves not going in (4-6/4-5/?-?)</li> <li>6. Second serves not good (4-6/4-5/0-30)</li> <li>6. Pressure affected serve (4-6/4-5/0-30)</li> <li>6. Not making first serves (4-6/4-5/0-30)</li> <li>8. Serve not going right (6-7/2-2/15-0)</li> </ul>	Negative perceptions of serve
<ul style="list-style-type: none"> <li>6. Missed first serves when tight (4-6)</li> </ul>	Somatic anxiety effects on serve
<ul style="list-style-type: none"> <li>7. Negative whilst serving (7-6/1-1/40-40)</li> </ul>	Cognitive anxiety with serve
<ul style="list-style-type: none"> <li>8. Little confidence in my serve (6-7/4-4/?-?)</li> </ul>	Lack of confidence with serve
<ul style="list-style-type: none"> <li>5. Focused on serve (6-4/1-1/0-0)</li> <li>5. Get up to first serve (6-4/4-4/?-?)</li> <li>5. Get first serve in (6-4/4-4/?-?)</li> <li>5. Make first serve (6-4/4-4/A-40)</li> <li>7. Concentrated on service game (7-6/1-0/0-0)</li> <li>6. Thinking where to serve (4-6/0-1/40-40)</li> <li>6. Trying to get serves in (4-6/0-1/40-40)</li> <li>6. Trying to keep serves in (4-6/1-2/0-30)</li> <li>8. Thinking about serve (6-7/5-5/?-?)</li> </ul>	Serve cognitions
<ul style="list-style-type: none"> <li>7. Important to hold serve (7-6/3-4/0-0)</li> <li>7. Need to hold serve (7-6/6-6/0-5)</li> <li>6. Told self to hold serve (4-6/2-3)</li> <li>6. Wanted to hold serve (4-6/3-3/?-?)</li> <li>6. Have to hold serve (4-6/3-4/?-?)</li> <li>6. Need to hold (4-6/4-5)</li> </ul>	Holding serve cognitions
<ul style="list-style-type: none"> <li>6. Thinking too much about serve (4-6/3-4/?-?)</li> </ul>	Over analysis of serve Second Set Technical Cognitions

<p>5. He played an ace (6-4/1-0/?-?)            5. He played two big serves (6-4/4-4)            7. He played a good serve (7-6/1-1/A-40)            7. He's playing good serves (7-6/4-4)            6. He's serving well (4-6/3-3)            6. He's got a big serve (4-6/3-3)            6. He's serving well (4-6/4-4)            6. He played a good serve (4-6/4-4/40-A)</p>	Opponents perceived positive serve
<p>7. He's missing serves (7-6/4-4/40-40)</p>	Opponents perceived negative serve
<p>7. Trying to take on serve (7-6/6-6/6-5)            6. Trying to get on his serve (4-6/3-3)            8. First chance on his serve for a while (6-7/4-4)</p>	Cognitions on opponents serve
<p>8. He's taking on second serve (6-7/5-5/?-?)</p>	Opponents success with serve
<p>8. Double fault made me feel better (6-7/6-5/15-15)</p>	Opponents double fault
<p>5. Trying to get a break (6-4/4-3/0-0)            5. Try and break him next time (6-4/4-4)            5. Want to break here (6-4/4-3/0-0)            7. Wanted to break him (7-6/0-0/0-0)            7. Trying to break him (7-6/1-1/0-0)            7. Concentrated on breaking (7-6/3-3/0-0)            7. Trying to get a break (7-6/6-6/0-3)            6. Be good to break (4-6/0-0/0-0)            6. Trying to get a break (4-6/0-0/0-0)            6. Trying to break him (4-6/1-1/0-0)            6. Not been broken yet (4-6/1-2)            6. Know I could break him (4-6/1-2)            6. Wanted the break (4-6/3-3/?-?)            8. Wanted to hold a break (6-7/4-4)            8. Thinking about breaking (6-7/5-4)            8. Felt I could break him (6-7/6-5)</p>	Breaking cognitions
<p>5. Got chances to break (6-4/2-1/0-0)            7. Opportunity to break (7-6/1-1/30-0)</p>	Perceived chances to break
<p>7. Lost opportunity to break (7-6/1-1/40-30)            7. Missed opportunity to break (7-6/4-5)</p>	Wasted opportunities in breaking
<p>7. Can break here (7-6/1-1/40-15)            7. Should be able to break (7-6/1-1/40-40)            6. Determined to break (4-6/4-4)            6. Feel I can break him (4-6/4-4/40-40)            8. Had a chance to break (6-7/4-3/40-40)</p>	Confidence in breaking

4. Thinking too much

Raw Data Themes

Higher Order Sub-Themes

6. Didn't have to break here (4-6/0-0/0-30)  
6. Didn't have to break here (4-6/4-4)

Lack of concerns over breaking

6. Not broken in seven games (4-6/1-2)

Concerns over breaking

6. Felt I could hold (4-6/0-1)  
6. Held really comfortably (4-6/3-3)

Confidence in holding serve

5. Got to hold (6-4/4-4/0-0)  
6. Out of match if don't hold (4-6/4-5)

Holding serve cognitions

7. Didn't expect him to hold (7-6/0-0/0-0)  
8. He's got to go out and hold (6-7/6-5)

Opponents holding ability

6. He's holding comfortably (4-6/2-3)  
6. He's holding very well (4-6/3-3)

Opponents positive state

7. Played a good return (7-6/6-6/3-5)  
6. Played a good return (4-6/4-4/40-40)

Positive perception on return

6. He's returning well (4-6/0-1/15-15)  
6. He's whacking his returns (4-6/0-1/40-40)  
6. He's returning well (4-6/1-1)  
6. He's whacking returns (4-6/3-4/?-?)  
6. He's returning well (4-6/4-4)  
6. He played a good return (4-6/4-5/40-40)

Positive perceptions of opponents return

6. He didn't return well (4-6/4-4/40-40)

Negative perceptions of opponents return

6. Threatened by his returns (4-6/3-4)

Negative return cognitions

6. Bad volley (4-6/2-3/30-15)  
6. Should have made volley (4-6/4-5/0-15)  
6. Should have made volley (4-6/4-5/40-40)

Negative perceptions of volley

6. He played a good volley (4-6/1-2/0-15)

Positive perceptions of opponents volley

7. Moving my feet well (7-6/5-5)

Positive perceptions of footwork

5. Feet not working so well (6-4/4-4/?-?)  
5. Get feet working (6-4/4-4/?-?)  
5. Get your feet moving (6-4/4-4/A-40)  
8. Wasn't moving my feet (6-7/2-1/0-40)

Negative perceptions of footwork

Second Set Technical Cognitions

5. Trying for three points (6-4/1-1/30-0)  
 7. Trying to get points (7-6/6-6/0-3)  
 6. Trying to get point (4-6/4-4/40-40)

Point cognitions

7. Got a lift from point (7-6/1-1/40-40)

Positive emotional response from point

5. Bit lucky on point (6-4/2-2/15-0)

Luck attributions

5. Good point (6-4/1-0/15-0)  
 5. Good point (6-4/4-4/?-?)  
 7. Good point (7-6/3-4/40-40)  
 7. Played a very good point (7-6/3-4/40-40)  
 7. Played pretty good point (7-6/3-4/A-40)  
 7. Played two good points (7-6/3-4/A-40)  
 7. Played couple of good points (7-6/4-5)  
 7. Played a good point (7-6/5-6/15-0)  
 7. Good point (7-6/5-6/30-15)  
 7. Played a good point (7-6/6-6/5-5)  
 6. Good point (4-6/0-1/15-15)  
 6. Played three good points (4-6/1-2/40-30)  
 6. Played a good point (4-6/2-2)  
 6. Played some good points (4-6/3-3)  
 6. Played a good point (4-6/4-4/40-40)

Positive perceptions of point

5. Nice point (6-4/1-1/15-0)  
 5. Pleased with points (6-4/1-1/30-0)  
 5. Really pleased with points (6-4/5-4/30-0)  
 7. Very pleased with point (7-6/5-6/40-40)  
 7. Pleased to hold point (7-6/6-6/2-5)  
 6. Pleased to get points (4-6/2-3/30-0)  
 8. Very happy with last point (6-7/6-5/40-30)  
 8. Pleased with first point (6-7/6-6/1-0)

Positive emotions elicited point

7. Played a bad point (7-6/1-1/40-A)  
 7. Lost the point (7-6/3-4/40-40)  
 7. Not a good point (7-6/5-6/15-15)  
 7. Played a cheap point (7-6/5-6/15-15)  
 7. Bad point (7-6/5-6/30-30)  
 6. Should have won point (4-6/4-4/40-40)

Negative perceptions of point

5. He played a good point (6-4/2-1/30-15)  
 7. He played some good points (7-6/1-2)  
 6. He played a good point (4-6/1-1/0-15)  
 6. He played a very good point (4-6/1-2/0-15)  
 6. He played good points (4-6/3-4/0-30)  
 6. He played too good a point (4-6/4-4/40-40)  
 6. He played two good points (4-6/4-4/40-A)  
 8. He's pulled a few points back! (6-7/4-4/40A)

Opponents positive points

<p>6. Hoped I'd play good shots (4-6/2-2/15-40)  8. Pretty pleased with that shot (6-7/0-1/40-30)  8. Did the right shot there (6-7/1-1/40-40)  8. Shot worked alright (6-7/1-1/A-40)  8. Pleased I'd got onto shot (6-7/3-3/40-30)  8. Felt pleased with that shot (6-7/4-3/30-30)  8. Pleased with that shot (6-7/4-4/40-40)</p>	Positive perceptions of shot
<p>5. He played a good shot (6-4/1-0/?-?)  7. He's playing good shots (7-6/1-1/A-40)  6. He hit a really good shot (4-6/0-0/0-30)  6. He's playing better shots (4-6/0-0/0-30)  6. He hit a great shot (4-6/1-2/0-15)  6. He played a good shot (4-6/4-5/0-15)</p>	Opponents positive shots
<p>6. Want game under belt (4-6/0-1/A-40)  6. Trying to catch a sloppy game (4-6/1-1/0-0)  6. Badly wanted to win game (4-6/4-5/0-15)  6. Need a good game (4-6/4-5/0-15)</p>	Game cognitions
<p>5. Got a good game (6-4/1-0)  5. Good game (6-4/4-4/A-40)  7. Play a good game (7-6/1-2/0-0)  7. Played a good game (7-6/2-2)  7. Won game comfortably (7-6/3-3)  7. Played a good game (7-6/4-5)  7. Played good service game (7-6/5-5)  7. Play a good game (7-6/5-6)  7. Played good game (7-6/6-6)  6. Got back into game (4-6/1-2/40-30)</p>	Positive perceptions of game
<p>5. Pleased to get rid of game (6-4/5-4)  8. Pleased to have held game (6-7/2-1)  8. Felt happier with that game (6-7/3-2)  8. Very pleased with game (6-7/3-2)  8. Pretty happy with last game (6-7/4-3)  8. Pleased with that game (6-7/5-4)  8. Very pleased with that game (6-7/5-4)</p>	Positive emotions elicited game
<p>7. It was a long game (7-6/4-4)  6. Felt like a long game (4-6/0-1/A-40)</p>	Perceptions on game
<p>5. He played a good game (6-4/3-3)  8. He played a good game (6-7/2-2)</p>	Opponents positive game
<p>6. Lost last three games (4-6/0-0/0-30)</p>	Negative perceptions of game
<p>7. He's lost 4 games (7-6/1-0)</p>	Opponents negative game

<p>5. Feel like I'm on top of set (6-4/3-3)  5. Felt on top of set (6-4/3-3/40-15)  5. Playing well (6-4/4-3/30-0)  5. Hitting the ball well (6-4/4-3/?-?)  7. Going how I want it to (7-6/1-0)  7. My game is going well (7-6/2-2)  7. I'm playing fine (7-6/2-2/15-40)  7. Doing the right things (7-6/3-4/40-40)  7. I'm playing okay (7-6/4-4/?-?)  7. Playing pretty good (7-6/5-5)  7. Felt good about whole game (7-6/6-6)  6. Carry on the same (4-6/0-0/0-0)  6. Things going alright (4-6/0-1/15-15)  6. Not doing things wrong (4-6/0-1/30-30)  6. Trying my best (4-6/2-2/15-40)  6. Not done anything wrong (4-6/4-4/40-A)  8. Was doing the right things (6-7/3-2)  6. Not playing that badly (4-6/3-3)  8. No major problems (6-7/3-3)  8. Playing alright now (6-7/4-3)  8. Happy came in on some shots (6-7/4-3)  8. Felt was timing ball alright (6-7/4-3)  8. Wasn't missing too much (6-7/5-4/0-30)</p>	Positive perceptions of play
<p>5. He played well (6-4/0-0/?-?)  7. He's played pretty good (7-6/4-4/?-?)  7. He's maintaining his game (7-6/5-5/?-?)  6. He's playing well (4-6/1-1)  6. He's done well (4-6/3-4)  6. He's playing well (4-6/4-4)  8. He played well (6-7/2-2)  8. Think he's playing well (6-7/4-3)</p>	Opponents positive play
<p>7. Raised my game (7-6/1-0/30-30)  7. Raised my game (7-6/6-6/5-5)</p>	Increase in level of play
<p>7. He's pulling away a bit (7-6/1-2)  6. He's upped his level of play (4-6/4-4)  6. He's playing better (4-6/4-4)</p>	Opponents increase in level of play
<p>7. Plays going up and down (7-6/5-6/30-30)</p>	Fluctuations in level of play
<p>7. His game's gone down (7-6/1-0/30-30)  7. His game's gone down (7-6/3-3)</p>	Decrease in opponents level of play
<p>6. Kept to my game plan (4-6/0-1/30-30)</p>	Game plan adherence

- 5. Realised what I was doing wrong (6-4/4-4/A-40)
- 6. I'm hanging on really (4-6/2-3/0-0)
- 6. Been struggling (4-6/3-4)
- 8. His game plan was working (6-7/1-1/15-40)
- 8. Felt nothing was working (6-7/1-1/A-40)
- 8. Game plan wasn't working (6-7/3-2/15-40)
- 8. Still not playing right (6-7/3-3/15-15)

Game plan cognitions

- 8. He forced me to change my game plan (6-7/1-1/0-15)

Opponents effects on game plan

- 6. Wanted to get on track (4-6/0-1/A-40)
- 6. Keep making him play (4-6/2-2/15-40)
- 6. Wanted to make him play balls (4-6/4-4)
- 8. Thinking about my tactics (6-7/2-1/0-40)
- 8. I should be moving in on him (6-7/2-1/0-40)
- 8. Thinking a bit more here (6-7/4-3/?-?)
- 8. Thinking about taking a chance (6-7/4-4/40-A)
- 8. Thinking about getting ball over the back (6-7/6-6/40-0)

Technical/tactical cognitions

- 7. Set's closer than last one (7-6/3-4)
- 7. Been close all match (7-6/4-4/?-?)
- 7. It's still close (7-6/6-6/5-5)
- 6. Getting closer to end of set (4-6/2-3)

Awareness of scoreline

- 5. Nothing I could have done (6-4/1-0/?-?)
- 6. Played too good for me (4-6/0-0/0-30)
- 6. He's playing too good (4-6/0-1/30-30)
- 6. Can't do anything (4-6/1-1/?-?)
- 6. Couldn't have done anything (4-6/1-1/0-15)
- 6. Nothing I could have done (4-6/1-2/0-15)
- 6. Nothing I could do (4-6/4-4/40-40)
- 8. He was dominating game (6-7/1-1/0-15)

Lack of perceived control

- 7. Some errors there (7-6/1-1)
- 7. Played very loose (7-6/1-1)
- 7. Played silly shots (7-6/4-5)
- 7. Made same mistake twice (7-6/4-5)
- 7. Silly errors (7-6/5-6/30-30)
- 8. Went for silly shots (6-7/1-1/0-15)

Recognition of errors

- 8. Deliberately taking my time (6-7/6-6/15-15)
- 8. Telling myself to take my time (6-7/6-6/15-15)
- 8. Told myself to take my time (6-7/6-6/15-15)
- 8. Taking my time (6-7/6-6/15-15)
- 8. Taking my time (6-7/6-6/15-15)

<p>5. Took eye off the ball (6-4/3-3/30-15)  5. Went for too much (6-4/3-3/30-15)  6. Pushed ball too much (4-6/2-3/30-15)  6. Bit too careful (4-6/3-4/0-30)  6. Not able to get in (4-6/4-4/40-A)  8. Wasn't watching the ball (6-7/0-1/30-30)  8. Wasn't in the right place (6-7/0-1/30-30)  8. Still going for too much (6-7/1-1/0-15)  8. Was too far behind the baseline (6-7/2-1/0-40)  8. Didn't want to chip the ball (6-7/5-4/15-40)  8. Wasn't concentrating (6-7/6-6/5-0)</p>	Tactical/technical errors
<p>6. He put in a few errors (4-6/4-5)</p>	Opponents errors
<p>7. He played two double faults (7-6/1-0)  7. He couldn't make the shot (7-6/1-1/A-40)  6. He's starting to miss now (4-6/4-4/40-40)  6. He's hitting the ball too early (4-6/4-4/40-40)</p>	Opponents tactical/technical errors
<p>7. Nice he's struggling (7-6/1-1/40-40)</p>	Positive state elicited from opponent
<p>7. Urgency to win game (7-6/3-4/40-40)  7. Wanted to finish it (7-6/4-4)  7. Eager to play (7-6/5-6/0-0)  8. Rushed to get back to change over (6-7/40-15)</p>	Urgency to complete match
<p>5. Rushed point (6-4/4-4/40-40)  5. Aware I was rushing it (6-4/4-4/?-?)  5. Trying to get point too quickly (6-4/4-4/?-?)  8. Trying to get the game over with (6-7/40-0)  8. Rushed it (6-7/0-0/40-40)  8. Just rushed it (6-7/0-0/40-40)  8. Tried to finish the game too early (6-7/40-40)  8. Wanted to get game out of the way (6-7/40-40)</p>	Rushing play
<p>7. First points went quickly (7-6/6-6/0-3)</p>	Perceptions of time
<p>5. Took time on serve (6-4/5-4)  8. Deliberately taking my time (6-7/4-4/A-40)  8. Telling myself to take my time (6-7/4-4/A-40)  8. Told myself to take my time (6-7/6-5)  8. Taking my time (6-7/6-5/0-15)  8. Taking my time (6-7/6-5/30-30)</p>	Taking time over play

- 5. Got an opportunity here (6-4/5-4/30-0)
- 7. Good opportunity to get game (7-6/0-0)
- 7. Good chance for both of us (7-6/1-2)
- 6. Tried not to waste chances (4-6/0-1/15-15)
- 6. Ready for any chances (4-6/1-1/?-?)
- 6. Got a chance (4-6/1-2/0-0)
- 6. Hoped I'd get a chance (4-6/2-3/0-0)
- 6. Felt I could get chances (4-6/3-3)
- 6. Don't throw away chance (4-6/4-4/15-30)
- 6. Felt I had a chance (4-6/4-4/30-30)
- 6. Here's my chance (4-6/4-4/40-30)
- 6. May be only chance (4-6/4-4/40-30)

Perceived chances

- 5. Didn't get much of a chance (6-4/3-3)

Perceived lack of opportunities

- 5. Lost a big opportunity (6-4/1-1)
- 5. Another wasted chance (6-4/1-1)
- 5. Should have won point (6-4/2-1/30-15)
- 5. Wasted chance (6-4/2-1/30-30)
- 7. Lost the chance of a lead (7-6/1-1)
- 7. Let him back in match (7-6/1-1)
- 7. Lost a good opportunity (7-6/4-4/0-15)
- 7. Had a chance there (7-6/4-4/40-40)
- 6. Had a chance (4-6/4-4/40-40)
- 6. Had my chances there (4-6/4-5)

Perceived wasted chances

- 5. Knew I'd have other chances (6-4/1-1)
- 5. Knew I'd have other chances (6-4/2-2)
- 6. Still be opportunities (4-6/3-4)

Confidence in perceived chances

- 5. Gave him an opportunity (6-4/1-1/30-15)

Opportunity for opponent

- 5. Could be a good opportunity
- 5. Thinking about waiting until...
- 7. Could be a good rest for...
- 7. Could have stayed for...
- 6. Looking forward to next game...
- 6. Trying to get to deuce...
- 6. Thinking about a technical...
- 6. Knew had a chance to...
- 8. Thought I had won the game...
- 8. Thinking I'd done the...
- 8. Felt that I had the...
- 8. Mind's on the third...

- 5. Focused on match (6-4/1-1/30-15)

Focus on match

- 5. Thinking about the last shot (6-4/1-0/?-?)
- 5. Thought about last game (6-4/2-1/0-0)
- 5. Reflected back to game (6-4/3-2)
- 7. Thinking about last game (7-6/1-1/30-0)
- 7. Played point back in head (7-6/1-1/40-40)
- 7. Wish had won service game (7-6/1-2)
- 7. Still thinking about last game (7-6/2-2)
- 7. Game could have slipped away (7-6/4-4)
- 7. Thought back to previous point (7-6/4-5)
- 6. Point at back of mind (4-6/4-4/40-40)
- 8. Thinking about past points (6-7/0-1/30-30)
- 8. Previous game was a big one (6-7/2-2)
- 8. Still relieved getting previous game (6-7/2-2)
- 8. Thinking back to what could have been (6-7/4-3/?-?)
- 8. Thinking about 5-5 last time (6-7/5-5)
- 8. Thinking back to last year (6-7/6-5/40-40)
- 8. Didn't want to repeat last years mistake (6-7/6-6)
- 8. Thinking back to being 5-0 up (6-7/6-6/5-6)
- 8. Thinking about losing last set (6-7/0-0/40-40)
- 8. Shouldn't have lost last set (6-7/0-0/40-40)

Past performance cognitions

- 5. Didn't think back to ace (6-4/1-0/?-?)
- 5. Ditched last point (6-4/2-2/40-15)
- 7. Didn't think about last game (7-6/3-4/40-40)
- 7. Trying to stay in tie-break (7-6/6-6/5-5)
- 7. One point at a time (7-6/6-6/5-5)
- 6. Didn't look back to game (4-6/2-2)
- 6. Let bad shots go (4-6/3-3)
- 6. One point at a time (4-6/4-4/15-30)
- 6. Waste of time thinking back (4-6/2-2)
- 8. Wasn't thinking ahead (6-7/3-3)

Present performance cognitions

- 5. Should be 2-0 (6-4/1-1)
- 5. Wanted to serve it out (6-4/4-3/0-0)
- 5. Could be 40-0 up (6-4/4-3/30-15)
- 5. Thinking about winning match (6-4/5-4/30-0)
- 7. Could be 3-0 and not 2-1 (7-6/1-1/40-15)
- 7. Could have served for match (7-6/4-5)
- 6. Looking forward to next game (4-6/2-2)
- 6. Trying to get to deuce (4-6/2-2/15-40)
- 6. Thinking about a tie-break (4-6/3-3)
- 6. Knew had a chance in tie-break (4-6/3-3)
- 8. Thought I had won the game (6-7/0-0/40-15)
- 8. Thinking I'd done the job (6-7/6-6/5-0)
- 8. Felt that I had the set (6-7/6-6/5-0)
- 8. Mind's on the third set (6-7/6-6/5-0)

Future performance cognitions

- 5. Focused on match (6-4/1-0/0-0)

Match focus

- 5. Thought about the score (6-4/4-3/30-15)
- 5. Mind was wandering (6-4/4-3/30-15)
- 5. Mind went again (6-4/4-4/40-40)
- 5. Mind was still wandering (6-4/4-4/40-40)
- 5. Not thinking about the right things (6-4/4-4/40-40)
- 6. Score at back of mind (4-6/2-3)

Task irrelevant cognitions

- 6. Not particularly happy (6-4/4-4/40-40)
- 6. Not happy (6-4/4-4/40-40)
- 6. Didn't have happy thoughts (6-4/4-4/40-40)
- 6. Felt terrible (6-4/4-4/40-40)
- 6. It felt like a nightmare (6-4/4-4/40-40)

- 7. Haven't been happy (6-4/4-4/40-40)
- 7. Might be sad (6-4/4-4/40-40)
- 7. He looks sad (6-4/4-4/40-40)

- 8. He has to be sad (6-4/4-4/40-40)

- 8. Got a bit angry (6-4/4-4/40-40)
- 8. Angry with myself (6-4/4-4/40-40)
- 8. Anger was building (6-4/4-4/40-40)
- 8. Felt very angry (6-4/4-4/40-40)

- 8. Angry in heart (6-4/4-4/40-40)

5. Felt over the moon (6-4/1-0)  
 5. Felt fine (6-4/1-0/?-?)  
 5. Felt very comfortable (6-4/3-2)  
 5. Didn't feel too bad (6-4/3-2)  
 5. Felt comfortable (6-4/4-4/?-?)  
 5. Feeling pretty pleased (6-4/4-4/?-?)  
 7. Felt very good (7-6/0-0/0-0)  
 7. Feeling very good (7-6/1-0)  
 7. Not feeling bad (7-6/2-2/15-40)  
 7. Feeling pretty good (7-6/2-3)  
 7. I'm fine now (7-6/3-3)  
 7. Still feeling alright (7-6/3-4)  
 7. Got more excited (7-6/4-4)  
 7. Not feeling too bad (7-6/4-5)  
 7. Feeling pretty good (7-6/6-6)  
 6. Felt comfortable (4-6/2-3/30-0)  
 6. Really happy at the moment (4-6/3-3)  
 6. Determined (4-6/4-4/A-40)  
 8. Felt better (6-7/0-0/40-0)  
 8. Wasn't really down (6-7/0-1/40-30)  
 8. Felt much happier (6-7/1-1)  
 8. Feeling happier now (6-7/3-2)  
 8. Felt good (6-7/4-4)  
 8. Felt like I was flying a bit (6-7/4-4)  
 8. Still felt alright (6-7/5-4/5-5)  
 8. Felt on a high (6-7/5-4)  
 8. Felt okay (6-7/6-5)

Positive emotional response

7. Relieved to get game (7-6/4-4)

Relief with play

5. Gutted about game (6-4/1-1)  
 7. Don't feel as good as before (7-6/3-4)  
 7. Not feeling good (7-6/6-6/0-5)  
 6. Not particularly happy (4-6/0-0/0-30)  
 6. Not happy (4-6/4-5/40-40)  
 8. Didn't have happy thoughts! (6-7/0-1)  
 8. Felt terrible (6-7/0-1/30-30)  
 8. It felt like a nightmare (6-7/1-1/15-40)

Negative emotional response

7. He won't be feeling great (7-6/0-0/0-0)  
 7. He'll be feeling down (7-6/0-0/0-0)  
 7. He feels bad now (7-6/1-0)

Opponents perceived negativity

8. He has to be aggressive now (6-7/6-5)

Opponents perceived need for aggression

5. Got a bit angry (6-4/4-4/40-40)  
 7. Angry with myself (7-6/1-1/40-40)  
 8. Anger was bubbling away (6-7/6-5/40-40)  
 8. Felt very angry (6-7/6-6)

Anger with self

5. Angry at point (6-4/1-0/?-?)

Anger at play

Second Set Emotional Response

<p>5. Annoyed (6-4/2-1)  6. Annoyed (4-6/4-5/0-30)  8. Felt annoyed (6-7/0-0/40-40)  8. Very, very annoyed (6-7/6-5/40-40)  8. Felt annoyed (6-7/6-5/A-40)  8. Really annoyed (6-7/6-5/A-40)  5. Annoyed didn't get break (6-4/2-1)  6. Annoyed with point (4-6/4-4/40-40)  8. Annoyed missed two easy shots (6-7/0-0/40-40)  8. Annoyed didn't win last serve (6-7/0-0/40-15)  8. Annoyed with that shot (6-7/4-3/?-?)</p>	Annoyance with self
<p>6. Annoyed he's playing well (4-6/1-2/0-15)  8. More annoyed with his ace (6-7/6-5/A-40)</p>	Annoyance with opponent
<p>8. Annoyance helped play a better point (6-7/4-3/?-?)</p>	Positive use of annoyance
<p>5. Little bit frustrated (6-4/2-2)  7. Still frustrated (7-6/1-1/30-0)  7. Frustrated (7-6/1-1/40-40)  7. Frustrated (7-6/1-1/40-A)  7. Little bit frustrated (7-6/4-5)  6. Bit frustrated (4-6/0-1/30-40)  6. Bit frustrated (4-6/1-2)  6. Bit of frustration (4-6/1-2/0-15)  6. Frustrated (4-6/2-3/30-15)  6. Bit frustrated (4-6/4-4/40-40)  6. Frustrated (4-6/4-5/0-30)  8. Felt frustrated (6-7/0-1)  8. Felt frustrated (6-7/5-4/15-40)</p>	Frustration with self
<p>5. Frustrated with point (6-4/1-0/?-?)  5. Frustrated at point (6-4/2-1/30-15)  7. Frustrated with game (7-6/1-0/30-40)  7. Bit frustrated losing initiative (7-6/1-0/30-40)</p>	Frustration with play
<p>7. He's frustrating me now (7-6/1-1/A-40)  7. He's affecting me (7-6/5-5/?-?)  6. Frustrated he's playing well (4-6/1-1/0-15)</p>	Frustration with opponent
<p>5. Disappointed (6-4/4-4/40-40)  7. Very disappointed (7-6/4-5)</p>	Disappointment with self
<p>7. Disappointed with game (7-6/2-2)  7. Disappointed with point (7-6/5-6/15-15)  6. Could have done better (4-6/4-4/40-0)</p>	Disappointment with play

<p>5. Momentum's with me (6-4/3-3/40-15)</p> <p>8. Got quite bit more momentum (6-7/4-4)</p> <p>8. Momentum rolled into next game (6-7/4-4)</p>	Momentum with self
<p>7. Momentum has left me (7-6/3-4/40-40)</p> <p>7. Lost a bit of momentum (7-6/4-5)</p>	Loss of momentum
<p>7. Momentum still with him (7-6/6-6/3-5)</p> <p>6. He's getting on a roll (4-6/0-1/30-40)</p> <p>8. He was on a winning streak (6-7/0-0)</p> <p>8. Felt momentum still with him (6-7/0-1)</p>	Momentum with opponent
<p>6. Didn't want to start him on a roll (4-6/0-0)</p> <p>8. Didn't think he could maintain winning streak (6-7/0-0)</p>	Congitions on momentum
<p>5. Momentum went back and forth (6-4/5-4)</p> <p>8. Momentum back and forth (6-7)</p>	Shifts in momentum
<p>5. Got to win this point (6-4/4-4/40-40)</p> <p>6. This is a big point (4-6/4-4/A-40)</p> <p>6. Point could turn match round (4-6/4-4/A-40)</p> <p>6. Big point (4-6/4-4/A-40)</p> <p>8. It was an important point (6-7/4-4/40-40)</p> <p>8. Important point (6-7/5-6/40-40)</p> <p>8. Need to win this point (6-7/6-6/5-4)</p>	Key point
<p>5. Game is important (6-4/4-4/?-?)</p> <p>7. Got to hold this game (7-6/3-4/40-40)</p> <p>7. This is a big game (7-6/5-6/30-30)</p> <p>6. Game was important to win (4-6/0-1/A-40)</p> <p>6. Game could turn match around (4-6/1-1)</p> <p>6. It's a big game (4-6/3-4/0-30)</p> <p>6. 4-4 is a really big game (4-6/4-4)</p> <p>6. 5-4 is a big game (4-6/4-5)</p> <p>8. Important to get game under belt (6-7/0-0)</p> <p>8. Previous game was a big one (6-7/2-2)</p> <p>8. Feeling importance as set nears end (6-7/4-3/40-40)</p> <p>8. Quite an important game (6-7/4-4/40-40)</p>	Key game

- 5. My service game at 4-4
- 7. The start of the second set
- 6. Break point at 2-2 first set
- 6. At 5-4 first set on my serve
- 6. Break point on his serve 4-4, 30-40
- 6. Break point on his serve 4-4, 40-A
- 8. Break point at 6-5, 30-40 a key point
- 8. All points from 5-0 to 5-5 in tie-break key points

Key times in match

- 8. Disappointed about my performance
- 8. Disappointed about my serve
- 8. Disappointed about my backhand
- 8. Disappointed about my forehand
- 8. Disappointed about my net play
- 8. Disappointed about my footwork
- 8. Disappointed about my fitness
- 8. Disappointed about my strategy
- 8. Disappointed about my opponent's play
- 8. Disappointed about my opponent's serve
- 8. Disappointed about my opponent's backhand
- 8. Disappointed about my opponent's forehand
- 8. Disappointed about my opponent's net play
- 8. Disappointed about my opponent's footwork
- 8. Disappointed about my opponent's fitness
- 8. Disappointed about my opponent's strategy

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- 8. Disappointed about my opponent's forehand
- 8. Disappointed about my opponent's net play
- 8. Disappointed about my opponent's footwork
- 8. Disappointed about my opponent's fitness
- 8. Disappointed about my opponent's strategy

<p>5. Felt very pleased 7. Generally very pleased</p>	<p>Positive emotional response</p>
<p>5. Relieved to have won 7. Relieved to have won tie-break</p>	<p>Relief with play</p>
<p>8. I was annoyed 8. Felt angry 6. Felt a little bit frustrated 8. Anger that I was 5-0 up in the tie-break</p>	<p>Negative emotional response</p>
<p>5. Attacked the guy well 5. Got over the ball well 7. Good effort to get through 5. Pleased with the way I kept myself 6. Played a good first set 6. Had a good match 6. Gave everything I had to give 6. Quite pleased with the way I played 6. Took good things from match 6. Played quite well 6. I handled it quite well 6. Thought I did my best 8. Felt like I had chances 8. Felt like I did a few things right 8. Felt like I was seeing the ball well 8. Felt I was hitting the ball alright</p>	<p>Positive perceptions of match</p>
<p>5. Few points disappointed me 8. Disappointed about the situations 8. Disappointed about break point ahead at 6-5, 30-40 8. Disappointed I didn't take break point at 6-5, 30-40 8. Disappointed hadn't done anything to him 6. Disappointed I'd lost</p>	<p>Disappointment with game</p>
<p>5. It was probably a nine 6. Would rate it 7 or 8 8. Felt performance was average</p>	<p>Rating of match</p>
<p>6. Felt I'd achieved my goals</p>	<p>Goal success</p>
<p>8. Didn't fully achieve my goal 8. Main objective wasn't there</p>	<p>Goal failure</p>
<p>5. Training definitely had an effect 8. Training definitely had an effect 6. Lack of practice</p>	<p>Training effects</p>

Raw Data Themes	Higher Order Sub-Themes
<p>7. Always felt in control at back of the court 7. In control at the net</p>	Perceived control
<p>5. My backhand went really well 7. Played well when I needed to</p>	Positive technical/tactical success
<p>5. I put the pressure on him 5. Took on his second serve 5. Put more pressure on his first serve</p>	Pressure exerted on opponent
<p>6. Got tight on a few games</p>	Somatic anxiety
<p>8. Just wasn't positive enough</p>	Lack of self-belief
<p>6. Missing first serves because of low confidence 6. Wasn't as confident as normal under pressure</p>	Low level of confidence
<p>6. Pressure on serve and volley in second set</p>	Pressure exerted by opponent
<p>6. Didn't make enough first serve 6. Second serve wasn't strong enough 8. Wasn't serve and volleying enough 6. Didn't take chances 8. Didn't get to the net when I should have 8. Didn't play well 8. Didn't take opportunities 8. Didn't take opportunities to go forward 8. Game plan didn't work 8. I wasn't good enough on the day 8. Wasn't able to take the ball off the ground 8. Didn't feel I could rally with him all day 8. Wasn't able to finish the point at the net</p>	Technical/tactical failure
<p>6. I gave him the chance to win</p>	Match given to opponent
<p>5. Pep talk from coach</p>	Coach influence
<p>7. He didn't attack net on his serve</p>	Opponents poor play

- 6. He came out with good points and not me
- 6. He played better on the big points
- 6. He won the match
- 6. He played better shots
- 6. He played better on big points
- 8. He kept a better length
- 8. Felt he was controlling match from the ground
- 8. He started mixing serve more as match went on
- 8. Don't think he could have played much better

Opponents good play

- 8. He kept me back bit more
- 8. He didn't let me play my game plan
- 8. He played me try and play good shots
- 8. He made me try and get back into the rally
- 8. He stopped me getting to the net
- 8. Couldn't get to the net because of his depth
- 8. He made me have to play big shots
- 8. He made it more difficult for me to come in

Opponents control of match

*[Faint, illegible text from the reverse side of the page, appearing as bleed-through.]*

6. Momentum exists  
8. I think momentum is there in a tennis match

Existence of momentum

6. You have a bit of an edge  
6. Others are fearful of you  
6. Thinking you're playing really well  
6. It's carrying on a good feeling  
6. Not changing the positive feelings  
6. How you feel inside  
6. How you are hitting the ball  
8. Momentum is when I'm working well  
8. Momentum is when things are going well  
8. I'm doing things right  
8. I'm doing my game plan  
8. When I have momentum I'm getting it right  
8. When I have momentum I'm going ahead  
8. Momentum's with me when I'm totally focused

Positive effects on play

6. It's having confidence

Link to confidence

6. Momentum changes quite frequently  
6. Momentum can change in little ways  
6. Swings so easily from one to another

Fast temporal pacing of momentum

5. First point is important  
5. First and last points are key  
7. First point is key  
6. First point is really important

Key points

7. First point gives you a cushion  
7. First point important receiving or serving  
6. If win first point, get more relaxed

Positive effects from key points

6. Know when big points come round

Awareness of key points

5. Opponents game point important  
7. Important to win first game in set  
7. First game gives you an edge  
7. First game is psychological  
7. Nice to have a lead from first game  
8. First game is important

Positive effects from key games

5. Top players can get momentum back themselves  
6. It depends on you and how you're feeling  
8. I'm feel in control of momentum

Perceived control of momentum

5. Know if you have it or not

Awareness of momentum

8. Momentum goes when I'm annoyed  
8. Lose momentum when lose game plan

Antecedents to loss of momentum

## **SECONDARY APPENDIX**

# **STUDY ONE**

## **INTERVIEW SCHEDULE**

# **PSYCHOLOGICAL MOMENTUM IN ELITE ATHLETES**

## **INTERVIEW SCHEDULE**

### **SECTION ONE: INTRODUCTION**

First of all, thanks for agreeing to take part in this interview study.  
In this study I am talking to elite middle distance runners about the thoughts and feelings they have before and during and after periods of successful and less successful races and how these thoughts and feelings affect the phenomenon called "psychological momentum".

**The information from this study will be used in three ways.**

**Doctoral thesis**

**International journals/conferences**

**Results will also be made available to you, if requested.**

**Interview information will remain completely confidential.**

**Coach, without your prior consent.**

**Use selected quotes from the interview strictly anonymous**

**Identity is protected.**

**Using a tape recorder to get complete and accurate information**

**As a participant in this study, you have several definite rights:**

**participation in this interview is entirely voluntary**

**free to decline to answer any questions or to stop the interview at any point.**

**No right or wrong answers to the questions**

**If you have any questions as we go along, please ask them**

**First, I will be asking you to think back to what you perceive to be your most successful race you have run in.**

**brief questions about this race.**

**move on and discuss in more depth your thoughts and feelings about this race.**

**Questions will be split into three sections**

**thoughts and feelings before the race**

**during the race**

**after the race.**

**See diagram**

**Second part of the interview: most unsuccessful.**

**Finally, I will ask you a few general questions on the interview itself.**

**Take your time as you try to recall the past; pauses are fine**

**Please don't guess.**

**Keep in mind that I am interested in all possible factors that you feel may have affected your thoughts and feelings, and in turn your performance. All aspects in your life, both on the track and off it. past experiences, interactions with other people (for example, your coach or parents), other factors outside athletics itself, of anything else that you feel was important at that time.**

**End of the interview there will be an opportunity for you to add anything that you feel is important, but not covered in the questions asked.**

**Would you like ten minutes or so to think back to the race?**

## **SECTION TWO: SUCCESSFUL RACE**

**Background information on race  
Most successful race to date.**

- 1. When was the race? (year, month)**
- 2. What was the name of the meet and where was it held? (Britain, abroad)**
- 3. Had you ran at that track before?**
- 4. When did it take place with regards to your running season? (start, middle, end of season)**
- 5. At what stage of the meet was the race? (heats, final)**
- 6. What was the result of the race? (position, time)**
- 7. Why was this your most successful race? (important meet, friends in audience, points, grudge race)**

**Like to move on and look at it in more depth.  
Begin by taking you back to one week before the race.**

## **SECTION THREE: PRE-EVENT EXPERIENCES (ONE WEEK BEFORE RACE)**

- 1. How had your training/races been going over the last week?**  
*Probe: were you happy about it?*
- 2. Position/time for your last race?**  
*Probe: how did you feel about it?*
- 3. Coach and training?**
- 4. How were things in general in your life at this time, away from the track? (family, coach, media, contracts, friends)**
- 5. How important was it to do well in this race, why?**
- 6. How did you rate the standard of the other runners? (how many runners were ranked higher than yourself?)**
- 7. Set goals for the race (time/position)**  
*Probe: difficulty of these goals*  
*Probe: did your coach set these goals or were they self set? Did you set different goals to what the coach had set, if so how?*

## SECTION FOUR: PRE-EVENT EXPERIENCES (MORNING OF RACE)

**Think back to when you woke up that morning.**

**Talk me through what you did after getting up until arriving at the track**

**1. What were your first thoughts when you woke up?**

*Probe: task/ego oriented? (get a pb, run well, win?)*

**2. How did you feel physically, any butterflies etc.?**

**3. How self-confident did you feel?**

**4. Did you eat breakfast/not hungry (nerves)?**

**5. How much were you thinking about the race, what about? (goals, tactics, anxiety and self-confidence levels, directions)**

**6. Travelling to the track (was the track far away, did you travel with your coach/other athletes)**

## SECTION FIVE: PRE-EVENT EXPERIENCES (ARRIVAL AT TRACK)

**Talk me through what you did and how you felt once arrived at track**

**1. What time did you arrive at the track?**

**2. What was the atmosphere like, how did that make you feel? (weather, crowd)**

**3. What did you do once you'd arrived, register, warm up talk to coach etc.?**

**4. What sort of thoughts were going through your mind while you were waiting to run?**

*Probe: did you change your goals in any way, did they still seem obtainable?*

**5. Did you go into the race with any pressures on you, for example, external/internal pressures (coach, media, sponsors, parents, self)**

*Probe: how did this make you feel?*

*Probe: how did the presence/non-presence of your coach/family/friends make you feel? Would you have preferred them to be /not to be there, why?*

**6. How confident were you feeling?**

**7. Did your thoughts and/or feelings change in any way from the ones you had in the morning, if so, how?**

**8. Did you go into the race with any fitness/injury problems?**

**9. Did you feel physically and/or mentally ready for the race, if not, why not?**

## **SECTION SIX: PRE-EVENT EXPERIENCES (ON TRACK, WAITING TO LINE UP)**

### **PRE-RACE ANXIETY AND SELF-CONFIDENCE**

Ask you some questions about your thoughts of anxiety or arousal that you experienced once you were on the track waiting to line up.

#### **Subsection 1: COGNITIVE ANXIETY**

**1. What were the kind of things that were going through your mind at that time? What were you thinking about?**

*Probe:* antecedents, e.g. can't wait to get started; focused; worried about opponents; worried about running well/losing/winning; coach's, parents, sig other's expectations, lane you were drawn in.

*Probe:* **how did you interpret those worries/thoughts? As good or bad for you?**

*Probe:* **did your goals change in any way?**

#### **Subsection 2: SOMATIC ANXIETY**

**How felt physically, again while you were waiting to line up.**

**1. How did you feel, what were the kind of physical reactions/symptoms you were experiencing before the race?**

*Probe:* e.g. tenseness; butterflies; clammy hands; racing heart; relaxed; psyched-up

*Probe:* are you usually aware of your physical nerves?

*Probe:* **how did you interpret those feelings? As good or bad for you?**

#### **Subsection 3: SELF-CONFIDENCE**

Focus on your level of self-confidence, again just before the race started.

**1. How self-confident did you feel just before the race?**

*Probe:* why do you think you had such a high/average/low level of self-confidence? (e.g. confident of winning/beating PB; didn't have anything to lose; nervous but confident)

*Probe:* **how did you feel about having that level of self-confidence? Was it good or bad for you being at that level before the race?**

**3. Do you think that your level of self-confidence affected you either mentally or physically or both?(e.g. do you think because you felt/didn't feel confident that you were less/more concerned about the race or performing poorly?)**

## **SECTION SEVEN: DURING RACE EXPERIENCES (ON THE LINE)**

**The next part of the interview focuses on the race itself.**

**Take your time as you try to recall the details.**

**Some athletes are very good at recalling details.** Some can describe races almost second by second. If you can then that's great, if not, don't worry too much about it. Try to consider the race as a whole. If, however, there are **any parts of the race which you feel was particularly relevant to how you thought or felt, please mention and expand on it within the context of the questions**, for example if your anxiety increased and/or your self-confidence decreased when a runner went past you unexpectedly, that sort of thing.

**Think back to when you were lined up and waiting for the gun to go off.**

### **1. What was going through your mind at that time?**

*Probe:* were you totally focused and blocked out all distractions (e.g. crowd, the other athletes)?

*Probe:* were you visualising the race, going over your game plan, tactics in your head, goals worried about specific runner?

### **2. How did you feel physically at this time?**

*Probe:* butterflies, racing heart, strong, fit, pumped, relaxed?

## **SECTION EIGHT: DURING RACE EXPERIENCES (START OF RACE)**

That's great. Okay, the gun has gone off and you're now into the race.

**1. What were the first thoughts going through your head?** (e.g. keep calm, keep focused, stay relaxed, be positive, don't go too fast)

**2. How did you interpret/perceive those thoughts? As good or bad for you?**

*Probe:* if not concerned, why?

**3. How did you feel physically at the start of the race?** (e.g. loose, tight)

**4. How did you interpret/perceive those feelings? As being good or bad for you?**

## **SECTION NINE: DURING RACE EXPERIENCES (MAIN RACE)**

**Move on now to the race in general.**

**If you can try to talk me through the race now as best as you can, starting with the thoughts that you had.**

**1. Did your thoughts change in any way from the ones you had at the very start of the race? (focus more on tactics, other runners, hear coach in head)**

*Probe:* did they become more or less intense, and if so why do you think that was?

**2. Were you aware, at any time, of your thoughts starting to change in any way (e.g. turn negative/positive; intense/mild)?**

*Probe:* when did this happen and why (e.g. athletes running past them)?

*Probe:* did the other athletes affect your thoughts in any way, if so, how?

*Probe:* task/ego fluctuations?

**3. In what way did your thoughts change?**

*Probe:* goals change in any way (task/ego)

**4. How did you feel about this (e.g. comfortable, worried)?**

*Probe:* did you try to do anything about it, if so what, and did it work?

**5. Overall, would you say your thoughts changed very little throughout the race or not?**

**6. Did your level of confidence change throughout the race or did it remain fairly stable?**

*Probe:* if so, why?

*Probe:* did your self-confidence increase as the race went on?

*Probe:* did this affect your goals/ thoughts in any way?

**7. Did your thoughts or self-confidence affect your race plan in any way (e.g. did you attempt any moves outwith your race plan when you were positive)**

**8. How did you feel physically throughout the race? What were the kinds of physical reactions/symptoms you were experiencing?**

*Probe:* were any of these feelings ones you experienced before the race began?

**9. How did you interpret these feelings? As good or bad for you?**

**10. Would you say that these feelings, on the whole, remained relatively stable throughout the race or did they fluctuate (e.g. did your legs get weak later in the race)?**

**11. Would you say your thoughts and feelings affected your performance in any way, generally/specifically; positively/negatively?**

*Probe:* In what way, e.g. thoughts affected performance or performance affected thoughts?

*Probe:* affect your goals (re-evaluate/make more determined to achieve them: tired/pumped)

## **SECTION TEN: DURING RACE EXPERIENCES (BELL: END OF RACE)**

Looking at the **last section of the race now.**

**1. What thoughts were going through your mind when the bell went?**

**2. Did your thoughts change in any way over the last stretch of the race (e.g. more confident, positive)?**

*Probe:* why do you think that was, for example, you got a second wind when you saw the finish

*Probe:* task/ego fluctuations?( high self-confidence when knew goals would be achieved)

**3. How did you feel physically?**

*Probe:* (focus on technique = pain goes away?)

## **SECTION ELEVEN: POST RACE EXPERIENCES (ATTRIBUTIONS)**

I now want to focus on your thoughts and feelings after the race.

**1. What were your thoughts having achieved/bettered your goal (pleased to have achieved the goal)?**

**2. Did you expect to achieve/surpass your goal?**

*Probe: why?*

**3. Why do you think you performed so well? (ability, effort, luck)(training, poor perf by other athletes, coach help)**

**4. After having a chance to reflect on your performance, did your thoughts change in any way (e.g. did you attribute your performance to any other reasons)?**

**5. Did your coach give the same reasons as you about your performance?**

*Probe: if not, how did they differ?*

*Probe: did this affect your thoughts in any way (e.g. did you agree with your coach)?*

**6. Was there ever a time when you thought you wouldn't win the race? If so, when and why**

**7. Was there ever a time when you just knew that you would run well, when and why?**

*Probe: did this affect your goal setting in any way?*

## **SECTION TWELVE: POST RACE EXPERIENCES (EMOTION/AFFECT)**

**1. How did you feel emotionally after the race (e.g. confident, surprised, relieved)?**

**2. What pleased you most about the win? (overcoming a bad patch)**

**3. If you split the race into three section, beginning, middle and end, how would you describe your momentum in each of those sections?**

*Probe: for example, start: physically good = positive thoughts; middle: legs went = thoughts?*

**4. When did you run your next race, and how did you perform?**

**5. Did this race affect your performance in your next race in any way?**

*Probe: did the positive feelings/thoughts that you experienced in this race carry over into your next race?*

*Probe: how exactly did this happen (e.g. went into the next race with high expectations, confidence, lower anxiety levels)?*

**Finishes part one of the interview about your most successful race.**

**Move onto the second part.**

**Least successful race.**

**Follow the same format**

## **SECTION ONE: UNSUCCESSFUL RACE**

**Background information on race**

**Least successful race**

- 1. When was the race? (year, month)**
- 2. What was the name of the meet and where was it held? (Britain, abroad)**
- 3. Had you ran at that track before?**
- 4. When did it take place with regards to your running season? (start, middle, end of season)**
- 5. At what stage of the meet was the race? (heats, final)**
- 6. What was the result of the race? (position, time)**
- 7. Why was this race your least successful race?**

**Look at it in more depth. One week before race**

## **SECTION TWO: PRE-EVENT EXPERIENCES (ONE WEEK BEFORE RACE)**

- 1. How had your training/races been going over the last week?**  
*Probe: were you happy about it?*
- 2. Position/time of your last race?**  
*Probe: how did you feel about that?*
- 3. Coach and training?**
- 4. How were things away from the track? (family, friends, coach, media, sponsors)**
- 5. How important was it to do well in this race, why?/why was this race important to you?**
- 6. How did you rate the standard of the other runners? (how many runners were ranked higher than you)**
- 7. Did you set any goals for the race? (time/position)**  
*Probe: how did you set these goals, on your own, with help of coach, by coach alone. Had you set different goals from the coach?*  
*Probe: how would you rank the difficulty of these goals, did you think you could achieve them?*

## **SECTION THREE: PRE-EVENT EXPERIENCES (MORNING OF RACE)**

**Morning of the race now.**

**Talk me through what you did up until arriving at the track**

- 1. What thoughts were going through your mind when you woke up?**  
*Probe: task/ego oriented?*
- 2. How did you feel physically, any butterflies?**
- 3. How self-confident did you feel?**
- 4. Did you eat any breakfast/not hungry (nerves)?**
- 5. How much were your thoughts taken up about the race ahead, what were you thinking about? (goals, tactics, anxiety, self-confidence levels, directions)**
- 6. Travelling to the track (was it far away, who did you travel with)**

## **SECTION FOUR: PRE-EVENT EXPERIENCES (ARRIVAL AT TRACK)**

**Talk me through what you did once you'd arrived at the track**

**1. When did you arrive at the track?**

**2. What was the atmosphere like, how did that make you feel?**

**3. What did you do once you'd arrived, register, warm-up, talk to coach etc.?**

**4. What were you thinking about while you were waiting to run?**

*Probe: did you change your goals in any way, did they still seem obtainable?*

**5. Did you go into the race with any pressures on you, for example, external/internal pressures? (coach, sponsors, media, parents, self)**

*Probe: how did this make you feel?*

*Probe: how did the presence/non-presence of your coach/family/friends make you feel? would you have preferred them not to be/be there, why?*

**6. How confident were you feeling?**

**7. Did your thoughts and /or feelings fluctuate in any way from the ones you had in the morning, if so, how?**

**8. Did you go into the race with any fitness/injury problems?**

**9. Did you feel physically/mentally ready for the race, if not, why not?**

## **SECTION FIVE: PRE-EVENT EXPERIENCES (ON TRACK, WAITING TO LINE UP)**

### **Pre-race anxiety and self-confidence**

I'd like to ask you some questions about your thoughts of anxiety or arousal that you experienced once you were on the track waiting to line up.

### **Subsection 1: COGNITIVE ANXIETY**

**1. What were the kind of things that were going through your mind at that time? What were you thinking about?**

*Probe: antecedents, e.g. can't wait to get started; focused; worried about opponents; worried about running well/losing/winning; coach's, parents, sig other's expectations.*

*Probe: how did you interpret those worries/thoughts? As good or bad for you?*

*Probe: did your goals change in any way?*

### **Subsection 2: SOMATIC ANXIETY**

Now I would like to move on to how felt physically, again while you were waiting to line up.

**1. How did you feel, what were the kind of physical reactions/symptoms you were experiencing before the race?**

*Probe: e.g. tenseness; butterflies; clammy hands; racing heart; relaxed; psyched-up*

*Probe: are you usually aware of your physical nerves?*

*Probe: how did you interpret those feelings? As good or bad for you?*

### **Subsection 3: SELF-CONFIDENCE**

Again just before the race started.

#### **1. How self-confident did you feel just before the race?**

*Probe: why do you think you had such a high/average/low level of self-confidence? (e.g. confident of winning/beating PB; didn't have anything to lose; nervous but confident)*

*Probe: how did you feel about having that level of self-confidence? Was it good or bad for you being at that level before the race?*

#### **3. Do you think that your level of self-confidence affected you either mentally or physically or both?(e.g. do you think because you felt/didn't feel confident that you were less/more concerned about the race or performing poorly?)**

### **SECTION SIX: DURING RACE EXPERIENCES (ON THE LINE)**

Focuses on the race itself. Again, take your time as you try to recall the details. Okay, if you could think back to when you were lining up and waiting for the gun to go off.

#### **1. What was going through your mind at that time?**

*Probe: were you totally focused and blocked out all distractions (e.g. crowd, the other athletes)?*

*Probe: were you visualising the race, going over your game plan/tactics in your head?*

#### **2. How did you feel physically at this time?**

*Probe: butterflies, racing heart, strong, fit, pumped, relaxed?*

### **SECTION SEVEN: DURING RACE EXPERIENCES (START OF RACE)**

That's great. Okay, the gun has gone off and you're now into the race.

**1. What were the first thoughts going through your head? (e.g. keep calm, keep focused, stay relaxed, be positive, don't go too fast)**

**2. How did you interpret/perceive those thoughts? As good or bad for you?**

*Probe: if not concerned, why?*

**3. How did you feel physically at the start of the race? (e.g. loose, tight)**

**4. How did you interpret/perceive those feelings? As being good or bad for you?**

### **SECTION EIGHT: DURING RACE EXPERIENCES (MAIN RACE)**

Race in general. If you can try to talk me through the race now as best as you can, starting with the thoughts that you had.

**1. Did your thoughts change in any way from the ones you had at the very start of the race?**

*Probe: did they become more or less intense, and if so why do you think that was?*

**2. Were you aware, at any time, of your thoughts starting to change in any way (e.g. turn negative/positive; intense/mild)?**

*Probe: when did this happen and why (e.g. athletes running past them, crowd)?*

*Probe: do other competitors affect your thoughts in any way?*

*Probe: task/ego fluctuations?*

**3. In what way did your thoughts change?**

*4. How did you feel about this (e.g. comfortable, worried)?*

*Probe: did you try to do anything about it, if so what, and did it work?*

**5. Overall, would you say your thoughts changed very little throughout the race or not?**

**6. Did your goals change in any way, e.g. task to ego or vice versa?**

**7. Did your level of confidence change throughout the race or did it remain fairly stable?**

*Probe: if so, why?*

*Probe: did your self-confidence increase as the race went on?*

**8. Did your thoughts or self-confidence affect your race plan in any way (e.g. did you attempt any moves outwith your race plan when you were positive)**

**9. How did you feel physically throughout the race? What were the kinds of physical reactions/symptoms you were experiencing?**

*Probe: were any of these feelings ones you experienced before the race began?*

**10. How did you interpret these feelings? As good or bad for you?**

**11. Would you say that these feelings, on the whole, remained relatively stable throughout the race or did they fluctuate (e.g. did your legs get weak later in the race)?**

*Probe: did this affect your goals in any way? (re-evaluate/more determined)*

**12. Would you say your thoughts and feelings affected your performance in any way, generally/specifically; positively/negatively?**

*Probe: In what way, e.g. thoughts affected performance or performance affected thoughts?*

## **SECTION NINE: DURING RACE EXPERIENCES (BELL, END OF RACE)** **Last section of the race now.**

**1. What thoughts were going through your mind when the bell went?**

**2. Did your thoughts change in any way over the last stretch of the race (e.g. more confident, positive, anxiety)?**

*Probe: why do you think that was, for example, you got a second wind when you saw the finish*

*Probe: task/ego fluctuations (low self-confidence, failed goals)*

**3. How did you feel physically?**

*Probe: (focus on technique= pain goes away?)*

## SECTION TEN: POST RACE EXPERIENCES (ATTRIBUTIONS)

I now want to focus on your **thoughts and feelings after the race.**

- 1. What were your thoughts having failed to achieve your goal** (*disappointed not to have achieved the goal*)?
- 2. Did you expect to achieve/surpass your goal?**  
*Probe: why?*
- 3. Why do you think you didn't perform well?** (*ability, effort, luck*)
- 4. After having a chance to reflect on your performance, did your thoughts change in any way** (e.g. *did you attribute our performance to any other reasons*)?
- 5. Did your coach give the same reasons as you about your performance?**  
*Probe: if not, how did they differ?*  
*Probe: did this affect your thoughts in any way (e.g. did you agree with your coach)?*
- 6. Was there ever a time when you thought you would win the race? If so, when and why**
- 7. Was there any stage when you thought that you wouldn't run well?**  
*Probe: did this affect your goal setting ?*

## SECTION ELEVEN: POST RACE EXPERIENCES (EMOTION/AFFECT)

- 1. How did you feel emotionally after the race** (e.g. *confident, surprised, relieved*)?
- 2. What disappointed you the most about the loss?** (*not overcoming a bad patch*)
- 3. If you split the race into three sections, beginning, middle and end. How would you describe your momentum in each of those sections?**  
*Probe: for example, start: physically good=positive thoughts; middle: legs went =negative thoughts?*
- 4. When did you run your next race, and how did you perform?**
- 5. Did this race affect your performance in your next race in any way?**  
*Probe: did the negative feelings/thoughts that you experienced in this race carry over into your next race?*  
*Probe: how exactly did this happen (e.g. went into the next race with low expectations, confidence, high anxiety levels)?*

## SECTION TWELVE: CONCLUSION

That just about finishes the interview. However, before we end, let me ask you some final questions.

- 1. Having talked about your thoughts and feelings throughout several races, successful and less successful, what are your views on the concept of Psychological Momentum?**  
*Probe: do you think such a thing exists?*

*Probe: have you thought about it before now, its possible effects upon your performances?*

Great, and finally can I just ask you

### **SECTION THIRTEEN: REFLECTION ON INTERVIEW**

1. How do you think the interview went?
- 2. Did I lead you or influence your responses in any way? For example, do you think I put words in your mouth?**
3. Have you any comments or suggestions about the interview itself? For example, did I explain the questions clearly?
- 4. Do you have any questions that you would like to ask me?**

Right, that's the end of the interview. Thank you for taking the time to done this interview. You're comments have really helpful. I hope the rest of your season goes well for you.

**STUDY ONE**

**SUBJECT CONSENT FORM**

# Liverpool John Moores University Research Project

## SUBJECT INFORMED CONSENT FORM

Title of Research: An investigation of psychological momentum in middle and long distance runners

Name of Researcher: Judith Smith (BSc MSc)  
Name of Supervisors: Dr. A. Nevill (BSc PhD)  
Mr. D. Gilbourne (Cert Ed BA MSc Accredited Sport Psychologist)

Title of Study: A micro investigation of psychological momentum

### TO THE PARTICIPANT

This consent form is designed to set out all of the information relevant to the proposed study. To acknowledge your approval to participate in this study, please sign below. Should you require any clarification or additional information with regards to the study protocol, this should be obtained before you sign this form. **Please bring this form with you to the interview.**

### OUTLINE OF THE STUDY

This study will examine athletes experiences of psychological momentum. It will focus on athletes perceptions of successful and unsuccessful races.

### PROCEDURE

The procedure will involve a semi-structured taped interview being carried out with you. It will last for approximately one hour. The interview will be split into two sections:

Section One: this will focus on what you perceive to be your most successful race which you have ever ran in.

Section Two: will follow a similar protocol to Section One, only this time focusing on what you believe to be the most unsuccessful race you have ran in.

**Please use the time before the interview to think back to your most successful and unsuccessful races.**

## ETHICAL CONSIDERATION

This study has been approved by Liverpool John Moores University Ethics Committee. It conforms to the Ethics Committee guidelines and also to the ethical guidelines as set out by the British Association of Sport and Exercise Sciences (BASES, 1988).

## PARTICIPANTS DECLARATION

I have read and understood the information regarding the above study. I understand that:

- a) I am free to withdraw from this study at any point
- b) all the information provided by me will be held in the strictest confidence. The storage and use of identifiable data will be in accordance with the provisions of the Data Protection Act. My identity will not be disclosed to any other party other than that of the above named researcher
- c) I have the right to a copy of my information if I so request it.

NAME .....

SIGNATURE .....

RESEARCHER .....

WITNESS .....

DATE .....

## **STUDY TWO**

### **INTERVIEW SCHEDULE**

## Interview Schedule

### Section One: Introduction

Talking to tennis players about their thoughts and feelings they have before, during and after a tennis match, and how these thoughts and feelings affect the phenomenon called 'psychological momentum'

Remain completely **confidential**

No information will be passed to your **coach** without prior consent

Selected quotes from interview strictly anonymous

Identity is protected

Using a **tape recorder** to get complete and accurate information

As a participant in this study you have several definite rights:

Participation in this interview is entirely voluntary

Free to decline to answer any question or to stop the interview at any point

**No right or wrong answers** to the questions

If you have any questions as we go along, please ask them

The interview will be split into three sections:

Your thoughts and feelings before the match

Your thoughts and feelings during the match

Your thoughts and feelings after the match

Some questions on what you think psychological momentum is and finally, a few general questions on the interview itself

**Take your time as you recall the past; pauses are fine**

If you can't remember any details let me know, please **don't guess**

Keep in mind that I'm interested in **all possible factors** that you feel may have affected you thoughts and feelings, and in turn your performance

All aspects of your life, **both on the court and off it**- past experiences, interactions with other people (coach, parents etc), other factors outside tennis itself, or anything else that you feel was important at that time

At the end of the interview there will be an opportunity for you to add anything that you feel is important, but not covered in the questions asked

Do you have any questions?

### Section Two: Demographic Information on Matches

Background information on 'research' match:

Have you played against your opponent before

*Probe:* if yes, roughly what was the win/loss ratio, not including this match?

.....  
.....

**Section Three: Pre-match experiences: One week before match**

1. How had your **training been going over the last week?**  
*Probe:* were you happy about that?  
*Probe:* **attributions for training?**
2. How were **things in general** in your life at this time, away from the courts?  
(family, coach, friends, media, contracts etc)
3. How **important** was this match to you?
4. How **important was it to do well** in this match, why?
5. Did you have any **fitness/injury problems** coming into this match?
  1. Did you **set goals** for the match?  
*Probe:* technical, tactical, game plan, outcome etc?  
*Probe:* who set the goals- self, coach, joint?  
*Probe:* how difficult were these goals?  
*Probe:* what did you think your chances of winning the match were (marks out of 10)

.....  
.....

**Section Four: Pre-match experiences: Morning of match**

Think back to when you **woke up** that morning  
**Talk me through what you did** after getting up until arrival at the court

1. What were your **first thoughts** when you woke up?  
*Probe:* task/ego oriented
2. How did you **feel physically?**
3. How **self-confident** did you feel?
4. Were you **thinking about the match?**

**[Effects of last match carried into this match?]**

.....  
.....

**Section Five: Pre-match experiences: Arrival at tennis centre**

Talk me through what you did and how you felt **once** arrived at centre

1. What was the atmosphere like, how did that make you feel?
2. What **sort of thoughts were going through your mind?**
3. Did you **change your goals** in any way?
4. Levels of **anxiety and confidence?**
5. Did you go into the match with **any pressures on you (self or others)?**

**[Questionnaire]**

.....  
.....

## Section Six: Pre-match experiences: warming-up

### [VIDEO TAPE]

1. What sort of things were **going through your mind**? What were you thinking about?

*Probe:* worried about opponent, worried about playing well, thinking back to last match?

2. How did you interpret those thoughts - as good or bad for you?

3. **How did you feel**, what were the kind of physical symptoms you were experiencing during the warm-up?

*Probe:* racing heart, relaxed

4. How did you interpret those feelings- as good or bad for you?

5. How **self-confident** did you feel during the warm-up?

*Probe:* did your opponent affect your confidence?

6. How did you feel about having that level of confidence – good or bad for you?

7. Do you think that your level of confidence affected you either mentally, physically or both?

8. **Did you feel mentally and physically ready for the match**

9. Family/coach/friends watching?

### [Questionnaire]

.....  
.....

## Section Seven: During match experiences

The next part of the interview focuses on the match itself

I'd like you to **watch a video of your match**. There will be two pictures on the screen. You will be in the main picture, while your opponent will be in a smaller picture in the corner of the screen.

While the video is playing, I'd like you to **talk me through what you were thinking and how you were feelings**. You will have **full control of the running of the video**. You can **fast forward** at times when your thoughts and feelings didn't change very much, **rewind** if you felt you missed an important part in the match, and **pause when you want to take time to expand on your thoughts and feelings**. You can take as long as you like to go through the video – there is **no time limit**. Any 'key' games, **give as much detail as possible**.

Through out the video I will be **asking you questions about your thoughts and feelings**. Also at **key points** I'll ask you to fill in a **short questionnaire about your moods**. I'd like you to **fill one out just now**, then after the second game of each set and at the end of each set. If you feel there were **key moments during the match, times when you felt the match swung either for or against you, let me know** and I'll ask you to fill in a questionnaire here as well. **Take note of score and time on video**.

Do you have any questions? Okay, take your time as you recall your thoughts and feelings

**[KEY POINTS/GAMES]**

**[Questionnaire]**

**KEY AREAS**

**Antecedents** (of momentum; opponent or self induced e.g. poor/weak shots)

**Goal Changes** (micro goal-setting, task/ego, difficulty)

**Anxiety** (cognitive/somatic; directionality)

**Confidence** (increase/decrease)

**Emotions** (positive/negative)

**Attributions** (after points, games, sets and match; stability, controllability, internal/external)

**Technical** (thoughts)

**Tactical** (thoughts)

**PST** (coping strategies; emotional/problem focused; pre-performance routine; success of PST)

**Subcomponents of performance**

**Timing:**

**Before points, during points (e.g. tactical, task irrelevant), after points**

**Before games, after games, tie-breaks**

**Change of ends**

Relate to strengths and weaknesses of game (e.g. did cognitive anxiety affect serve more than forehand?)

**[STATE SCORE AT EVERY STAGE!] [questionnaire]**

.....  
.....

**Section Eight: Post-match experiences: Emotions**

1. How did you feel emotionally after the race?
  2. What pleased you most about the match?
  3. What disappointed you most about the match?
  
  4. When did you play your next match?
  5. What was the outcome?
  6. Did this match affect your next match in any way?
- Probe:* increase confidence, added more pressure?

.....  
.....

**Section Nine: Post-match experiences: Attributions**

1. What were your thoughts and feelings having won/lost the match?

2. Overall, were you happy with your performance and why?
3. **Why do you think you performed so well/badly?**  
*Probe: do you think that you could overcome/repeat the same performance in your next matches (stability, controllability, internal/external)?*
4. Could you prioritise your attributions?
5. **Having had a chance to reflect on your performance, have your thoughts and feelings changed in any way?**
6. Did your coach give the same reasons as you for your performance?

**Section Ten: General thoughts on match**

1. On a scale on 1-10, how would you rate your performance (average, better than average)?
2. **Describe PM throughout the match: key points/games.**
3. Did you expect to win/lose, if so, why?
4. **Did you feel you won/lost the match or your opponent won/lost the match?**  
*Probe: won/lost match mentally before it started?*
5. **Is there anything else that you feel was important in the match and affected your performance, that we've failed to discuss?**

.....  
 .....

**Section Eleven: General thoughts on psychological momentum**

Having talked about your thoughts and feelings before, during and after this match, I'd like to ask you some questions on the **concept of psychological momentum?**

1. Do you think such a thing exists?
2. Do you think that affects your performance in any way?
3. Can you explain to me what you think momentum is and how you feel?  
*Probe: antecedent or consequence (produces performance or is performance itself)?*  
*Probe: positive momentum – time slows down, less tired, more focused*  
*negative momentum – helpless, question ability, fall back on going through the motions*
4. Do you think there are critical times during a match when momentum reverses?  
*Probe: antecedents – opponent/self plays better, win several points in a row etc*
5. **During positive/negative momentum, do you take risks with shots or play safe?**
6. **Do you find that when momentum starts or stops, its immediate or a gradual process?**

.....  
 .....

**Section Twelve: Reflection on the interview**

1. How do you think the interview went?

2. **Did you have any problems in thinking back to the match/did the video help?**
3. **Did I lead you or influence your answers in any way?** For example, did I put words in your mouth?
4. **Have you any comments or questions about the interview itself?**
5. **Did you find this interview helpful to your tennis in any way?**

That's the end of the interview. Thanks for taking the time to sit down and go through your match with me; your comments have been really helpful.

**STUDY TWO**  
**QUESTIONNAIRE**

## END OF WARM-UP

	Not At All	1	2	3	4	5	6	7	8	9	10	Very Much So	Very Unhelpful	Neutral	Very Helpful			
1. My thoughts are worried	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3
2. My body feels tense	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3
3. I feel confident	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3
4. I feel depressed	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3
5. I feel angry	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3
6. I feel fatigued	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3
7. I feel energetic	1	2	3	4	5	6	7	8	9	10		-3	-2	-1	0	+1	+2	+3

**STUDY TWO**

**SUBJECT INFORMED CONSENT FORM**

# Liverpool John Moores University Research Project

## SUBJECT INFORMED CONSENT FORM

Title of Research: An investigation of psychological momentum in an elite tennis players

Name of Researcher: Judith Smith (BSc, MSc)

Name of Supervisors: Dr. A. Nevill (BSc, PhD)

Dr. D. Gilbourne (Cert Ed, BA, MSc, PhD)

Title of Study: A micro and macro analysis of a tennis tournament

### TO THE PARTICIPANT

This consent form is designed to set out all of the information relevant to the proposed study. To acknowledge your approval to participate in this study, please sign below. Should you require any clarification or additional information with regards to the study protocol, this should be obtained before you sign this form.

### OUTLINE OF THE STUDY

This study will examine elite tennis players' experiences of psychological momentum. It will explore players' levels of anxiety, self-confidence, goal orientation and attributions with regards to their perceived effects upon momentum and performance over two consecutive matches.

### PROCEDURE

Both your matches will be video taped and a taped semi-structured interview will then be carried out for each match. These interviews will be held at times which are convenient for you. With the aid of the video, you will be asked to think back to how you felt and what you were thinking during each match. You will also be asked how, if at all, you thought winning your first match affected how you felt and played in your second match.

### ETHICAL CONSIDERATION

This study has been approved by Liverpool John Moores University Ethics Committee. It conforms to the Ethics Committee guidelines and also to the

ethical guidelines as set out by the British Association of Sport and Exercise Sciences (BASES, 1988).

#### PARTICIPANTS DECLARATION

I have read and understood the information regarding the above study. I understand that:

- a) I am free to withdraw from this study at any point
- b) all the information provided by me will be held in the strictest confidence. The storage and use of identifiable data will be in accordance with the provisions of the Data Protection Act. My identity will not be disclosed to any other party other than that of the above named researcher
- c) I have the right to a copy of my information if I so request it.

NAME .....

SIGNATURE .....

RESEARCHER .....

DATE .....

**STUDY TWO**  
**STATISTICAL RAW DATA**

FIRST POINT WON

		YES	NO
GAME	WON	27	9
	LOST	1	4

Winners/serve

FIRST POINT WON

		YES	NO
GAME	WON	15	13
	LOST	3	10

Losers/serve

FIRST POINT WON

		YES	NO
GAME	WON	10	3
	LOST	13	15

Winners/received

FIRST POINT WON

		YES	NO
GAME	WON	4	1
	LOST	9	27

Losers/received

FIRST POINT WON

		YES	NO
GAME	WON	5	2
	LOST	0	3

Case study I winner/serve

FIRST POINT WON

		YES	NO
GAME	WON	2	3
	LOST	0	5

Case study I loser/server

FIRST POINT WON

		YES	NO
GAME	WON	5	0
	LOST	3	2

Case study I winner/received

FIRST POINT WON

		YES	NO
GAME	WON	3	0
	LOST	2	5

Case study I loser/received

FIRST POINT WON

		YES	NO
GAME	WON	6	3
	LOST	0	0

Case study 2 winner/server

FIRST POINT WON

		YES	NO
GAME	WON	4	2
	LOST	2	1

Case study 2 loser/server

FIRST POINT WON

		YES	NO
GAME	WON	1	2
	LOST	2	4

Case study 2: winner/receiver

FIRST POINT WON

		YES	NO
GAME	WON	0	0
	LOST	3	6

Case study 2: loser/receiver

FIRST POINT WON

		YES	NO
GAME	WON	8	2
	LOST	0	0

Case study 3: winner/serve

FIRST POINT WON

		YES	NO
GAME	WON	4	4
	LOST	0	2

Case study 3: loser/serve

FIRST POINT WON

		YES	NO
GAME	WON	2	0
	LOST	4	4

Case study 3: winner/receiver

FIRST POINT WON

		YES	NO
GAME	WON	0	0
	LOST	2	8

Case study 3: loser/receiver

FIRST POINT WON

		YES	NO
GAME	WON	8	2
	LOST	1	1

Case study 4 winner/server

FIRST POINT WON

		YES	NO
GAME	WON	5	4
	LOST	1	2

Case study 4 loser/server

FIRST POINT WON

		YES	NO
GAME	WON	2	1
	LOST	4	5

Case study 4: winner/receiver

FIRST POINT WON

		YES	NO
GAME	WON	1	1
	LOST	2	8

Case study 4: loser/receiver

**STUDY THREE**

**SUBJECT INFORMED CONSENT FORM**

## Liverpool John Moores University Research Project

### SUBJECT INFORMED CONSENT FORM

Title of Research: An investigation of psychological momentum in an elite female tennis players

Name of Researcher: Judith Smith (BSc, MSc)

Name of Supervisors: Prof. A. Nevill (BSc, PhD)

Dr. D. Gilbourne (Cert Ed, BA, MSc, PhD)

Title of Study: A micro and macro analysis of grass-court tennis tournaments

#### TO THE PARTICIPANT

This consent form is designed to set out all of the information relevant to the proposed study. To acknowledge your approval to participate in this study, please sign below. Should you require any clarification or additional information with regards to the study protocol, this should be obtained before you sign this form.

#### OUTLINE OF THE STUDY

This study will examine your experiences of psychological momentum. It will explore your levels of anxiety, self-confidence, goals and thoughts and feelings with regards to their perceived effects upon momentum and performance during a series of grass-court tournaments.

#### PROCEDURE

Semi-structured interviews will be carried out over a period of three weeks. These interviews will be held at times which are convenient for you. You will be asked to think back to how you felt and what you were thinking during each match you play and also on days when you are not playing competitively.

#### ETHICAL CONSIDERATION

This study has been approved by Liverpool John Moores University Ethics Committee. It conforms to the Ethics Committee guidelines and also to the ethical guidelines as set out by the British Association of Sport and Exercise Sciences (BASES, 1988).

**PARTICIPANTS DECLARATION**

I have read and understood the information regarding the above study. I understand that:

- a) I am free to withdraw from this study at any point
- b) all the information provided by me will be held in the strictest confidence. The storage and use of identifiable data will be in accordance with the provisions of the Data Protection Act. My identity will not be disclosed to any other party other than that of the above named researcher
- c) I have the right to a copy of my information if I so request it.

NAME .....

SIGNATURE .....

RESEARCHER .....

DATE .....