## Cardiff School of Sport
### DISSERTATION ASSESSMENT PROFORMA:
#### Empirical

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2 There is scope within qualitative dissertations for the RESULTS and DISCUSSION sections to be presented as a combined section followed by an appropriate CONCLUSION. The mark distribution and criteria across these two sections should be aggregated in those circumstances.
A Comparison between the Differences of Coaches’ and Athletes’ Perceptions of Closeness, Commitment and Complementarity within Coach-Athlete Relationships

Dissertation submitted under the discipline of

COACHING

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Finally, I would like to thank all the participants who took part in the study, who without it would not have been possible.
Abstract

This study examined the differences of coaches and athletes perceptions of the levels of Closeness, Commitment and Complementarity (3C’s) within coach-athlete relationships. The secondary aim was to compare the differences of the 3C’s between team sport participants and individual sport participants. The coaches (N= 55) and athletes (N = 55) from team (N= 30) and individual sports (N = 80) completed the Coach-Athlete Relationship Questionnaire (CART-Q), from direct and meta perspectives. MANOVA revealed no significant difference for the meta perspective of the 3C’s for the coach and athlete variable. Further analysis revealed no significant main effect for both the direct and meta perspective of the 3C’s for the team and individual independent variable. Coach and athlete main effects for the direct perspective were indicated. Follow up Bonferroni t-tests revealed significant differences between coaches and athletes perceptions of closeness and commitment. Specifically, the results indicated that athletes perceived they were closer and more committed to their coaches than the coaches did to their athletes. These findings may create practical implications for the coach-athlete relationship such as developing coaches feelings towards their athletes. The sport type did not affect the levels of the 3C’s experienced or perceived within the coach-athlete relationship and therefore athletes and coaches should be made aware that sport type does not affect these specific constructs of the relationship.
CHAPTER 1

INTRODUCTION
1.0 Introduction

Coaching, in terms of developing sport performance, has only recently been acknowledged as a profession (Robinson, 2010). In contrast, professions such as biomechanics, psychology and sociology have been recognised for quite some time (Cross and Lyle, 1999). However despite this, Cross and Lyle (1999) claim that coaching has quickly progressed in popularity which is evident by the number of undergraduate and postgraduate courses offered by British Universities. Due to this increased popularity, the role of a sports coach can be seen to be crucial in developing athlete’s performances. If the coaching process is delivered proficiently then the prospect of increased athlete performance is likely to become more observable. For this to occur, coaches should do more than coach an athlete, they should aim to really understand the athlete as a person. This is required for coaches to work more proficiently. Cote and Sedgwick (2003) suggested that athletes and coaches perceived dominant coaching conducts to include planning, creating constructive training environments, goal setting, confidence building, efficient teaching of skill, acknowledging individual differences and building reports with individual athletes. The traits that have been said to be required of coaches should allow for performance development. However, if a coach does not possess these traits, then levels of coaching performance and athlete development may not be as significant.

Jowett (2005) suggested that the coach-athlete relationship is at the centre of coaching. Due to the complexity of the nature of the coaching process as stated by Jones and Turner (2006), it is important that coaches and athletes are close to one another. As sport is a socially mediated process as well as a social context (LaVoi, 2007), there is a need for a close coach-athlete relationship in order for both coach and athlete to work and perform well together. Therefore it can be seen as important to explore the construct of closeness within the coach-athlete relationship, to see what implications it may have on both the coaches and athletes’ performance and the relationship itself. The term ‘Closeness’ has been described as feeling emotionally close with one another in the coach-athlete relationship (Jowett and Ntoumanis, 2004). A stronger emotional bond between the coach and athlete may create a closer and more successful relationship. LaVoi (2007) suggested that dyads most often investigated in this area are those that include; parent-child, married couples and relationships among peers. However, coach-athlete dyads have not received as much attention. As coaches play a large role in athletes lives (LaVoi, 2007), exploring this particular dyad can be seen as worthwhile. Jowett and Ntoumanis
(2004) have also investigated the role of Commitment (cognitions), and Complementarity (behaviours) within the coach-athlete relationship. Jowett and Ntoumanis (2004) claim that the coach-athlete relationship definition states that coach’s and athlete’s emotions, thoughts and behaviours are all linked together. Therefore it can be seen as beneficial to explore the links between the Closeness, Commitment and Complementarity (3C’s) within the coach-athlete relationship.

1.1 Purpose of the Thesis

The purpose of this study was to compare coaches and athletes’ perceptions of closeness, commitment and complementarity (3C’s) within coach-athlete relationships. The aim is to further the knowledge regarding the importance of these aspects within their interactions. This specific research question aimed to enhance the understanding of the 3C’s within the coach-athlete relationship literature. The secondary aim of this investigation was to access the differences between coaches and athletes competing in individual sports to coaches and athletes operating within team sports.

1.2 Structure of the Thesis

This thesis has been split into 6 distinctive sections to provide a detailed insight into the 3C’s of the coach-athlete relationship. Following on from this introduction, the second section reviews the current literature available regarding coaching as a whole and more specifically, the coach-athlete relationship. Models that have been proposed to represent the coach-athlete relationship, were critically reviewed to illustrate which aspects are the most salient within the relationship. In particular, the 3C’s and the 3C’s +1 models will be explored and analysed in detail to provide an understanding of why each of the 3C’s can be viewed as important to build an effective coach-athlete relationship. The literature review will then narrow its focus on a specific research question, formed on the basis of existing research, justifying why the 3C’s are important to explore further. The third section details, the methodology. This includes information relating to the participants used for the data collection, the instrumentation used and the processes used, to capture the data. Section 4, the result section, will be presented in a concise manner, addressing the key findings of the study. Following on, is the discussion. This section will discuss the results, as detailed in section 4 and will link back to the current literature, relating to the coach-athlete relationship. The final section will be the conclusion. This will aim to summarise the key points throughout the assignment. This section will also look at the
practical implications, the results may have on the relationship and also a discussion of the limitations of the thesis. This will provide future directions for researches.
CHAPTER 2

LITERATURE REVIEW
2.0 Literature Review

2.1 Introduction

This chapter focusses on reviewing the literature from previous studies relating to the coach-athlete relationship. It has been split into 8 different sections and discusses current research on those particular areas of interest. To start, an overview on the coaching process has been provided, looking at aspects that are important within the process of coaching. The next section specifically looks at the coach-athlete relationship, which then leads onto the subsequent sections with a model of the coach-athlete relationship. The constructs of closeness, commitment and complementarity will then be explored within the coach-athlete relationship, followed by the addition of a 4th construct known as co-orientation. A summary of the current literature on the above areas of interest will be provided, leading onto the purpose of the study based on the limitations and suggested future directions of previous studies. The final section is the hypothesis, where a prediction for this present study has been made, based on the work of previous researchers.

2.2 The Coaching Process

Szabo (2012) claims that the process of coaching others involves a large proportion of teaching, particularly when presenting new activities and exercises to novices. Coaches should therefore be aware that athletes may have different learning styles and so must be able to relate to each individual. Lyle (2002) proposes that the coaching process is a sequence of activities and interventions, which require preparation, organization and integration and are designed to improve competition performance. These sequential activities may include preparing a specific training session aimed at developing a specific skill or pattern of play, the coaching during the session and the provision of feedback to the athletes both during and after the session. Both the coach and athlete develop these principles however it is the coaches’ responsibility to employ the overall process. The coach and athlete both contribute to this process, thereby creating a coach-athlete relationship. Jones and Wallace (2005) viewed the coaching process differently to Lyle (2002) by suggesting that viewing the process from a logical outlook, limits the possibility for a progression in an academic understanding of coaching or for guiding practitioners. Jones and Wallace (2005) have further stated that the variables that frame the coaching process are many and ever changing. Jones and Turner (2006) support this view by
claiming that the process of coaching can be seen to be an unclear social process due its involvement of a large network of variables. This viewpoint has been previously looked at by Baria, Cote, Russell, Salmela and Trudel (1995) who stress that there is no existing theoretical structure that describes what facets within the process of coaching that are most critical. Baria et al., (1995) claimed that it has therefore become increasingly important for the content of the coaching domain to be structured in order to support its progression as an occupation. This is due to its fast development as stated by Cross and Lyle (1999). Due to the lack of direction regarding the variables incorporated within the coaching process, it may be viewed as being both complex and disordered, particularly as many of these variables are autonomous according to Lyle (2002). If the associations amongst the components within frameworks are clarified, then a more systematic process of coaching may be observable.

Developing an understanding of the coaching process can therefore be seen as having a high importance for coaches as it provides them with the opportunity to develop strategies for improving their athlete’s performance. For example, coaches need to understand their individual athletes learning styles rather than just delivering in one style (Calleja-Gonzalez, Escanero and Gonzalez-Haro, 2010). As a coach may have athletes of different ages, it is also important to understand how to coach athletes of different ages. Hilliard (2007) proposed that coaches of young athletes should focus on establishing a wide array of motor skills to develop an extensive conditioning base. Without this initial level of fitness and skill development it may be a challenge to teach them when older. Further strategies may include verbal instructions, criticism and reassurance which could be implemented and thus contribute to the creation of a success-orientated setting as claimed by Szabo (2012). Reflection is another key skill for coaches to possess as it enables the enhancement of their own learning (Werthner and Trudel, 2006). This consequently provides the opportunity to also improve the athletes learning. It has also been suggested that for coaches to be successful and effective, they must be extremely skilful when making decisions (Szabo, 2012). However, a strong coach-athlete relationship is needed if a coach is to be as effective as possible.
2.3 The Coach – Athlete Relationship

Jowett (2005) have claimed that the coach-athlete relationship is not simply a by-product of the coaching process or dependent on the age, gender or level of performance of the athlete, however it is the centre of coaching. An athlete’s performance is reliant upon many situational and individual factors and thus the role of the coach to assist both learning and physical development is highly important (French and Norman, 2013). Currently there is little research that exists which recognizes optimal coaching behaviours and issues that have an impact on the efficiency of certain behaviours, despite the importance of the coach in influencing the success of an athlete’s performance as stated by Kenow and Williams (2009). Jowett and Cockerill (2003) claim that this specific interpersonal relationship between the coach and athlete is important to psychology. Both the coach and athlete purposely create a relationship which is derived from an increase in respect and gratitude to one another as individuals (Jowett, 2005). This increase in respect and appreciation is important for a successful relationship between the coach and athlete. This is due to the coach-athlete relationship being at the centre of accomplishment and the acquirement of mastery personal assets such as confidence, leadership and fortitude as stated by Jowett (2005). For a coach to create a relationship in which an athlete can develop both personally and physically, Jowett (2005) has claimed that they must also have to develop themselves. Therefore, coaches must aim to constantly develop their own skills to further develop the effectiveness of the coach-athlete relationship. This can be seen to be especially important as Heydarinejad and Adman (2010) assert that the relationship can determine the success of the team or individual athletes, as coaches are required to create an understanding of their athletes.

Jowett and Cockerill (2003) claim that the coach-athlete relationship plays a significant role in an athlete’s improvement both as a person and a performer. However, despite this relationship being highly important with regards to athlete’s development, Jowett and Cockerill (2003) have suggested that the relationship can also cause stress and disturbance, particularly towards the athlete. This could then lead to a lack of trust or communication from either the coach or athlete and result in the bond between the two to weaken, creating a less cohesive relationship and poorer outcomes in terms of performance and personal development. Jowett, Lorimer and Yang (2012) support this viewpoint by claiming that the coach-athlete relationship can have positive outcomes (e.g., success) and negative outcomes (e.g., failure and conflict). It is therefore important that a coach understands how the athletes are feeling so that negative outcomes can be
avoided. Boardley, Kavussanu and Ring (2008) found that athlete’s awareness of their coach’s efficiency on motivating, character building, and focussing on technique and game strategies had significant implications for certain vital aspects of their rugby experiences. Boardley et al., (2008), claim that these areas, within coaching, can have an effect on athlete’s effort, commitment, satisfaction and confidence. Thus, coaches should be made aware that they can influence these aspects of an athlete’s life, thereby affecting the nature of the athletic experience. This knowledge, regarding how a coach can influence areas of an athlete’s life can be linked to Bognár, Géczi, Révész and Trzaskoma-Bicsérdi (2007) statement, if a coach is able to develop an inspirational environment that focusses on athletes’ effort and personal development, then a greater athlete cooperation may be more evident. Thus allowing for the creation of a more stable background for excellence. Boardley et al., (2008) suggest that coach education programmes should contemplate incorporating certain guidelines that aim to develop coach’s proficiency in motivating athletes, character building and focussing on the technical and tactical aspects of coaching.

2.4 The 3C’s

The constructs of closeness, commitment and complementarity have been seen by many researchers as having a high level of significance on the effectiveness of coach-athlete relationships. Balduck and Jowett (2010) define closeness as an emotional state of respect, trust and interpersonal liking amongst members contained within the relationship. A similar definition describes closeness as being the appreciation of emotional feelings and affection with one another (Cho, Choi and Huh, 2013) and can be related to Jowett and Clark-Carter (2006) statement that it is the trust, respect and relational liking between an athlete and a coach. Closeness may therefore been seen as a vital element of a successful relationship due to the emotional connection associated with it amongst the members who operate within it. The nature of the relationship has been said to change over time as different emotions and behaviours shape the interaction of the coach and athlete (Jowett and Poczwardowski, 2007). A close coach-athlete relationship may consequently allow for these emotions to not affect the strength of the bond if any issues arise. Commitment has been said to reflect the thoughts of the stability and connection of the relationship (Balduck and Jowett, 2010) and is a significant concept within this type of relationship as Jones (2009) have suggested that it helps demonstrate a level of care. Jones (2009) stated that commitment is an essential aspect within the coach-athlete relationship by proposing that caring involves a commitment and a move of motivational
application from the teacher to the student. This statement therefore suggests that without commitment, a coach is unable to show that they care about their athletes and thus may lead to a lack of motivation and effort from the athletes. The objective of commitment according to Cho et al., (2013), is to advance and sustain relationships through honest communication and providing understanding. It may therefore be seen that for coaches and athletes to feel committed to one another, they must be truthful to each other. Complementarity as defined by Cho et al., (2013) is a cooperative interaction between each member of the relationship (e.g., the coach and athlete) and describes both coaches’ and athletes’ relational behaviour of mutuality and association, such as being responsive and at ease during training (Jowett and Timson-Katchis, 2005). Complementarity has also been suggested to reflect the co-operative, associate and reactive acts of cooperation and concerns the degree to which coaches and athletes interactive behaviours are responsive, friendly and easy (Balduck and Jowett, 2010). Thus, the degree to which coaches and athletes react and cooperate with one another, may affect the perceived level of complementarity within the coach-athlete relationship. If a coach or athlete is not responsive to a situation, then it could lead to a weaker bond within the relationship. The constructs of closeness, commitment and complementarity have been seen as vital elements within the coach-athlete relationship and as so studies have been conducted by researchers with the aim of analysing the relationship in more detail.

Jowett and Meek (2000) undertook a study to examine the interpersonal association of four married coach-athlete relationships. To enable analysis to take place within this kind of relationship, the relational constructs of closeness, co-orientation and complementarity were incorporated into a theoretical-based model. The participants were four married coach-athlete dyads with a minimum of a two year coach-athlete relationship. The coaches were all male with an average of 22 years’ experience and the female athletes were all part of the Greek national track and field athletics team with an average of 17 years sporting experience. Each of the coach-athlete dyads were interviewed together, but separately from the other dyads on the same day. Each dyad-member was interviewed individually after for up to 2 hours. Individual and general feelings were noticeable gauges associated with closeness as all the participants felt self-assured and content with their feelings towards one another. Within the co-orientation construct, mutual knowledge and understanding were discovered to be significant to each coach-athlete dyad and the goals each attempt to obtain. Both coaches and athletes defined their complementary actions as cooperative, by which the coach leads and the athlete performs without being sceptical or conflicting. Jowett and Meek (2000) suggest the
proposed 3C’s theoretical model may offer a system for examining coach-athlete relationships and therefore aid in the understanding of them. In this study a qualitative method was employed, however, by using more of a quantitative method, a greater quantity of coach-athlete dyads could have be assessed thereby providing greater reliability.

Jowett and Timson-Katchis (2005) explored a different type of coach-athlete dyad, by looking at the influences that parents have on the quality of the relationship. The participants were fifteen coach-athlete-parent triads which all asked 15-open ended questions in an interview format to access the triadic relationships in detail. Jowett and Timson-Katchis (2005) discovered that the parents of athletes offered an array of knowledge, opportunities and a wide-ranging emotional support, which all had a positive influence on the quality of the relationship as defined by the 3C’s. This may suggest that athletes, who feel closer to their coach and are more committed to them, may then perform better and work harder in both training and competition settings. Jowett and Cockerill (2003) underpinned the constructs of closeness, commitment and complementarity as having a significant importance within the coach-athlete relationship. Using these constructs, Jowett and Ntoumanis (2004) aimed at developing and validating a mechanism for self-reporting that can be used to assess the nature of the coach-athlete relationship through a quantitative method. They thereby built on the work of Jowett and Meek (2000) by moving away from a qualitative method to a quantitative method to investigate a greater number of coach-athlete relationships. Jowett and Ntoumanis (2004) produced an instrument with items that measure the emotional, cognitive and interactive aspects of the coach-athlete relationship. This instrument therefore was designed to measure the 3C’s through the development of the Coach-Athlete Relationship Questionnaire (CART-Q). To assess the content, prognostic and concept validity of the CART-Q as well as the internal consistency, two studies were conducted using the Principal Component Analysis (PCA) and Confirmatory Factor Analysis (CFA). A questionnaire was produced for the first study to apply the preponderance of coaches and athletes directed at evaluating the positive features of coaches’ and athletes’ feelings (Closeness), thoughts (Co-orientation), and actions (Complementarity), each initially designated with 13 items each. The content validity of the 39 item questionnaire was evaluated using an international athlete, a club coach and two sport psychology students. The result of this process led to two questionnaires being created, one for the coach and the other for the athlete. Study 2 looked at applying the CFA to support the component structure using the data from the independent British sample from study 1. Both of the above studies led to the
development of the finalised CART-Q containing 11 items that accessed the levels of Closeness, Commitment and Complementarity within the coach-athlete relationship. Suggested future research has been pointed towards comparing a variety of groups such as individual v team sports, male v female and coaches’ v athletes. Through comparing these kinds of samples, Jowett and Ntoumanis (2004) claim an academic framework for the coach-athlete relationship may be developed and applied to diverse cultural situations.

LaVoi (2007) undertook a study aimed at expanding our knowledge on the notion of closeness within the coach-athlete relationship. LaVoi (2007) reviewed Berscheid, Omoto and Snyder (1989) work on the Relationship Closeness Inventory (RCI), a method used for accessing closeness. The RCI was said to have five subscales that predominately reflect behaviours but may also affect behaviours. These subscales are diversity (a range of activities), time (length of the relationship), frequency (how often the encounters took place), strength of the relationship and interdependence. However, LaVoi (2007) suggested that these components may not be as appropriate within sport as a result of the performance perspective sport has (e.g., the governance of sport that effects the length of time a coach can spend with the athletes). The participants were 431 collegiate athletes competing in a wide range of sports from the National Collegiate Athletic Association (NCAA) in Division 1 and Division 3 within the Midwest and Eastern regions of the USA. These two divisions were selected to allow direct comparisons across competition levels concerning the content and quantity of coach-athlete closeness. To examine the levels of closeness, a questionnaire lasting in the region of 15 minutes was completed by the athletes on-site, just before or just after a training session towards the last third of the competitive season. LaVoi (2007) discovered that communication is the most prominent feature of a close relationship and that gender, type of sport and competition level didn’t determine the level of closeness of the relationship.

Rhind, Jowett and Yang (2012) looked at the differences between athletes’ from team and individual sports perceptions on the quality of the coach-athlete relationship. The method selected for analysis was Jowett and Ntoumanis (2004) CART-Q, and so Rhind et al., (2012) looked at accessing the level of the 3C’s within the coach-athlete relationship. This method measured the participant’s perceptions from a direct perspective, which reflects ones feelings, cognitions and behaviours towards the other (Jowett and Yang, 2010). A second perspective known as the meta-perspective which reflects how one perceives the other to feel, think and act towards them (Jowett and Yang, 2010) was also employed within the study. Rhind et al., (2012) therefore aimed to examine how the athletes felt and
perceived others to feel, using a total of 699 athletes who competed in a number of team and individual sports. Rhind et al., (2012) findings contradicted LaVoi (2007), as the results showed that individual athletes felt both closer and commitment to their coach. The findings also suggested that those participants from individual sports perceived their coach to feel more faith, respect and gratitude for them than those athletes in team sports believed for their coaches. This could be as a result of having a one-to-one basis relationship with their coach and as such the coaches may have appeared to have been connected to all aspects of their athletes’ lives as stated by Jowett and Meek (2000).

2.5 The 3C’s +1

Closeness, commitment and complementarity have all been seen to play an important role within the coach-athlete relationship, however a further construct has also been looked at in detail by researchers. This fourth concept known as co-orientation, has also been seen to have a significant influence over the relationship between a coach and athlete. Co-orientation has been described by Bognár et al., (2007) as reflecting the channels of communication and common viewpoints. It has been claimed by Bognár et al., (2007), that it is associated to matching beliefs, values, interests, standards, aims and anticipations through communication.

Duda, Jowett and Olympiou (2008) state that one of the main advantages that the 3C’s + 1 model has on the coach-athlete relationship is that it emphasises the bidirectional nature of the relationship. This two-way direction is expressed through the construct of co-orientation. These two types of relational perspectives according to Duda et al., (2008) are direct perspectives (e.g., I like my coach/athlete) and meta perspectives (e.g., my coach/athlete likes me). The direct perspective measures the coaches/athletes personal thoughts of the relationship with regards to the 3C’s whilst the meta perspective measures how the individual perceives their coach/athlete to feel in terms of each of the 3C’s. The use of this bidirectional outlook on the coach-athlete relationship allows for a greater understanding of how those within the relationship feel and perceive one another to feel.

2.6 The COMPASS Model

Over recent years researches have tried to represent the coach-athlete relationship in a model format in an attempt to display the most salient aspects within the relationship. Mageau and Vallerand (2003) developed a motivational model of the coach-athlete
relationship to display how coaches may be able to influence athletes’ motivation. A multidimensional model of athletes’ commitment to the coach-athlete relationship has been created by Dimmock, Gucciardi and Jackson (2014). The aim of this model was to represent senior athletes’ commitment to their coach-athlete relationship and to their team. Dimmock et al., (2014) model has been suggested to have the potential to be used in team and relationship based settings to access the aspects which support an athlete’s engagement in sport. Jowett and Rhind (2010) conducted a study on investigating the relationship maintenance strategies within the coach-athlete relationship. Jowett’s (2007) 3C’s +1 model of the coach–athlete containing the constructs of closeness, commitment, complementarity and co-ordination was used to develop the interview guides. The results exposed seven main groups: conflict management, openness, motivation, positivity, advice, support, and social networks. Bognár et al., (2007) have stated that when a coach creates a motivational environment that focusses on enhancing effort and performance improvements, then it becomes more likely that the athletes will engage in a positive manner. Jowett and Rhind (2010) findings built upon previous research by Bognár et al., (2007) who, similarly, reported that nearly a third of the comments from the interview guides from both the coaches and athletes related to motivational strategies. Coaches should therefore be aware that motivating their athletes plays a large part in maintaining the quality of their relationship with them. This has also been explored by Vallerand (2004) who assert that both coaches and athletes agree that motivation is one of the main features that can assist performance and the development of positive sporting experiences. The seven categories highlighted above were used to create the COMPASS model which provides a theoretical framework for understanding how an athlete and a coach are able to sustain the quality of the relationship as suggested by Jowett and Rhind (2010).
Figure 1: The COMPASS model of relationship maintenance in the coach-athlete relationship
The COMPASS model may enhance our understanding of how the elements with the 3C’s +1 model can be maintained Jowett and Rhind (2010).

2.7 Summary

This section has looked at the current literature on the coaching process and models that represent the process of coaching others, including the most salient aspects within it. The coach-athlete relationship can be observed as being a complex process due to the numerous aspects that it involves as discussed by Jones and Turner (2006). It can therefore be seen as worthwhile to explore the process further building on the current literature available.

Jowett and Meek (2000) qualitative approach at assessing the 3C’s provided valuable results on the levels of closeness, co-orientation and complementarity experienced amongst married coach-athlete dyads. However, Jowett and Meek (2000) suggested that the use of a quantitative method would allow for a much larger number of coach-athlete relationships to be explored and therefore may contribute to greater reliability. The constructs of closeness, commitment and complementarity was seen by Jowett and Cockerill (2003) as having a significant importance in the coach-athlete relationship. Hence, Jowett and Ntoumanis (2004) aimed to develop a method for assessing these concepts, building on Jowett and Meek (2000) study by moving towards a quantitative method of analysis with the creation of the CART-Q. The comparison between individual v team sports, male v female and coaches’ v athletes was suggested for future researchers as it may allow for the creation of an academic framework for the relationship that could be applied in practice according to Jowett and Ntoumanis (2004).

2.8 Purpose of Thesis

The purpose of this study was to contribute to the current literature examining the coach-athlete relationship and to build on the limitations of previous studies (Jowett and Meek, 2000; Jowett and Ntoumanis, 2004). Specifically, the aim was to compare the differences between the levels of closeness, commitment and complementarity within coach-athlete relationships through both direct and meta perspectives of the CART-Q. Further aims also included comparing the differences between individual and team sports, form both direct and meta perspectives, with the aim to understand what the effects that sport type has on the relationship.
2.9 Hypothesis

Based on the current literature on the coach-athlete relationship, the following predications have been made. It was hypothesised that both coaches and athletes would experience similar levels of each of the 3C’s (Jowett and Meek, 2000). Secondly, based on Rhind et al., (2012) findings, it was also predicted that the participants from individual sports were likely to feel more committed to their coach or athlete than those from team sports. Moreover, it was not clear how different sports affect the constructs of closeness and complementarity based on the varying research provided by previous researchers (Jowett et al., 2012; LaVoi, 2007).
CHAPTER 3

METHODOLOGY
3.0 Methodology

3.1 Research Background

Over recent years, many researchers have employed a number of methods to create a greater understanding of the coaching process and in particular the coach-athlete relationship. As research within the context of coaching is still fairly new, it is not clear which method is most suitable for identifying the most important aspects within the coach-athlete relationship.

Jowett and Meek (2000) developed an interview guide based on the relational constructs of closeness, co-orientation and complementarity. Based on these 3 constructs, Jowett and Ntoumanis (2004) created the CART-Q, a quantitative method to assess the levels of the 3C’s in the coach-athlete relationship. Jowett and Rhind (2010) also created interview guides to access the coach-athlete relationship through the development of the COMPASS model. This model incorporated Jowett’s (2007) 3C’s +1 model, including the aspects of closeness, commitment, complementarity and co-ordination.

3.2 Participants

For this present study, a total of 110 participants took part; coaches (N = 55) and athletes (N = 55). Out of the 110 participants, 80 of them were from Individual sports and the remaining 30 from team sports. The criteria for selection was that each participant had to be over the age of 18yrs and either competing or coaching in a nationally recognised sport. The coaches consisted of 29 males, ranging from 18yrs to 49yrs (M = 21.7) and 26 females, ranging from 18yrs to 23yrs (M = 20.2). The level of coaching qualification consisted of N/A (16), Level 1 (26), Level 2 (11) and Level 3 (2) and the sports in which they coached in included Athletics (28), Badminton (3), Basketball (1), Canoe Slalom (1), Football (3), Rugby (3), Squash (1), Swimming (4), Tennis (9) and Water polo (2). The athletes were 31 males between the ages of 18yrs and 23yrs (M = 20.5) and 24 females, ranging from 18yrs to 23yrs (M = 20.1). The level of the athletes’ performance consisted of Club/University (19), County (12), Regional (7), National (10) and International (7). The sports the athletes competed in included Athletics (26), Badminton (2), Basketball (1), Canoe Slalom (1), Cricket (2), Football (3), Hockey (1), Netball (1), Rugby (2), Squash (1), Swimming (4), Tennis (9), Water polo (1) and wheelchair rugby (1).
3.3 Demographic Information

The participants were asked to fill out demographic information containing details such as the participant’s gender and age, found on the top of both the coach and athlete Coach-Athlete Relationship Questionnaires (CART-Q). More specifically, the coaches’ questionnaire also asked for the participant’s main sport they coached and their level of coaching qualification (e.g., Level 1- level 4). The Athletes version asked for the main sport they performed in and their current level of performance (e.g., club, county, regional, national or international).

3.4 Ethical Consideration

According to Guillemin and Gillam (2004), it is important for a researcher to be sensitive to ethical issues when creating a research proposal. Therefore to ensure this, certain aspects were taken into consideration whilst developing the proposal. One of the main ethical considerations applied during the process of the study was the risk of harm to the participants. The potential for the study to cause the participants harm as discussed by Yow (1994) was addressed through reducing any kind of pressure the participants may have been experiencing before, during or after the study. Despite the study not having a high potential of risk of harm, it was still important to make sure that no one felt pressured in doing anything they did not want to do. The coaches and athletes were therefore told before agreeing to take part that they did not have to answer all of the questions and that they could back out at any point of the study without questioning.

Another ethical issue that was considered during the developmental stages of the study was to ensure that the participant’s privacy was not violated. To make sure that this was achieved, the participants were told that they could remain anonymous and therefore that their results could remain confidential.

3.5 Instrumentation

The instrumentation used in this study to assess the levels of closeness, commitment and complementarity (3C’s) from the coaches and athletes was the Coach Athlete Relationship Questionnaire (CART-Q). Jowett and Ntoumanis’ (2004) version of the 11-item CART-Q was used to assess coaches and athletes perceptions of the 3C’s from a direct perspective (e.g., I trust my coach; Jowett and Ntoumanis, 2004) and meta perspective
(e.g., My coach trusts me; Jowett, 2009). According to Boardley et al., (2008), the meta perspective is an important aspect of the questionnaire as the effects a coach can have on an athlete can be applied through the athlete’s perceptions of their coach’s effectiveness. Thus, by assessing how an athlete perceives the coach to feel, it may be possible to see if these emotions reflect the athletes own feelings towards the coach. Jowett (2009) validated the CART-Q through Confirmatory factor analysis within a study and revealed that the 3C’s were related to one another in a theoretical comprehensible manner. The reliability of the method has also been shown through various studies (e.g., Jowett and Yang, 2010; Rhind et al., 2012). These studies have provided valuable results signifying the validity and reliability of the CART-Q. To assess the coaches direct and meta perspectives within the coach-athlete relationship, the athletes’ version of the CART-Q was altered by replacing the coach as the subject to the athlete. This therefore meant that the questions were directed at assessing how the coach felt and perceived the athletes to feel. As the CART-Q has been adapted and not used before in previous studies, it may be seen as not a completely valid or reliable method. However it may provide valuable results from the coaches’ point of view.

3.6 Procedure

For this study the participants were enlisted through university and club links. All of the participants were spoken to individually with regards to the process of the study, what was expected of them and why they were appropriate as a participant for the present investigation. To inform the potential participants what the study entailed, a participation information form was handed out to each person to give them information on why the study was been conducted. Anonymity and confidentially was assured as the participants could back of the study at any time and the results could remain private. Each person then had the knowledge and understanding of what the studies aims and process were and could then decide on whether they would like to participate in it. Those who agreed to participant were then asked to fill out a consent form, confirming their interest in participating. Once the consent forms were completed and the participants were willing to take part, the CART-Q (direct and meta versions) was handed out. The athletes were provided with the CART-Q (Jowett and Ntoumanis, 2004; Jowett, 2009) combined version and the coaches were given the adapted version. Once provided with a questionnaire the participants were reminded to answer each question as truthfully as possible (e.g., answering the questions how they actually felt towards the coach-athlete relationship rather than how they wished the relationship was). On completion, the participants
handed the questionnaire back to the researcher and were then provided time to discuss anything they so wished regarding the study before been thanked for taking part. Each participant was also told that if they would like to see the results and findings of the study, then they could be contacted to inform them of any potential implications the results may have on the coach-athlete relationship.

### 3.7 Data Analysis

Before data analysis could be conducted, a series of assumption tests were required to be carried out to see if Multivariate Analysis of Variance (MANOVA) was appropriate for the study. These assumption tests included cell size, Univariate and Multivariate normality, Linearity, Homogeneity of regression, Homogeneity of variance-covariance and Multicollinearity, and singularity. For analysis to take place the programme ‘Statistical Package for the Social Sciences’ (SPSS) was used and a step by step guide provide by means of Coakes and Steed (1999) book. This programme allowed the means of each of the 3C’s provided by the coaches and athletes to be analysed and differences to be compared. MANOVA was employed to discover any significant differences within the independent variables of coach and athlete and team and individual. Follow up Bonferroni t-tests were then used to separate mean differences within the independent variables to discover how close, committed and complementary the participants felt and perceived one another to have felt.
CHAPTER 4

RESULTS
4.0 Results

Jowett and Ntoumanis (2004) used the means of each of the 3C’s to analyse and compare the differences experienced between the participants. Therefore, this study looked at comparing the means of each of the 3C’s collected through the use of the coach and athlete versions of the CART-Q using both the direct and meta perspectives. This allowed for the comparison between how coaches and athletes directly feel and how they perceive one another to feel. The comparison between how individual team sport coaches and athletes felt and perceive one another to feel to that of the team sports coaches and athletes were also investigated.

4.1 Assumption Testing

Following data collection, several assumption tests were required to be carried out to see whether MANOVA was a suitable method for analysing the data. Cell size, Univariate and Multivariate normality, Linearity, Homogeneity of regression, Homogeneity of variance-covariance and Multicollinearity, and singularity were all satisfied.

4.2 Multivariate Analysis of Variance

The results collected from this present study using MANOVA indicated that the independent variable, team and individual sports, failed to reveal any significant interactions. This suggests that athletes and coaches from team and individual sports experience similar levels of closeness, commitment and complementarity to one another. MANOVA did however identify coach and athlete main effects.

4.3 Direct Perspective of the CART-Q

MANOVA indicated a significant main effect for the coach and athlete independent variable (Pillai’s Trace = .120, F = 4.723, p = .004). Further data analysis failed to reveal a significant effect between individual and team sport participants 3C’s (p = .051). Therefore there was no obvious interaction between the independent variable as the significant effect was greater than .05.
4.4 Follow up Bonferroni T-tests

To further investigate the coach and athlete relationship, follow up Bonferroni t-tests were performed. For the construct of closeness, there was a main effect for the coach and athlete independent variable as \( p = .002 \). There was also a main effect for the construct of commitment as \( p = .011 \). Further analysis indicated that there was no main effect for complementary for coach and athlete direct perspective as the significant difference was \( p = .533 \).

Comparing the means individually made it possible to see what the mean scores were for each of the 3C’s for both the coaches and athletes direct perspective. The coaches scores for closeness were \( (M = 2.29, SD = .80) \), commitment \( (M = 2.82, SD = 1.05) \) and complementarity \( (M = 1.81, SD = .75) \). The athletes scores for closeness were \( (M = 1.64, SD = .73) \), commitment \( (M = 2.24, SD = .82) \) and complementarity \( (M = 1.68, SD = .58) \).

4.5 Meta Perspective of the CART-Q

The meta perspective revealed no significant main effect for the independent variables of both coach and athlete \( (p = .163) \) and team and individual \( (p = .556) \).
CHAPTER 5

DISCUSSION
5.0 Discussion

5.1 General Discussion

This section provides an overview regarding the importance of the conceptual and practical implications. Specifically, it provides a discussion of the results in relation to previous literature and revisits the aims and objectives of the study. The discussion concludes by presenting the limitations and strengths of the study as future directions for researchers.

The primary aim of this study was to explore and compare the differences between coaches and athletes levels of the constructs of closeness, commitment and complementarity within coach-athlete relationships. The secondary aim was to compare the effects that coaching or competing within a team sport had on the level of the 3C’s within the coach-athlete relationship, to that of those who coached or competed in individual sports. With regards to the first aim, data analysis procedures revealed a significant main effect. Follow up Bonferroni t-tests indicated that coaches and athletes direct perspectives for closeness and commitment were significantly different. Specifically athletes felt and perceived their coaches to be closer and more committed than the coaches did of their athletes. MANOVA however, failed to reveal any significant differences for the construct of complementarity within the coach and athlete independent variable. Coaches and athletes therefore were seen to have scored similarly to one another for the latter construct, but not for the two previous concepts. The coaches and athletes thus felt and perceived one another to experience similar levels of complementary within the relationship. MANOVA also revealed no significant difference between the coach and athlete independent variable for the meta perspective. This suggested that coaches and athletes indicated one another to perceive the level of the 3C’s as having similar levels of importance.

The team and individual variable provided no main effect for both the direct and meta perspective. This hence implied that participants from these two sport types, had similar opinions with regards to the level of importance of the 3C’s within the coach-athlete relationship. Although no significant differences for this variable were evident, it is still
worthwhile to discuss these results and the implications that they may have on the coach-athlete relationship.

5.2 Closeness

One of the 3 concepts focussed in this study, was the extent to which closeness was perceived to be an important aspect within coach-athlete relationships. It was hypothesised that both coaches and athletes would view closeness as having a high level of importance within the coach-athlete relationship and that they would also score similarly for the construct based on the work of Jowett and Meek (2000).

MANOVA revealed that for the direct perspective there was a significant main effect for the construct of closeness for the coaches and athletes variable. Further analysis through comparing the means showed that the athletes’ average score for this construct were lower than the coaches. These results are comparable to Jowett and Meek (2000) in that both the coaches and athletes perceived closeness to be an important feature in the coach-athlete relationship. The participants used in Jowett and Meek (2000) study were four married coach-athlete dyads. Due to the nature of this kind of relationship, the participants were likely to have felt close to each other and thus may have affected the results. Bognár et al., (2007) also discovered that coaches and athletes perceived closeness as being a significant aspect within the coach-athlete relationship. Both coaches and athletes from their study, stated that regular talks with each other were important, along with on-going attention and care. This level of closeness experienced by the participants may contribute to the sole purpose of the coach-athlete relationship, which is to ensure that athlete performance is improved and that both the coach and athlete work in harmony (Cross and Lyle, 1999). However, the athletes were seen to have viewed closeness as having a greater level of significance than the coaches. This could mean that the athletes felt closer to the coaches and may have looked forward to training sessions more than the coaches did. One reason why the athletes may have felt closer to their coach could have been that an athlete may have only one or two coaches, whereas a coach may have multiple athletes and so may not feel as close to each individual.

The results suggested that the participants from team sports felt similar levels of closeness to those from individual sports. Furthermore, the results also indicated that both the team and individual sport participants perceived each other to feel similar levels of closeness
within the coach-athlete relationships. These results are comparable to LaVoi (2007) who found that the type of sport the participants operated in, did not affect the level of closeness experienced. In contrast, Rhind et al., (2012) findings contradict this as their results suggested that individual athletes felt closer to their coach compared to team sport athletes. As the coaches and athletes revealed similar levels of closeness, both may therefore have felt self-assured and content with their feelings towards one another as found in Jowett and Meek (2000) study.

5.3 Commitment

The construct of commitment was another key concept analysed in detail within the coach-athlete relationships. It was predicted that the coaches and athletes would experience similar levels of commitment based on the work of Jowett and Meek (2000). Furthermore, it was predicted that the individual sport participants would feel more committed to their coaches or athletes than those from team sports as discovered by Rhind et al., (2012).

The results collected from the coaches and athletes versions of the CART-Q showed that commitment was a significant aspect in the coach-athlete relationships. There was a significant main effect for the coach and athlete variable, with the coaches scoring higher than the athletes. These results suggested that although both felt committed to one another, the athletes, on average, felt more committed to their coaches than the coaches did to their athletes.

Rhind et al., (2012) found that those athletes who competed in individual sports felt more committed to their coach than those from team sports. It was therefore hypothesised that the individual sport participants would feel more committed to one another than those from team sport background. However, the data collected in this study revealed no significant main effect for the independent variable of team and individual. This implied that the team and individual participants scored similarly to one another regarding the construct of commitment. Therefore, the results from this study showed that the coaches and athletes felt similar levels of commitment to one another within the coach-athlete relationship. There may not have been a significant difference between the two, as the coach-athlete relationship has appeared to be grounded more upon the characteristics and needs of the individual athlete rather than the characteristics of the sport (Bognar et al., 2007).
The participants in this study may have felt committed towards their coach or athletes in different ways as according to Dimmock, Gucciardi and Jackson (2014), there are three independent dimensions of commitment. Each type of commitment can be experienced by an individual at one time (Dimmock et al., 2014). The first is affective commitment, where by an individual feels emotionally attached with the group or coach, the second is referred to as continuance commitment, where an individual feels as though they need to remain in the team or with their coach. The final type, is normative commitment, which is experienced by an individual who feels as if they ought to remain in the team or with their coach as a result of moral attachment. The participants within this study may have felt committed to one another in different ways, which could have affected the results provided. An investigation into which type of commitment is most effective for successful performances and creating a stronger coach-athlete relationship may be worthwhile.

5.4 Complementarity

Complementarity was the third construct looked at for analysis within the coach-athlete relationship. Coaches and athletes have defined their complementary actions as harmonious where they both understand their roles within the relationship and are content with them (Jowett and Meek, 2000). This may be evident in the results as both the coaches and athletes indicated that complementarity was an important aspect within the coach-athlete relationship. Comparable results were provided for the construct of complementarity between the coaches and athletes for the direct and meta perspectives and therefore no main significant effect was exposed. Further analysis also showed that there was no significant main effect for the independent variable of team and individual sport for both of the perspectives. These results suggested that athletes and coaches, from both team and individual sports scored similarly for the construct of complementarity and so felt and perceived one another to feel the same. Thus, these results implied that the type of sport and the position the individual holds within the coach-athlete relationship did not affect the level of importance of the construct experienced.

5.5 Practical Implications

The results collected from the coach and athlete versions of the CART-Q have highlighted possible implications for practice. For example, the athletes who participated, in general, felt closer, more committed and more complementary to their coaches than the coaches that took part did to their athletes. It can be therefore seen to be important to develop an
understanding of why coaches do not feel as close or committed to their athletes. Coaches may need to ask more questions of their athletes to develop a greater understanding of how the athletes are feeling. Coaches may also have to develop strategies for becoming closer to their athletes. If this can be achieved, the strategies might be able to be employed in practice and consequently may produce stronger coach-athlete relationships, leading onto greater coach and athlete performances.

The team and individual sport participants revealed comparable results regarding the level of the 3C’s experienced and perceived within the coach-athlete relationship. This implied that the type of sport the coaches and athletes operated in, did not affect the levels of closeness, commitment and complementary between those members within the relationship. Coaches and athletes should therefore be made aware that sport type has been seen to not affect the levels of the 3C’s experienced within the relationship.

The coaches and athletes were seen to have perceived one another to feel similarly regarding each of the 3C’s. This may allow for a more stable relationship as they both have shown that they understand how one another feels.

5.6 Limitations and Future Directions

Despite this study providing valuable results in contributing to the knowledge on the coach-athlete relationship with regards to the feelings experienced by both the athletes and coaches within it, there are some noticeable limitations that require addressing. Based on the limitations of this study and in an attempt to further the knowledge on the coach-athlete relationship, several directions for future researches have been highlighted.

Firstly, the instrumentation employed in the study to assess the levels of the 3C’s experienced by the participants has not been used in previous studies and therefore may need to undergo more rigorous reliability and validity through future investigations. To elaborate, Jowett and Ntoumanis (2004) version of the 11-item CART-Q which measured both the coaches and athletes levels of the 3C’s from a direct perspective was used as well as Jowett (2007) meta perspective version. These questionnaires were combined together to create one questionnaire that assessed both the direct and meta perspectives of the athletes views of the 3C’s. To assess the coaches direct and meta perspectives, the questionnaire was adapted by making the athlete the subject instead. The CART-Q provided valuable results regarding how close, committed and complementary the
coaches and athletes felt and how they perceived one another to feel. This information will allow future researchers to focus on possible reasons why the coaches and athletes felt the way they did. Although the quantitative approach provided statistics to help show how coaches and athletes perceived the 3C’s to be important, a qualitative approach may have provided more in depth results. This type of approach could address the reasons why coaches and athletes felt the way they did about the coach-athlete relationship, providing a greater insight into the relationships.

The secondary aim of the study was to compare the differences of the 3C’s from the perspectives of those who coached or competed in individual sports to those that coached or competed in team sports. There was an uneven number of team to individual participants, therefore the results may not have been as reliable as if there had been an even number of participants for each sport type. Future research should therefore look at comparing team and individual sport coaches and athletes perceptions of the relationship with an even number of participants within each sport type. This study provided no main effect for the team and individual sport variable, however previous research (e.g., Rhind et al., 2012) has shown that individual sport athletes have been seen to have felt closer to their coach than those from team sports. Rhind et al., (2012) have stated that coaches of team sports could benefit from focusing on developing strong relationships with each individual in the team as the coaches do in individual sports. This additional attention given to each individual may increase the coaches’ level of closeness, commitment and complementary with each of the athletes within the team, and in turn may improve the teams’ performance.

As the 3C’s have been seen to be highly important within the coach-athlete relationship, it may be worth investigating why coaches did not feel as close or committed to their athletes as their athletes did to them. By understanding why there were differences, methods for getting coaches to feel closer and more committed to their athletes may be put into practice. This might then strengthen the relationship between them and lead to a more successful relationship. In order for this to be achieved, employing a qualitative approach may provide more thorough information on the coach-athlete relationship. It may also be beneficial to incorporate a quantitative approach along with a qualitative to allow for larger sample testing.

A large proportion of the sample collected was predominately from one university and could then have resulted in sampling bias. The sample collected may therefore not have
truly represented the whole population, so future researchers should aim to create a more random sample of participants to provide greater reliability. The sample size was also fairly large and allowed for a reasonable number of coach and athlete perceptions of their relationships. However a greater number of participants may have further contributed to the reliability as a result of more coaches and athletes opinions being analysed.

Cushion, Armour and Jones (2003) have suggested that a large part of coaching knowledge and practice derives from the experience and the personal interpretation of those experiences. Therefore, the use of older participants may have provided more reliable results as a result of having greater experience of different relationships and obtaining a larger bank of coaching knowledge. This additional experience may make the individuals more aware of what is required for a successful relationship. Moreover, this added experience, could have aided in addressing what a good coach or athlete is based on how they communicate with one another. Some of the coaches used in the study were only acting as coaches as part of their course at university and so due to this temporary involvement they may not have felt as close, committed or complementary to their athletes as a full time coach would. Out of the 55 coaches, only 13 had a level 2 or above coaching qualification and so it may be seen that the majority of the coaches may not have had very much coaching experience. The use of elite coaches may have provided more realistic figures due to the large amount of contact time they have with their athletes. Coaching at an elite level may result in feeling closer, more committed and complementary with their athletes and thus form a stronger and more successful coach-athlete relationship.

Furthermore, greater reliability of the results may have been achieved if the participants were provided with more than one opportunity throughout the year to complete the CART-Q. If the participants had filled out a CART-Q at the beginning of the season, mid-way through and then towards the end, comparisons could have been made between the times of season. Athletes and coaches may have more positive or negative perceptions of their relationships over time so this would provide the opportunity to access the relationship in greater detail. An average score could have also been produced for each of the CART-Q’s to create a greater picture of how they felt throughout the season on a whole.
CHAPTER 6

CONCLUSION
6.0 Conclusion

The key objective of this thesis was to compare the differences between coaches and athletes direct and meta perspectives of the importance on the constructs of closeness, commitment and complementarity within the coach-athlete relationship. The secondary aim of the study was to compare the differences of the 3C’s between the participants coaching or competing in team sports to those from individual sports.

The results showed that there was a significant main effect for the direct perspective of the CART-Q for the coach and athlete variable. MANOVA revealed that within this variable there was a significant difference for the constructs of closeness (p = .002) and commitment (p = .011). Follow up Bonferroni t-tests showed that athletes felt closer and more committed to their coaches than the coaches did to their athletes. There was however no significant main effect for the independent variable of team and individual sport for the direct and meta perspectives. This implied that the type of sport the participants coached or competed in, did not affect the level of the 3C’s experienced or perceived of one another, within the coach-athlete relationship.

The results have several practical implications for the coach-athlete relationship. As the athletes’ felt closer and more committed than their coaches, strategies to increase coaches’ feelings towards their athletes should be developed and employed in practice. A stronger bond between the coach and athlete may be an outcome and contribute to a more positive coach-athlete relationship. Additionally, the coaches and athletes perceived one another to experience comparable levels of each of the 3C’s, which could suggest that they understand how each other feels. This understanding may thereby produce a stable relationship.

The CART-Q provided valuable results regarding the differences between coaches and athletes perceptions on the relationship from a direct and meta perspective. It revealed how close, committed and complementary the participants felt and perceived one another to feel. The quantitative approach also made it possible to use a greater number of participants than that of a qualitative approach. However, the CART-Q was not able to discover why the coaches and athletes felt the way they did regarding the 3C’s. A qualitative method might have provided why they felt the way they did through the use of open ended questions as employed in previous studies (e.g., Jowett and Meek, 2000; Jowett and Timson-Katchis, 2005). To further develop the knowledge on the coach-athlete
relationship literature, future researchers should attempt to combine a quantitative method of analysis with a qualitative one. This may further address why coaches and athletes feel the way they do about the coach-athlete relationship, whilst still maintaining a large sample size. Further exploration into the effects that the type of sport has on the relationship may also be a worthwhile investigation. This study has helped to develop the knowledge on the coach-athlete relationship by providing useful results and highlighted future directions for researchers.
REFERENCES
References


APPENDICES
APPENDIX 1
Ethical Approval Letter

Date: 24th July 2013

To: Chris Claydon

Project reference number: 13/10/17U

Your project was recommended for approval by myself as supervisor and formally approved at the Cardiff School of Sport Research Ethics Committee meeting of 24th July 2013.

Yours sincerely

Andrew Lane

Supervisor
APPENDIX 2
Participation information Form

Title of Project:
A Comparison between Coaches and Athletes' Perception of Closeness, Commitment and Complementarity within Coach-Athlete Relationships.

Information Sheet

Background
This study will look at comparing the differences in coaches and athletes levels of Closeness, Commitment and Complementarity (3C’s) to access how coaches and athletes perceive each of the 3C’s as being an important part in a coach-athlete relationship.

Your participation in the research project

Why you have been asked
You have been asked to take part in this study as there is a need to identify the differences between athletes and coaches perspectives on the degree to which they feel close, committed and complementary to one another. The information collected may allow you to become more aware of how you (either as a coach or athlete) feel towards your coach/athlete(s).

What would happen if you agree to take part?
If you agree to join the study, then the following will happen.

1. You will be asked to complete an 11-item Coach-Athlete Relationship Questionnaire (CART-Q) covering both direct and meta-perspectives

2. You will then be asked to hand the questionnaire to the researcher as soon as they have been completed.

Are there any risks?
There are not any significant risks to your health through taking part in the study. You will be asked if you are willing to participate and will be provided the opportunity to ask as many questions as you like. You will also have the right to withdraw at any time without question.

Your rights
Taking part in this study does not mean that you give up any legal rights. In the very unlikely event of something going wrong during the study, Cardiff Met fully insures its staff, and participants are covered by its insurance.
What happens to the results of the evaluation?
Information collected from you will be stored safely at Cardiff Met University online and will not be accessible to anyone other than specific staff members and the researcher.

Are there any benefits from taking part?
You may become more aware of how you feel towards your coach/athlete(s) which may help strengthen the coach-athlete relationship, thereby creating a greater learning environment for enhancing performance (as athlete) or enhancing your effectiveness (as coach).

What happens next?
With this letter you will find a consent form for you to fill out. If you are happy to participate, then this form must be completed. A CART-Q is also provided for you to complete in your own time.

How we protect your privacy:
The researcher has designed the study and the procedure so that your privacy remains respected.
All the information about you will be stored securely away from the consent forms. At the end of the evaluation study the information gathered about you will be destroyed. Only the consent forms with your name and address will be kept. They will be kept for ten years because it is required of my Cardiff Met.

Further information
If you have any questions about the research or how we intend to conduct the study, please contact myself.
Chris Claydon
clayhead1st@aol.com
Andy Lane
alane@cardiffmet.ac.uk
APPENDIX 3
Title of Project:
A Comparison between Coaches and Athletes’ Perception of Closeness, Commitment and Complementarity within Coach-Athlete Relationships.

Name of Researcher: Chris Claydon

Participant (18+) to complete this section: Please initial each box.

1. I confirm that I have read and understand the participant information form dated for this study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am able to withdraw at any time without questioning.

3. I also understand that if this happens, our relationships with the university or any clubs involved and our legal rights will not be affected.

4. I understand that information collected from the study may be used for reporting purposes, but I will remain anonymous

I agree to take part in this study

Name of Participant: ___________________

Signature of Participant: ___________________________ Date: ________________
Coaches version of the CART-Q (Modified version)

Age: ______
Gender: Male/Female
Sport (if more than one choose your main sport): ________________
Level of Coaching Qualification: ____________________________

This questionnaire assesses the levels of closeness, commitment and complementarity within the coach-athlete relationship. Please read the statements carefully and answer truthfully how each statement currently reflects your views on the relationship with your athlete and also how you think your athletes feel about their relationship with you.

<table>
<thead>
<tr>
<th>Closeness</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I like my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete likes me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>2 I trust my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete trusts me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>3 I respect my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete respects me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>4 I appreciate the sacrifices my athlete has experienced to improve performance</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete appreciates the sacrifices I have experienced to improve performance</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commitment</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 I am committed to my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete is committed to me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>6 I am close to my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete is close to me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>7 I think that’s my sport career is promising with my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete believes that his/her sports career is promising with me</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complementarity</th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In training…</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>8 I am at ease with my athlete</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete is at ease</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>9 I am responsive to his/her efforts</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete is responsive to my efforts</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>10 I am ready to do my best</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete is ready to do his/her best</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>11 I adopt a friendly stance</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>My athlete adopts a friendly stance</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>